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January 21, 1966
Friday: 6:30 p.m.

MEMORANDUM FOR THE PRESIDENT

You have clearly said on at least four major occasions in the past year that we should launch a major effort in the field of population.

Now the problem is to move the bureaucracy. Despite your push and the efforts of a number of interested experts, concrete progress has been slow. Bell has long stressed the importance of getting on top of the population problem, but now is the time for his mission directors to step up their activity. How hard we push is a touchy question, but it's clear now we ought to take a new look.

So to capitalize on the impetus of your Independence speech, we would like to put out the attached memorandum and cable. The memo's purpose is to force the bureaucracy to surface and face up to policy questions it's easier to ignore. The cable's purpose is just to start the key people in our overseas machine thinking, since we depend on the men on the spot to translate problems into programs.

There are admittedly some tough issues to be resolved, both in policy and in tactics. Our aid review has given us a good go-round on some of them, but now we need to follow that up with some good solid projects. There's also the political question--whether pushing hard encourages opponents to fight back when we might get just as far by moving ahead quietly. I gather you've decided this is urgent enough to risk a fight. In any case, this in-house shouldn't cause trouble.

DECLASSIFIED
E.O. 12958, Sec. 3.5
NSC Memo, 1/30/95, State Dept. Guidelines
By jc, NARA, Date 7-31-03

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DECLASSIFIED
E.O. 12958, Sec. 3.5
NSC Memo, 1/30/95, State Dept. Guidelines
By jc, NARA, Date 7-31-03

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Population
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January 21, 1966

NATIONAL SECURITY ACTION MEMORANDUM NO. _____

TO: SECRETARY OF STATE
SECRETARY OF HEALTH, EDUCATION AND WELFARE
ADMINISTRATOR, AID

The President has asked me to call your attention particularly to these statements in his Independence speech dealing with the world population problem:

"... we will increase our efforts in the great field of human population. The hungry world cannot be fed until and unless the growth in its resources and the growth in its population come into balance. Each man and woman--and each nation--must make decisions of conscience and policy in the face of this great problem. But the position of the United States of America is clear. We will give our help and our support to nations which make their own decision to insure an effective balance between the numbers of their people and the food they have to eat. And we will push forward the frontiers of research in this important field."

We must be sure that we are launching programs that will make major progress in this field. He has also asked me to stress the equal importance both of developing a strong program in this field and of developing it in the right way. It is clear to all of us that this program is essential to getting the most out of the rest of our foreign aid effort. It is equally clear that getting off on the wrong foot will seriously blunt our effort or divert it into unfruitful channels.

The President knows we cannot and believes we should not impose a US-planned program on anyone. However, in addition to the technical help we can give on request, we must also give subtle but firm encouragement. The problem is too urgent to wait completely on others' initiatives. For

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- 2 -

one thing, we must make clear that we will include a solid attack on the population problem among the self-help measures we will gauge in deciding where to give further major economic aid.

The President would therefore like separate reports from the Secretary of Health, Education, and Welfare and from the Administrator, AID, describing for him (a) what actions have been taken or are pending in their respective agencies since his pledge in his 4 January 1965 State of the Union message for a new effort in this field and (b) how they plan to increase this effort. In looking to the future, he would particularly like you to identify the real bottlenecks in our own current policies, to point out the chief opportunities for progress and to estimate the costs and time periods involved. It might be useful, for instance, in the case of AID, to single out a few of the biggest problem countries like India and Pakistan and discuss what we might do there. It might be useful for HEW to focus on how to expand research on human reproduction.

He would appreciate having these reports by 28 February.

McGeorge Bundy

cc: Director, Bureau of the Budget
Special Assistant to the President
for Science and Technology

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January 21, 1966

ACTION: To posts listed below.

FOR AMBASSADOR

White House desires your personal evaluation of population problem in your country and prospects for adequate population planning. Purpose is not to produce exhaustive study at this stage but to get general feel for the situation, determine what we may expect in way of self-help in this field and surface problems and opportunities for US help.

FYI, President in speech at Independence, Missouri, on 20 January said in part QUOTE . . . we will increase our efforts in the great field of human population. The hungry world cannot be fed until and unless the growth in its resources and the growth in its population come into balance. Each man and woman -- and each nation -- must make decisions of conscience and policy in the face of this great problem. But the position of the United States of America is clear. We will give our help and our support to nations which make their own decision to insure an effective balance between the numbers of their people and the food they have to eat. And we will push forward the frontiers of research in this important field. UNQUOTE.

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E.O. 12958, Sec. 3.5

NSC Memo, 1/30/95, State Dept. Guidelines

By jc, NARA, Date 7-31-03

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August 4, 1965

Mac -

We're moving on population control. Califano is setting up a task force (perhaps more at Moyers' urging than LBJ's; Bill is a bug on this).

Population

The argument will be over how much splash we can make without setting up counterpressures, both here and abroad. Much will depend on what the Vatican finally comes out with.

Another problem is that little in the way of legislation seems called for. Most of what's needed can be done by Executive action. This creates a special message problem, so I suggested linking population control abroad at least to the war on want.

Incidentally, population research in government is abysmally low--only about \$500,000 directly attributed.

RWK

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DECLASSIFIED
E.O. 12958, Sec. 3.5
NSC Memo, 1/30/95, State Dept. Guidelines
By jc NARA, Date 7-31-03

April 29, 1965

MEMO FOR MR. REDMOND

Herewith the paper on population control you wanted. If and when you have no further need for it, we'd appreciate your sending it back since copies are limited.

Pop Control 3

Harold H. Saunders

Attach.

- (1) Summaries of Recent Polls Re Birth Control
- (2) Economic Programs to Prevent Births by Enke
- (3) Lower Birth Rates-Some Economic Aspects by Enke dtd 2/12/65

Pp Continued

4

April 28, 1965

Dear Hollis:

Here's a fascinating study by Steve Enke which, even if off by 50%, would justify a much bigger effort at population control as the most important handmaiden of development.

Capron tells me that Enke has a good reputation, though a difficult fellow. More than this, however, one naturally wonders if his conclusions that population control aid would be 100 times more effective than development aid in raising per capita income will stand up. So it strikes me that you fellows might be able to give us an informal reading.

Sorry to have missed you when I was in Cambridge except for an all too brief encounter on the stairs.

Sincerely,

R. W. Komer

Mr. Hollis Chenery
Littauer Center
Harvard University
Cambridge, Massachusetts

~~CONFIDENTIAL~~

April 28, 1965

MEMORANDUM FOR BILL MOYERS

Here's a copy of the short and longer papers on population control which struck me so forcibly. Delighted with what you told me, and I'll keep mum.

Since this is the view of just one RAND economist, though my economist friends say he's a good one, I am writing Hollis Chenery at Littauer to ask how we get a good reading on whether he's in the ball park.

My own sense is that whatever we do at home, a discreet but well-financed effort among our key clients abroad (which would cost peanuts compared to what we are already giving them) would pay great dividends.

Joe Clark, to whom I mentioned the study, was eager to have a copy and put it in the Congressional Record. I'm a bit skittish about early publicity, however, which might give people the idea we could scratch foreign aid if we'd just invest in birth control.

R. W. Komer

~~CONFIDENTIAL~~

Attach.

Economic Programs to Prevent Births by Stephen Enke
Lower Birth Rates--Some Economic Aspects by Enke 2/2/65
Summaries of Recent Polls Concerning Birth Control

cc: McGB (with attachments)
Bator (w/o attachments)

DECLASSIFIED
E.O. 12958, Sec. 3.5
NSC Memo, 1/30/95, State Dept. Guidelines
By je, NARA, Date 7-31-03

5
Pop Control

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April 27, 1965

Mac -

Here's a little flank attack that I think might just penetrate LBJ's defenses. It's a hard dollar and cents argument for taking a more serious view of birth control in the LDCs.

Any harm in just trying this out on LBJ? It might score, and he did tell Gaud he wanted to talk aid this week.

The study mentioned is a paper by Steve Enke, a RAND economist. Didn't want to overload LBJ but you ought to read it.

RWK

Pap Controll 6

DECLASSIFIED
E.O. 12958, Sec. 3.5
NSC Memo, 1/30/95, State Dept. Guidelines
By jc, NARA, Date 7-31-03

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6a
April 27, 1965

MEMORANDUM FOR

THE PRESIDENT

While you're thinking about foreign aid, here's a fascinating statistic. A recent study claims that if economic resources in many LDC's were devoted to retarding population growth rather than accelerating production growth, these resources could be 100 times more effective in raising output per capita! In many of these countries, spending only about one percent of their present overall development outlays on reducing births could be as effective in raising per capita output as the other 99%.

The above figures are just one good economist's. However, even if they're off somewhat, there's no doubt of the rapidly declining cost of population control because of new devices. This could have immense significance for areas where we are investing massive amounts of development capital--all of Latin America, India, Pakistan, Turkey (to take just our biggest clients). The process of getting these countries to the stage of self-sustaining growth, and thus reducing the longer term foreign aid burden on us--could be greatly foreshortened.

I'm not propagandizing for a big US push on the still sensitive issue of birth control. Things are already moving in this field at a pretty good pace. But the relevance of figures like the above to the achievement of our foreign aid goals is so striking that you may want to consider ways and means of gradually using our foreign aid more as an incentive to major efforts in this field by the less developed countries themselves. You might want to include this subject in your aid talks with Bill Gaud.

Would you like to hear more about this?

cc: McG. Bundy
Bill Moyers
Doug Cater

DECLASSIFIED
E.O. 12958, Sec. 3.5
NSC Memo, 1/30/95, State Dept. Guidelines
By jc, NARA, Date 7/31/03

R. W. Komer

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THE WHITE HOUSE
WASHINGTON

1

February 17, 1966

TO: Bob Komer
Deputy Special Assistant for
National Security Council

FROM: Harry C. McPherson, Jr.

Have you seen this?

Harry

Congress of the United States

House of Representatives

Washington, D.C. 20515

February 16, 1966

ACTION: PC for Bell sig 2/24

INFO: Bell Log

Gaud Log

Chapin

Kearns

TCR

CLS

LPCS

GC

AFR

NESA

LA

FE

Mr. David E. Bell
Department of State
Agency for International Development
Washington, D.C. 20025

Dear Mr. Bell:

This is in further reference to your letter of January 28 concerning A.I.D. activity in the population field.

Contrary to the interpretation by A.I.D., it was the understanding of the House conferees in 1963 that the limitation of the original Senate amendment on aid to family planning precluded the federal government from expending any foreign aid funds in this field, save for research. The justification of A.I.D.'s actions by citing Section 211 is entirely inappropriate. The section calls for the development of human resources, not the prevention of human beings.

It is my conclusion, therefore, that the Agency has been guilty of a grave misuse of authority in providing any aid, other than research assistance, in the population field. Such a sweeping change in the focus of U.S. aid efforts should have been subject to Congressional debate and vote. Unfortunately, this has not been the case.

I note in the press that a program of birth control aid to Pakistan is awaiting formal approval, the first time the United States has provided direct material assistance to another country for birth control work. It is my belief that no final decision should be given on this program unless, and until, Congress has given its approval to United States participation in this sensitive and important area.

As you know, I have long been a supporter of foreign aid. On many occasions I have taken the Floor of the House to defend your Agency and its predecessors against attack. But my enthusiasm ebbs significantly when I am confronted with what appears to be a deliberate flaunting of Congressional will. If A.I.D. cannot be trusted to carry out the intent of the Legislative Branch in this one small area, can it be trusted to look after the massive economic development program for which it has been given responsibility by Congress?

I await your reply on this matter.

Yours sincerely,

CLEMENT J. ZABLOCKI
Member of Congress

Jtp

JANUARY 20, 1966

OFFICE OF THE WHITE HOUSE PRESS SECRETARY
(Independence, Missouri)

8
Population

THE WHITE HOUSE

REMARKS OF THE PRESIDENT

AT THE

ANNOUNCEMENT CEREMONY OF THE ESTABLISHMENT OF
THE HARRY S. TRUMAN CENTER FOR THE ADVANCEMENT
OF PEACE

(AS ACTUALLY DELIVERED AT 11:15 AM CST)

President Truman, Mrs. Truman, Mr. Chief Justice, Senator Symington, Senator Long, Members of the Missouri Delegation and the Congress of the United States, Senator Anderson, Congressman Boggs, Ladies and Gentlemen:

I come back to Independence to be with one of the world's most persistent searchers for peace in the world. It is quite fitting that this day is set aside for the announcement of the Harry S. Truman Center for the Advancement of Peace in the world.

I first want to congratulate the men here today whose generous public spirit is making this Center possible.

I take my text from the words which President Truman spoke just 17 years ago in his Inaugural Address of January 20, 1949.

"We must embark," he said, "on a bold new program for making the benefits of our scientific advances and industrial progress available for the improvement and the growth of underdeveloped areas in the world."

This was, as we know now, Point IV. It was a bold and vital idea then, and it is just as bold and just as much alive as we meet here this afternoon.

The initial Point IV program of technical assistance was enacted in 1949 and has continued from that day to this. Congress after Congress has continued to appropriate ~~to that program~~ -- with growing confidence -- sums which now, I believe, add up to more than \$3 billion. American experts have traveled the globe to every continent, bringing their skills to the world-wide war against ignorance and against hunger and against disease.

And to measure the success of this effort we have only to ask: What would the world be like today if President Truman had not launched this program?

In this year 1966, I am proposing, on behalf of our nation, a major new effort in this same field that he began so long ago, and I am proud to add to the Point IV of President Truman, the fourth principle of this year's State of the Union speech: "to help improve the life of man."

How will we help improve the life of man?

First, we propose a radical increase in our response to the needs of international education. There can be no decent life for any man or any people without education.

MORE

The International Education Act of 1966 will help build partnerships between American and foreign schools.

It will recruit teachers for overseas work.

It will make possible long-term commitments by American universities toward solving the problems of international education.

It will launch a series of projects to attack illiteracy and to find new ways to teach basic skills. It will begin to provide for an Exchange Peace Corps to bring able young people from other countries to live and work here with us.

Second, we are going to enlarge our work for world health. And the twin of the International Education Act will be the International Health Act of 1966.

And with that Act we will strike at disease by establishing an international medical mission in our Public Health Service.

We plan to triple our effort to train medical manpower in the developing countries.

We plan to double the size of our nutrition program for mothers and for children. We plan to increase by 80 million those who will receive adequate diets.

We plan to set targets and to develop programs so in the next decade we can completely wipe out smallpox in the entire world; we can eliminate malaria in this hemisphere and large parts of Africa and Asia; we can end yellow fever in this hemisphere; we can find new controls for cholera, rabies, and other epidemic diseases.

Third, we will launch a major new attack on world-wide hunger. We will present this year a new food aid program, designed around the principle of intense cooperation with those in all hungry countries who are ready to help themselves. We will direct our assistance program toward a cooperative effort to increase agricultural production. We will ask the countries which we help to make the necessary land reforms -- to modernize marketing and distribution -- to invest greater energy and resources in their own food production.

In return, we will triple our assistance to investments in the powerful weapons of modern agriculture -- from fertilizer to machinery we will direct the efforts of our agricultural scientists to the special problems of the developing countries -- to the development of new foods and concentrates. We will call for an international effort, including institutions like the World Bank, to expand the world supply of fertilizer.

Fourth, we will increase our efforts in the great field of human population. The hungry world cannot be fed until and unless the growth in its resources and the growth in its population come into balance. Each man and woman -- and each nation -- must make decisions of conscience and policy in the face of this great problem. But the position of the United States of America is clear. We will give our help and our support to nations which make their own decision to insure an effective balance between the numbers of their people and the food they have to eat. And we will push forward the frontiers of research in this important field.

Fifth, the underlying principle of all our work with other nations will always be the principle of cooperation. We will work with those who are willing to work with us for their own progress, in the spirit of peace and in the spirit of understanding.

And while we work for peaceful progress, we will maintain our strength against aggression. Nothing is more false than the timid complaint that we cannot defend ourselves against the aggressor, and at the same time make progress in the works of peace. A celebration which unites the United States is a fit time to reaffirm that energy in the defense of freedom -- and that energy and progress in the building of a free society -- and it should be the common objectives of any free people -- large or small.

Now this is the central necessity today of the brave people with whom we are associated in South Vietnam. Just this week, the Prime Minister of Vietnam has pledged his country to this necessity. He has spoken for progress in rural education, in housing, in land reform, and above all, of the need for progress in social revolution and in the building of democracy -- by constitutional process and by free elections. All this he has said in the shadow of continuing aggression from the North. In all this he will have the full support of the United States of America.

And so, President Truman, as we dedicate today in your honor the Harry S. Truman Center for the Advancement of Peace, we recall the vision that you gave us to follow when you gave your farewell address, and I quote:

"I have a deep and abiding faith in the destiny of free men. With patience and courage we shall some day move on to a new era -- a wonderful golden age -- an age when we can use the peaceful tools that science has forged for us to do away with poverty and human misery everywhere on earth."

That is still our goal, President Truman. And now we are today redoubling our efforts to achieve it.

Today I informed President Truman of our worldwide efforts to move the violence of Southeast Asia to the table of peaceful discussions. I received a report this morning before I left Washington from Secretary Rusk and Ambassador Harriman on their recent travels. I shall be meeting with the Secretary and the Ambassador again later this afternoon. Both the Secretary and the Ambassador told me that in all the capitals they visited -- and Ambassador Harriman went to almost a dozen -- government leaders recognized the United States' genuine desire for peace in the world.

And of this one thing I am sure, the door of peace must be kept wide open for all who wish to avoid the scourge of war. But the door of aggression must be closed and bolted if man himself is to survive.

It is tragic that in the 1960s there are still those who would engulf their neighbors by force, still those who require that vast resources be used to guard the peace rather than to bring all the people in the world the wonders that are really within their grasp.

The central purpose of the American people is a peace which permits all men to remain free. But we must do more. We must work, and we must build upon the solid foundation, as the Chief Justice said, of law among nations. And this is America's determination, and this is America's commitment.

Now let me leave this one last thought with you. I think every schoolboy knows that peace is not unilateral -- it takes more than one to sign an agreement. And it seems clear to all that what is holding up peace in the world today is not the United States of America. What is holding back the peace is the mistaken view on the part of the aggressors that we are going to give up our principles,

that we may yield to pressure, or abandon our allies, or finally get tired and get out. On the day that others decide to substitute reason for terror, when they will use the pen instead of the hand grenade, when they will replace rational logic for inflammatory invective, then on that very day, the journey toward peace can really begin.

If the aggressors are ready for peace, if they are ready for a return to a decent respect for their neighbors, ready to understand where their hopeful future really lies, let them come to the meeting place and we will meet them there.

Here in the presence of the great man who was the 33d President of the United States, who labored so long and so valiantly to bring serenity to a troubled world, the 36th President of the United States speaks with a voice of 190 million Americans -- we want a peace with honor and with justice that will endure.

Now President Truman, there is one more bit of business that I would like to take care of so long as I have come out here to Independence. I was here not long ago in connection with a little project that you inaugurated two decades ago, but when the fellows last night in the Social Security office learned I was coming out here again to see you and Mrs. Truman today, they asked me to bring along your new Medicare card.

And it is now my great pleasure to present here, in the presence of these distinguished friends of yours, and many of the young men of yesteryear who fought these battles with you, to bring Card No. 1 for you, and Card No. 2 for Mrs. Truman.

They told me, President Truman, that if you wished to get the voluntary medical insurance that you will have to sign this application form, and they asked me to sign as your witness. So you are getting the special treatment since cards won't go out to the other folks until the end of this month. But we wanted you to know, and we wanted the entire world to know that we haven't forgotten who is the real daddy of Medicare. And because of the fight that you started many years ago, 19 million Americans will be eligible to receive new hope and new security when the program begins on July 1, and 19 million Americans have another reason, another cause to bless Harry S. Truman.

Again, I want to thank all of you who made this great day possible.

E N D

POPULATION: POLICY AND PROGRAM

Policy Progression

1. The world has seen an almost volcanic eruption of awareness by governments of the growing magnitude and complexity of its population problem during the past five years.

2. United States public opinion responded with tolerance if not actual agreement when President Eisenhower declared in 1959 that government had no role to play in handling population problems. The government could support the United Nations Population Commission and participate in other national and international demographic research activity so long as the purpose was descriptive and without prescriptive intent at home or abroad. Private American individuals and institutions had not been deterred by the government's limited interest in population matters. The Planned Parenthood Federation, the Population Council, the Ford and Rockefeller Foundations, the Population Reference Bureau were some of the organizations which were creating a body of knowledge and experience in the field of population studies. They were moved by conviction that a grave problem existed, that means existed to deal with it and that governments should move towards mobilizing the vast efforts needed to cope with the ramifications of a world population problem.

3. Shortly after the inauguration of President Kennedy in 1961, the United States Government began to acknowledge publicly the reality of population problems in many parts of the world. This fact alone gave encouragement to greater concentration upon research and programs to participants in private organizations in the United States and abroad, to the United Nations and to foreign governments. President Kennedy declared his concern over the population problems of Latin America. Under Secretary Ball spoke about the problem as related to economic growth prospects in developing countries to a meeting of World Bank and Fund representatives in Vienna. President Kennedy and Secretary Rusk acknowledged the reality of a population problem in press conferences. In December 1962 the United States made a forthright statement of support of United Nations activities devoted to study of the nature and scope of population problems and of possible solutions.

/4. Until

4. Until January 1965 no United States official advocated either specific policy or specific program for dealing with population problems acknowledged to be serious, diverse and sensitive for the United States and other countries.

5. A major advance in United States readiness to move from examination towards action was made by President Johnson in his January 5, 1965 State of the Union message. 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." President Johnson expanded on this statement of intention in his June 25 address on the occasion of the 20th anniversary of the United Nations. He pled for the entire world to "face forthrightly the multiplying problems of our multiplying populations and seek the answers to this most profound challenge to the future of the world. Let us act on the fact that less than \$5.00 invested in population control is worth \$100.00 invested in economic growth."

6. The Congress and the general public in the United States has approved - when it was not urging greater movement - this progression of United States Government policy. President Eisenhower and Vice President Nixon have called for inclusion of family planning in United States foreign aid programs. In June 1965 President Eisenhower wrote Senator Gruening: "If we now ignore the plight of those unborn generations which, because of unreadiness to take constructive action in controlling population growth, will be denied any expectations beyond abject poverty and suffering, then history will rightly condemn us." Senator Gruening has been joined by Senators Clark and Ellender in taking leadership to focus the attention of the Congress upon population problems. Senator Fulbright called for and obtained amendment of the Foreign Assistance Act of 1964 to make possible expanded research in this field. The Congress has appropriated funds specifically for family planning clinics in the District of Columbia. It has acquiesced in modest use of public money for family planning activities by the Office of Economic Opportunity, the Department of Defense, the Agency for International Development, the Department of Health, Education and Welfare and the Department of Interior.

Program Response

No elaborated United States population program, as such, exists.

/Government

Government agencies have dealt with population problems, including that of family planning, pragmatically. Government agencies have in general been guided by several principles with respect to family planning:

1. Participation in the family planning components of programs must be entirely voluntary.
2. Use of family planning services must not be a prerequisite to receipt of benefits or participation in any other program or activity funded by government agencies.
3. Such programs must provide and make known to participants the availability of advice and assistance on a variety of family planning methods and techniques sufficient to insure that persons may make choices consistent with their personal beliefs.
4. Programs must conform to medical standards and be supervised by qualified medical personnel.
5. Materials used must not contain propaganda promoting a particular philosophy, technique or method.
6. Programs must not conflict with local or state law.

The Supreme Court has ruled upon a number of cases affecting availability of family planning facilities for the American citizen, most notably the decision on June 7, 1965 to strike down a Connecticut ban on use of contraceptives by married couples. Laws differ widely through various United States jurisdictions but family planning clinics supported by federal money are in operation in 26 states.

The achievements of the United States Government in contributing to effective family planning programs in developing countries abroad have been relatively modest.

Prior to the President's State of the Union Address in January, 1965, the Agency for International Development provided assistance in the development of health services, population censuses, population surveys and vital statistics. Subsequent to the President's speech,

/A.I.D.

A.I.D. issued a memorandum on population supporting a positive role for A.I.D. in the area of population programs. Concomitantly, A.I.D. organized a Population Reference and Research Branch in its health office, created a population unit in the Latin American Branch, and established consultative and training programs to prepare its own staff and Mission Directors for an extensive program of family planning.

Current A.I.D. policy provides at the request of recipient nations, family planning advice and services. The Agency does not plan to provide contraceptive devices or the machinery for their manufacture.

A.I.D. budgets for FY-65 included \$1,230,000 for the Population Reference and Research Branch and \$950,000 for the Latin America Population office. Of these funds, approximately \$200,000 was spent for organizational development and in-service training with half again as much programmed for FY-66. The remainder of the funds were spent through grants of two types: 1) to educational and research institutes within the U.S. for studies relating to family planning, demography, etc. and 2) grants to operational agencies, primarily in recipient countries, to aid in the establishment and maintenance of family planning services, demographic studies, research in reproductive biology, etc.

As a result of its new and explicit policy, A.I.D. anticipates five or six major requests in FY-66 from countries which already have national programs of family planning. A.I.D. is unable to estimate the size of such requests, although the countries most likely to make them have programs of their own ranging from one to six million dollars.

The Future

From August 31 through September 10, 1965 a World Population Conference was held under United Nations auspices in Belgrade. Over 1,000 participants attended, some 100 from the United States. The last such conference was held 10 years ago in Rome. At that time the United Nations Secretariat did not dare to schedule a session on family planning for fear of exciting criticism by Roman Catholic representatives

/from

from participating countries. Representatives from Communist countries declared that inasmuch as all value, under the labor theory of value emanates from man there could be no "population problem". At the 1965 Belgrade meeting Soviet and other Communist bloc scientists contributed actively and without conspicuous contentious purpose in all sessions. A Roman Catholic priest from France presented views on the necessity of removing risk from the practice of the rhythm method of contraception. Another Roman Catholic priest from the Philippines declared that family planning in that country was an urgent necessity. The Holy See itself was represented at sessions. Scientists in Chile, Hungary and Czechoslovakia presented essays on abortion, legitimate and illegitimate. At Belgrade discussion of the population problem was being defused ideologically. The World Health Assembly of the WHO and the ECOSOC of the UN both took action in the spring and summer of 1965 moving UN concern with the problem down the path from research to action programs.

Looking to the future the United States could now, as a government, be guided by the following principles:

1. It can treat the population problem scientifically without anxiety that to do so will provoke obfuscating ideological dispute as to propriety of that activity.
2. It should advocate no specific or elaborate national policy with respect to population questions beyond the policy of stating readiness to respond to requests for help originating at home or in foreign countries with needed resources, financial, scientific, technical and personnel.
3. It should seek to make greatest impact upon foreign countries by demonstrating:
 - a. medical advances in improving and diversifying methods of contraception; and.
 - b. humane and effective organization of family planning activity in areas within the United States jurisdiction itself; e.g., in impoverished areas of our urban complexes, the Trust Territories, the Indian reservations, Alaska, etc. Scrupulous documentation in depth of this experience over the coming years would have profound teaching value both in the United States and in foreign countries.

/4. It

4. It should draw upon public monies as needed to finance all family planning activities responsive to actual need in the United States and in foreign countries and not embarrass beneficiaries or complicate needed operations by embarrassing distinctions as to the propriety of financing one or another of the elements.

The Human Element

Population is living people: babies, their mothers, their fathers. Its problem is deeply human and presents infinite aspects - as many, in fact, as does mankind itself.

The population problem is often viewed in the terms of those who are aware that:

1. To obtain a 1% increase in GNP in a less developed country requires something like a 3% rate of saving. A concurrent 1% increase in population will, consequently, cancel the per capita welfare benefit of that saving. For the many societies where per capita income is less than \$150 per year, even a 3% rate of saving brings hardship. These are often countries with the highest rates of population growth.

2. One-third to one-half of all the people in a large part of the less developed world now suffer from hunger, malnutrition, or both. Even if birth rates decline continuously and substantially, food production will have to be quadrupled in Asia and more than doubled elsewhere by the end of the century if growing national populations are to attain the minimum dietary targets of the United Nations Food and Agriculture Organization.

3. Industrialization and rapid urbanization have brought, for both affluent and less developed countries, distortions in urban-rural economic relationships, and an upheaval in social tradition; large families, historically economic assets and a source of joy in the countryside, burden the resources and often bring profound human anguish to the city family.

The mother who destroys the unwanted child she bears, the over crowded classroom, delinquents in the city slum, the empty stomach, the hysteria hovering over the national planner who sees greater and

/greater

greater collective effort yield often smaller and smaller return in human welfare are all symptoms of the population problem. A million abortions in the United States, a million abortions in Japan, an excess of abortions over live births in Hungary, twice the number of abortions as live births in some Latin American cities are cruel proof of the immediacy and tragedy of the problem in personal terms. For families, communities, nations and continents there is no more compelling problem on earth today.

1/4/65 / 2/ - 7/ 9
April 28, 1965
Population

Dear Hollis:

Here's a fascinating study by Steve Enke which, even if off by 50%, would justify a much bigger effort at population control as the most important handmaiden of development.

Capron tells me that Enke has a good reputation, though a difficult fellow. More than this, however, one naturally wonders if his conclusions that population control aid would be 100 times more effective than development aid in raising per capita income will stand up. So it strikes me that you fellows might be able to give us an informal reading.

Sorry to have missed you when I was in Cambridge except for an all too brief encounter on the stairs.

Sincerely,

R. W. Komer

Mr. Hollis Chenery
Littauer Center
Harvard University
Cambridge, Massachusetts

UNITED STATES GOVERNMENT

Executive Office of the President
Bureau of the Budget

Memorandum

Population
10

TO : Mr. William M. Capron

DATE: August 23, 1965

FROM : International Division (Cox)

*Phil
Barie*

SUBJECT: U. S. Population Control Programs Abroad

1. The Problem

Reduced death rates combined with high birth rates have precipitated a race between economic development and population increase in most underdeveloped areas. Economic development is in danger of losing the race.

Demographers and economists are increasingly concerned about the approach, in certain areas, of the "Malthusian low-level equilibrium trap" in which it becomes impossible to increase per capita income because any short-term increase touches off a faster rise in population than income, which restores the initial position. Sudden increases in population rates bring corresponding reductions in average age in a society and drastically reduce the ratio of workers to total numbers. Moreover, there is evidence that rapid rise in population neutralizes, or even renders counter-productive, much of the foreign assistance effort of the developed countries.

If present trends continue population of underdeveloped areas can be expected to increase by 65% during the third quarter of this century, and then to double during the last quarter. The underdeveloped world would thus experience a population gain in the last half of the century greater than that achieved by all of mankind throughout human existence on the planet, and by 2000 the underdeveloped areas would contain 80% of the human race as compared with 65% in 1950.

Stable family life and responsible parenthood crumble under the impact of this kind of human proliferation, and social structures become increasingly strained.

Even for a country like Venezuela, with a per capita income higher than Italy's, the population explosion is a severe problem. President Raul Leoni recently stated:

A tolerable rate of population increase is between $1\frac{1}{2}$ and 2 percent annually; Venezuela's is between $3\frac{1}{2}$ and 4 percent. Today, more than half of all Venezuelans are under the age of 20. Their demands for a place in schools and universities, industry and society, have the force of an avalanche.

2. State of the Art

Modern population control and family planning are predicated upon and virtually equivalent to birth control. To the individual, or couple, birth control is a means of preventing or terminating unwanted pregnancies. In the demographic context, it is a means of keeping the birth rate in balance with a low death rate. It consists of two families of techniques: induced abortion and contraception. U. S. Government efforts in connection with birth control programs abroad have centered on contraception.

Interest and experimentation in contraception date as far back as the ancient Greeks, Hebrews, and Egyptians but no completely satisfactory means of cheap and reliable mass contraception is yet available.

Methods which rely on individual restraint without assistance of devices or drugs--such as abstinence from sexual relations, the rhythm method, and coitus interruptus-- have often proved ineffective because of the strength of sex drives, physiological variables, and cultural-psychological constraints. Nevertheless, the rhythm method is being used in government programs in the Philippines and Latin America.

Highly reliable methods such as surgical sterilization, hormonal pills, and diaphragms tend to be prohibitively expensive (and in the case of pills and diaphragms may require too much personal responsibility) for mass control purposes in underdeveloped countries. Sterilization, however, has been used extensively in India, and with somewhat less emphasis in Pakistan.

The condom, less expensive and also less reliable, is still the most common contraceptive device. It can be produced fairly cheaply in some underdeveloped countries.

Vaginal foam, used with effectiveness in Puerto Rico, is found to be less acceptable in other tropical areas where heat, humidity, and dust cause deterioration of its plastic containers.

Intrauterine devices (IUD--"Lippes Loops"), which can be produced at a unit cost of eight cents and can be inserted at the rate of 40 in four hours by one physician, have proved over 95% effective when they can be retained. However, about 10% of women expell them; another 10% find that they induce excessive bleeding and pain and must be removed. Ambassador Chester Bowles was recently quoted as saying 20,000 IUD's will be made daily in a new Indian factory scheduled for full production in five months.

Examples of successful population control programs may be seen in Japan, where the birth rate has decreased sharply since 1950, largely through practice of abortion, and in Puerto Rico, where there has been a smaller but significant decline through sterilization and other forms of contraception.

Another promising effort is being carried on by the Population Study Center at Taichung, Taiwan, with the assistance of the Population Center of New York. In 1964, the first year of the program, 46,449 women responded to the Center's informational campaigns. Present plans provide for 300 to 400 Taiwan physicians and other public health personnel to be trained to insert the IUD.

3. Changing Climate of Opinion

World opinion has grown perceptibly stronger in favor of birth control during the 1960's.

Nearly all women on Taiwan tell researchers that they do not want more than four children. They are aware that they no longer need to have five or six in order that four may survive, but if nothing is done they will have five or six. A large percentage admit to having submitted to illegal abortion.

One of the dozens of Catholic priests who participated in the four-day Pan American Assembly on Population at Cali, Colombia, this month stated that "for every two births in Latin America there is one abortion" and that "almost half the female members of the Church now use some kind of contraceptive device." He added that "those who are not using such devices are usually in the poorest classes, whose high birth rate creates social conditions that lead them to live outside the Church." This population conference-with or without heavy clerical participation-would have been unthinkable three or four years ago.

Dr. Alan F. Guttmacher, prominent gynecologist and birth control specialist, told the Gruening Subcommittee of the Senate August 10, that illegal abortion is "one of the most serious diseases of mankind," probably causing more deaths throughout the world than cancer or heart disease. Secretary Udall on the same occasion said that "most of the crucial problems that now confront the human race will simply become insoluble" if population growth continues at the present rate.

4. The President's Concern

President Johnson said in his State of the Union Message on January 4, 1965:

I will seek new ways to use our knowledge to help deal with the explosion of world population and the growing scarcity of world resources.

Again, at the Twentieth Anniversary Session of the United Nations on June 25, the President said:

Let us in all our lands--including this land--face forthrightly the multiplying problems of our multiplying population and seek the answers to this most profound challenge to the future of all the world. Let us act on the fact that less than five dollars invested in population control is worth a hundred dollars invested in economic growth.

5. Government Policy

The attitudes and objectives of the Executive Branch are expressed in AID Circular Airgram A-280 of February 25, 1965, approved by the AID Administrator and the Secretary of State. Excerpts follow:

Since 1962 A.I.D. has encouraged the collection and analysis of population growth data and study of attitudes about family planning. Requests for information and assistance in family planning have been referred to appropriate private agencies.

A.I.D. does not advocate any particular method of family regulation. Freedom of choice should be available.

Requests for assistance in this field, as in others, will continue to be considered only if made or approved by appropriate host government authorities. Such assistance would, in any case, merely be additive to the host country's own efforts and assistance from other sources.

Requests for assistance will be handled, as in any other field, on a case by case basis. We are prepared to entertain requests for technical assistance.

Where appropriate, the requests will continue to be referred to private agencies.

We are prepared to receive and consider requests for commodity assistance, but A.I.D. will not consider requests for contraceptive devices or equipment for manufacture of contraceptives. Experience has made it clear that the cost of these latter items is not a stumbling block in countries that are developing effective programs.

Other items could be provided by A.I.D., such as vehicles and education equipment for use in maternal and child health and family planning programs.

We are also prepared to receive requests to assist in local currency financing of such programs.

6. The Program

The major U. S. population control programs abroad are directed by the Agency for International Development. Peace Corps volunteers often provide family planning and birth control information in the course of their work overseas, but that agency has no definable program in this area.

Program history

AID and predecessor agencies have traditionally provided assistance in the development of health services and demographic statistics, and have trained health and statistical personnel. Considerable aid has been given in population control as a part of maternal and child health assistance, although it has seldom appeared in programming or budget documents.

Since 1962, AID has encouraged and assisted collection and analysis of population growth data and attitudinal studies on family planning.

In July 1964, the Population Reference and Research Branch was organized in the Office of Technical Cooperation and Research, and the Latin America Bureau established a Population Unit in its Institutional Development Office. Full-time professional staffing for the entire Agency consists of two positions in the Population Reference and Research Branch. Consultants have been appointed in the demographic, economic, medical and public health aspects of the population field.

Each A.I.D. Mission has assigned one of its officers to become familiar with the problems of population dynamics and program developments.

The Agency through the Population Reference and Research Branch has initiated in-service training activities by conducting seminars and assisting in development and compilation of specific and general reference materials and publications on population for distribution to A.I.D. personnel.

Current status

Cost of AID population programs for FY 1965 totalled \$2,153,755 and an input of \$3,790,023 is programmed for FY 1966. The attachment contains data on nature and purpose of program components. The Agency's effort to date emphasizes development of strong organizational units working on

population dynamics training and research in U. S. and foreign universities, foundations, and government agencies. The objective is to develop a reservoir of trained manpower to meet anticipated requests for technical assistance and to provide expertise in population programs to AID Missions abroad.

In March the Agency began systematically informing host governments of the availability of U. S. assistance in population control. No formal requests have been received in AID/Washington to date, but requests are expected during FY 1966 from Turkey, Pakistan, India, Tunisia, and Korea, and possibly also from Kenya, Honduras, Brazil, Thailand, and Morocco.

Difficulty of long-range planning

Population control is an experimented field not only for the Agency but for recipient countries as well. The magnitude of the problem is now almost universally recognized by articulate people in all countries. The crusade for attention is over. But the methodology for attack is subject to formidable political, economic, religious, cultural, psychological, physiological, and technological variables and constraints. Most interested governments are still doubtful as to what kind of programs they should undertake and what kind and amount of input they might request from the United States. The Agency, therefore, has little basis for anticipating requirements for staffing or funds.

Planning factors

Some prediction of the size of requests can be deduced from the planned annual expenditures in the countries having national family planning programs. Data currently available indicate that Pakistan will spend \$1.7 million, India \$6 million, Turkey \$1 million and Korea \$800,000.

The Family Planning Commission of Pakistan has submitted a request to AID which indicates the magnitude of assistance and the purposes for which the funds will be spent. To date the Mission has only indicated it will provide financial assistance for the purchase of motor vehicles.

In Turkey a loan request of \$5 million distributed over FY 1966-1967-1968 is likely. In India and Korea no formal requests have been submitted, but it is clear that a major request will be submitted by India, and a smaller one is expected from Korea.

To meet future workload requirements, the Population Reference and Research Branch will probably require a full-time professional staff of four soon. At least one professional--either a demographer or a public health specialist--will be required for each AID Mission that develops a population control program.

As requests for assistance are received, long-range planning will become more practicable. At this stage the Agency expects to continue and accelerate its programs in three principal categories: commodities and technical assistance; review and evaluation of host country programs; and coordination with other-donor programs to avoid duplications.

7. Program Issues

The following questions may merit consideration as population control activities evolve:

Should the United States seek to provide more active stimulation and leadership to underdeveloped countries in the population control field?

Should more effort be made in selected countries to package population control with other programs and to encourage the recipient government to take the entire package, as is now being done in India?

Should AID/Washington begin now to augment its population control staff and decentralize more functions to regional bureaus in anticipation of a rapid increase in workload requirements during FY 1966?

Should AID relax its policy of uniformly declining to consider requests for contraceptive devices or equipment for manufacture of contraceptives? Does this policy imply something less than total U. S. commitment to population control efforts?

Attachment

100

Population Funds Expended or Proposed by Type of Expenditure by
The Agency for International Development, FY 1965 - 1966

Unless otherwise specified, contracts itemized on this table are for: (a) consultation services for AID/Washington and mission directors; (b) the establishment of training units in population dynamics for U. S. and foreign students; and (c) demonstration and research projects particularly in the areas of program evaluation and social attitudes.

| <u>Type</u> | <u>FY-1965</u> | <u>FY-1966</u> |
|---|----------------|----------------|
| <u>Population, Reference and Research Branch,</u> ^{1/} <u>Health Service, Office of Technical</u> <u>Cooperation and Research</u> | | |
| 1. Children's Bureau, HEW (Training) Training for midwives and supervisors in family planning. | \$ 12,150 | \$ 27,800 |
| 2. National Center for Health Statistics, HEW (Training) Training for demographers in fields of vital statistics and survey measurement. | 25,895 | 65,300 |
| 3. Bureau of Census Preparation of materials and documents (for AID executive staff and Mason Committee) concerning population policy and programs. | 16,300 | -- |
| 4. Johns Hopkins University (Seminar) Seminar in June 1965 on AID population policy and proposed programs. | 12,684 | -- |
| 5. University of Pittsburgh Preparation of materials and documents (for AID executive staff and Mason Committee) concerning population policy and programs. | 11,000 | -- |
| 6. University of Michigan (3 yrs.) | | 350,000 |
| 7. University of North Carolina (3 yrs.) | 268,884 | -- |
| 8. Johns Hopkins University (3 yrs.) | 480,342 | -- |
| 9. The Population Council (3 yrs.) Investigation of population problems: attitudinal studies, evaluation techniques, survey methods, computer programs. | -- | 411,400 |

^{1/} Does not include allocation of salaries of senior staff members (such as Assistant Administrator, Office of Technical Cooperation and Research; Associate Administrator, Office of Program Coordination; Director, Health Services, etc.) for time spent on population activity. It would be difficult to estimate the hours and cost for this activity.

| <u>Type</u> | <u>FY-1965</u> | <u>FY-1966</u> |
|---|------------------|--------------------|
| 10. Conferences | -- | \$411,400 |
| 11. Administrative Costs (PRRB) (Staff, consultants, travel, etc.) | \$ 63,500 | 136,000 |
| | <u>\$900,755</u> | <u>\$1,065,500</u> |

Bureau for Far East

| | | |
|--|----|---------------|
| 1. The Population Council (Korea) Testing of procedural manuals | -- | 50,000 |
| 2. University of Michigan (Taiwan) | -- | 145,000 |
| 3. Asian Institute for Economic Development Planning (Bangkok) | | |
| a. Workshop, communication | | 23,000 |
| b. Research and training center | | 50,000 |
| c. Other workshop activity (ECAFE) | | 50,000 |
| 4. University of Hawaii (East-West Center) | | 225,000 |
| 5. Bureau's administrative costs | | <u>10,000</u> |
| | | \$ 553,000 |

Bureau for Latin America

| | | |
|---|---------|---------|
| 1. University of California (2 yrs.) | 164,500 | -- |
| 2. International Planned Parenthood Federation Supplementary programs in maternal and child health | 100,000 | 500,000 |
| 3. Notre Dame University Family studies: attitudes, motivations. Working with Latin American universities (possibly in Brazil, Peru, Colombia) to improve their facilities. | 177,500 | 200,000 |
| 4. Population Council (3 yrs.) | 300,000 | 150,000 |
| 5. Center for Economic and Social Development in Latin America (3 yrs.) | 400,000 | 215,000 |
| 6. Colombia Institute for Social Development (1 yr.) Communications: production of a film; population problems and attitudes. | 40,000 | -- |
| 7. Design Center (1 yr.) Reports on communications. | 2,000 | -- |
| 8. University of Puerto Rico (training) | 10,000 | -- |

| <u>Type</u> | <u>FY-1965</u> | <u>FY-1966</u> |
|---|----------------|----------------|
| 9. International Federation of Institutes for Social and Socio-Religious Research (2 yrs.) Attitudinal changes in relation to Church doctrine. | | \$200,000 |
| 10. Institute for Economic & Social Development in Central America (2 yrs.) Development of a Central American training and research facility for population and family planning studies. | | 100,000 |
| 11. Catholic Inter-American Cooperation Program Rhythm method research | | 100,000 |
| 12. Pan American Health Organization Research and training program in population dynamics and demographic training. | | 200,000 |
| 13. Bureau's administrative costs | \$ 50,000 | 65,000 |
| <u>Sub-Total</u> | \$1,244,000 | \$1,730,000 |
| <u>TCR - Office of Research and Analysis</u> ^{2/} | | |
| 1. National Center for Health Statistics (supplemental section) Conduct tests of survey activities against model registration system. | -- | 74,000 |
| 2. American Institutes for Research Tests of procedures in relation to various religious and medical groups taking into account cultural or religious preconceptions. | -- | 358,523 |
| 3. Administrative costs | 9,000 | 9,000 |
| <u>Sub-Total</u> | \$ 9,000 | \$ 441,523 |
| <u>Bureau for Near East and South Asia</u> | -- | -- |
| <u>Bureau for Africa</u> | -- | -- |
| <u>GRAND TOTAL</u> ^{3/} | \$2,153,755 | \$3,790,023 |

^{2/} Does not include any contingency funds for unsolicited research contracts or grants with private agencies and universities which might develop within FY 1966 funding period.

^{3/} Does not include funds allocated for population census and survey activity; costs of designated population officers in each USAID Mission for time spent on activities in the population field; and participant training in statistics and health which has a relationship to population programs.

End papers //

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LOWER BIRTH RATES - SOME ECONOMIC ASPECTS

Stephen Enke

Consultant

Office of Program Coordination ,
Agency for International Development

12 February 1965

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World Pop.

4/28/65

LOWER BIRTH RATES - SOME ECONOMIC ASPECTS

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LOWER BIRTH RATES - SOME ECONOMIC ASPECTS

PREFACE

This short essay is written by an economist for use by those concerned with rapid population increases. It outlines some economic aspects of recent demographic and medical events that relate to the evolving population policies of the Less Developed Countries and the United States Government. It is offered as personal opinion only.

PART I - WHY FEWER BIRTHS?

A. The Demographic Threat

The demographic nature of the population threat is now so widely recognized among policy makers that only a few magnitudes deserve repetition.

(1) Most Less Developed Countries (LDCs) are experiencing a natural increase in population of from 2 to 3.5 per cent a year - which means a doubling of population every 38 to 22 years.

(2) All LDCs have "high" birth rates of over 30 births per thousand population a year, and some approach 45. All More Developed Countries have crude birth rates of under 30 per thousand a year. High birth rates are a characteristic, consequence, and cause of under-development.

(3) The rising rate of natural population increase during the last two decades is attributable to rapidly falling death rates. Mass epidemics have been largely controlled by such traditional public health measures as inoculation and quarantine. Malaria control has proved to be a successful and inexpensive way of indirectly reducing fatalities. In most LDCs it is expected that death rates will continue to fall, although not perhaps so fast or so inexpensively as in the recent past. Further improvements will have to depend more upon medical care and hospital treatment of individual patients. Nevertheless, over the next decade or two, many suppose that death rates will decline faster than will birth rates in a majority of LDCs.

(4) Current age specific fertility and death rates are unstable. They cannot continue for many more decades in already overpopulated countries that are effectively closed economies. Either birth rates must decline, or death rates attributable to malnutrition and even famine must rise towards the end of this century. International migration is probably not a feasible solution for Asia. Nor is it probable that mass movements of food grains and concentrates can or will be made available in sufficient quantities to provide more than an extra decade or so in which to reduce birth rates before disaster.

(5) Thus little time remains for those countries that have (a) high rates of natural increase, (b) high population densities already in terms of agricultural and other economic resources, and (c) too numerous and ethnically distinct a population for emigration to provide adequate relief. India, Pakistan, and Egypt notably fit this description. But there are many others.

B. Economic Cost of Uncontrolled Births

The economic cost of overpopulation and/or high birth rates takes several forms. The most serious are not always the ones most immediately recognized by governments. Thus, planning authorities in some countries are much concerned by the cost of extra schools and other social infrastructure necessitated by a rapidly increasing population. This is a serious problem. But other aspects of overpopulation and/or high birth rates are more critical and more pervasive.

Increasing population with over population

The countries that most rightly fear a doubling in population in 38 to 22 years are those that are already "overpopulated". ^{1/}

Officials in these countries sense that gross national output will not have doubled by the time that population has doubled. This is because a more or less doubled labor force, accompanying a twice as large population in say A.D. 2000, will not have doubled investment and doubled land resources with which to work. Innovations that result in more output per unit input of labor, capital, and resources may not be sufficient during the next 30 odd years to offset slow capital accumulation and the inability of "land" to multiply itself also. In this case there would be a reduction in output per head and no economic development.

Any extra GNP (ΔY) stems from extra employed labor (ΔL), extra capital stock (ΔK) and extra innovations that increase productive efficiency. There can only be a zero natural resource increase (ΔR). Thus, one possible macro-economic approximation for short-time periods of say five years is:

$$\% \Delta Y = \{1 (\% \Delta L) + k (\% \Delta K)\} + \{1 + \phi\}$$

where ϕ is increase in "productivity" over the period.

If population growth dynamics permit one to suppose that the ratio of population to labor remains unchanged over 5 years, and one assumes that the degree of employment of labor is about constant, some predictions can be made about the effect of extra population on output and income per head if the values of l , k and ϕ can be estimated roughly. In certain situations l and k may approximate the shares of labor and capital respectively in national

income.^{2/} Perhaps $l = .5$ and $k = .2$. That they sum to less than unity, leaving .3 attributable to fixed natural resources, is a measure of the diminishing returns of labor and capital together in terms of "land".

The use of this kind of equation can be demonstrated with a not unrealistic example. Assume a country with a 12% increase in P and L during 1965-70. Perhaps $\% \Delta K$ is 30% over these 5 years.^{3/} Then, if there are no innovations (ϕ) there is a .5 times .2 (i.e., 6%) increase in Y, attributable to ΔL . Also there is a .2 times .30 (i.e., 6%) increase in V, attributable to ΔK ^{4/}. Summing, after 5 years there is 12 per cent more output to be distributed among 12% more people, so output per head has remained unchanged.

In this example the magnitude of l provides an inverse measure of "overpopulation". The smaller l , the greater "overpopulation". The smaller $l / \frac{k}{K}$, the more economically scarce are natural resources.

This hypothetical case also distinguishes Less from More Developed Countries. A more developed country would probably have had a ϕ during 5 years of from .10 to .5. It might also have had a larger $\% \Delta K$.^{5/}

The main point, however, is that a 12% increase in population and employed labor force resulted in a 6% increase in output attributable to them. Thus, for all age brackets together, extra population means proportionately less increase in output than increase in consumers. Mouths are increasing more rapidly than food and other output. This consideration of birth reduction policies is still too crude though, because age structure is ignored.

Adult males and females in the most procreative ages -- say from 20 to 40 years in backward countries -- produce more than they consume. This is especially true of the men, and could also be true of the women if they had fewer babies. It is mostly the under 15 year olds who subtract from the economy as consumers while adding nothing as producers.^{6/}

Thus a reduction of births from 4% of population to 3% during 1965 - 1980 would reduce consumption by dependents without reducing production during the next decade and a half. All those who can enter the labor force at 15 years of age during the next 15 years are already born. Birth reductions must increase the future consumption and/or investment per head of those alive in 1965.

High birth rates and excessive infant dependency

It is not sufficiently realized that high birth rates, even in the absence of "overpopulation", impose a severe economic burden on any nation.

The fraction of population under 15 years of age, comprising those too young to be anything but consumers, is primarily a function of the birth rate. The demographic explanation of this relation is somewhat involved. Significant here is that a country with a crude birth rate over 40 per thousand a year is likely to have about 40% of its population too young to work. And a country with a birth rate of 20 might have roughly 20% under 15 years of age. It is the poor countries with high birth rates that have the most onerous dependency ratios.

The cost of these dependents in an LDC is serious in the aggregate. Very young children in really poor and tropical countries may not cost much for food and shelter. But they must and do eat after weaning. As they

approach 15 years they approach the consumption patterns of adults. In the future it is expected that children will increasingly occasion costs to government for social services such as schooling. And the almost universal trend towards urbanization ordinarily raises costs of housing and utilities for parents and municipalities alike.

In a country where per capita income is \$100 yearly, and the savings rate is 8 per cent in total, per capita consumption is \$92 a year. In such a country the undiscounted value of consumption of 0-15 year olds in any single year, averaged after allowing for age distribution, probably approximates \$60 a year per head. But it would give a false impression for these purposes to state that the consumption cost over the next 15 years, of a child born today, is 15 times \$60 or \$900.^{7/}

The present discounted value of such a child's consumption, which is alone significant for determining what it is worth to prevent a birth, must take three other considerations into account. First, typical consumption rates by age increase slowly year by year, from almost zero at birth to almost the consumption rates of adulthood by 15 years. Second, not all infants survive to the higher consumption of 10 and 15 years of age. Third, the higher consumption of older children must be discounted by appropriate rates, because such consumption is further in the future for infants born or not born this year. In countries suffering capital scarcities and urgent time preferences, present values of events are far less than their future values, and no less so in the case of dependents' consumption.

Table 1, taking these factors into account, gives present value estimates of released consumption per typical infant not born this year for a \$100 income per head per year nation. These are presented for discount rates of .10, .15, and .20 per annum. Details of calculation are given in Annex I. The main outcome is that a prevented birth this year releases consumption having a present value at .15 discount of \$279. The "average" yearly consumption, allowing for discounting and deaths, is \$19 . The "average" daily consumption has a present value of 5¢ a day.

These estimates are for a country with a per capita income of \$100. They would be about twice as great for a country with a \$200 per capita annual income. Scaling is roughly proportionate so long as yearly aggregate savings remain within 5 to 15 per cent of GNP.

Table 1 also gives values of postponing (temporarily) and preventing (permanently), an infant birth. The worth of male sterilization (vasectomy) for instance, relates to the value of permanently preventing another birth. But the worth of many forms of contraception -- condoms, for instance -- may relate more to the value of postponing a birth by one or more years.

The simplest approach, and the one perhaps most valid for high birth rate countries and couples that do not practice family planning, is to set the value of postponing a birth by one year at the present value of 15 years consumption times the age-specific fertility rate of the exposed woman. Thus, if 15 years consumption is worth \$279 now and the appropriate fertility rate is ^{.25}~~.20~~ a year, postponing one year is worth \$ 70 . (Logically this

estimate should be set against the estimated cost of postponing a birth one year by some particular contraceptive measure.)

Another possible approach, most relevant however to more developed countries where "spacing" is under some control by emancipated couples, is to compare the present values of 15 years consumption if the infant was definitely to be born either this year or next year. The probabilities of birth in any year are then either 1 or 0 and are not the age specific fertility rate. In the "spacing" method of estimation, the discounted 15 year consumption stream is conceptually shifted one more year into the future and then compared with the present value of the consumption of an infant born this year. Calculations are tedious. For a \$100 annual per capita income country, and using a .15 discount rate compounded, postponing a birth by one year is worth \$ 36 now.

These economic savings from permanently preventing or temporarily postponing a birth result from high birth rates and not from overpopulation as defined. The argument for reducing births as an economic development measure is not vitiated if a particular backward country has abundant and fertile land as yet uncultivated. It is the high birth rates common to all ^{8/} LDCs that are one common cause of their poverty.

Calculating the present discounted value of infants

More elegant but difficult calculations of the worth to an economy of birth reductions would combine the two approaches described above. These more refined estimates should take account of both the consumption of dependent children and the low marginal productivity of today's infants

when they eventually join the labor force. This means that the incidence of both high birth rates and of the degree of overpopulation should be gauged so far as possible.

Ideally, in forming birth reduction policies, officials should have estimates of the present discounted value of a newly born infant to the national economy it is entering. This involves discounting to the present the future consumption and production streams attributable to a "typical" infant.^{9/} In most, if not all LDCs, the present discounted value of the negative consumption stream will exceed the present discounted value of the positive production stream.

That infants should have a minus value to their country's economy is due to three elements:

- (1) consumption starts now, but production through labor does not begin significantly for 15 years or so, and values in the distant future are compound discounted to the present;
- (2) not all babies survive to enter the labor force, especially in poor and backward countries where death rates for children are relatively high; and
- (3) the marginal product of labor (i.e., extra output per extra worker) in any country suffering from some degree of overpopulation will be less than the average product of labor (i.e., output per worker).

Imagine a group of 1,000 infants born early this year, having typical fractions of boys and girls, intelligent and stupid, strong and weak, etc. After one year as sucklings, and after customary infant mortality, perhaps 825 survive to become more normal consumers. Apart from a few chores around

the family dwelling and land holding, they remain unimportant as producers for 15 years or so, by which time perhaps 800 survive.

These new members of the adult labor force add to output. However, if there are already many adults working with very little land and capital, the extra output of these extra workers will be less than output per worker in the country as a whole. Thus output per worker may be around \$250 a year in a country with a yearly income per head of \$100. But the extra output of the 800 new adult workers may be only \$80,000 or \$100 each.

Their individual remuneration -- in subsistence or money -- will be comparable though to that of other adults of the same sex, age, experience, etc. Thus in effect, wherever there is a degree of population pressure, any increment in population and labor force subsequently will add less to output than that increment subtracts in "wages" and consumption. And this disparity between marginal and average product, when combined with deaths in childhood and discounting the future, makes for negative value infants.

Depending on assumptions regarding diminishing returns, death rates, consumption, productivity, and proper discount rates, hopefully appropriate to each LDC, the value of permanently preventing a birth can logically be estimated for it. Obviously a great deal of empirical research to determine these parameters by country needs to be undertaken. At present these calculations are not being made by development planners.

As an order of magnitude, in populated countries with high birth rates, infants probably have a negative value between once and twice the annual per capita income. Hence, in a country with a serious population problem

and an output per head of about \$100, it is "worth" from \$100 to \$200 to prevent a birth permanently.^{10/}

Perhaps more importantly, if several births can be prevented by a couple adopting some contraceptive method that is ordinarily lasting (e.g., vasectomy), the "worth" of this act is several times as large again (perhaps equal to five times per capita income in the case of a young couple with few children already.)^{11/}

Return on Investments in Labor

There is another but related way of viewing the degree of overpopulation and overfertility in a country. National economies in effect are investing resources to provide real capital goods and to provide labor. Productive members of the labor force must have been supported through childhood and be provided at least sustenance in adult life. The planners of even a semi-socialist economy should pay some attention to the rate of return being earned on resources invested in providing a labor force. And "ideally" they might well seek to allocate resources so that the rate of return on those invested in supplying labor was the same as on those resources supplying capital goods.^{12/}

Mathematically, if the future marginal product and average consumption streams are known for a representative 1000 infants, year by year, there will be some discount rate that will attribute the same present values to these two streams. We know that this indifferent discount rate is markedly less than the 15 per cent assumed to be the typical ex ante earnings of capital. And if the undiscounted sum of marginal product values is less than the undiscounted sum of average consumption values -- which is conceivable in

a seriously overpopulated country -- the discount rate that would equate their present values will be negative.

In any event, in most LDCs there is an imbalance. Only about one-tenth of annually available resources are being invested in capital projects earning say 15 per cent a year. Yet roughly one-quarter of available resources are earning close to a zero or negative return as they are inadvertently "invested" each year in providing a labor force. Economically at least, fewer resources should be "invested" in providing labor and more in providing real capital goods and equipment. Moreover, if there were fewer births and hence children to support, it might be possible for government through extra taxation to divert a more substantial fraction of released dependents' consumption into real capital accumulation than will otherwise be the case.^{13/}

C. Comparative Effectiveness of Resources Invested in Birth Reductions

A reduction of births in LDCs will not necessarily occur merely because it would advance them economically. Clearly a program is needed that will augment the ability and willingness of couples to have fewer babies. And any such birth control program will require the use of varied resources, some of which are scarce and costly.

Hence, a valid question concerns the comparative effectiveness of resources used in reducing births rather than educating children, aiding farmers, or even building factories. Obviously, in a short run of five years or so, factories cannot be substituted for family clinics or engineers for doctors. But over longer periods a nation does have a choice between more output or fewer children than there would otherwise be.

Specifically, if an LDC's goal is to maximize aggregate gross output per head of population in each and every of the next 15 years, should it marginally divert some of its development budget and national resources from investment for extra output to investment for fewer consumers?

Output per head is a ratio of course. It can be raised by increasing the output numerator or decreasing the population denominator from what they would otherwise be at some future date. Resources can be used for either purpose. For example, after 15 years, some given millions of dollars worth of resources invested in real industrial capital might increase national annual output by .004 times. Different resources of equal value, employed in a birth control program, might after 15 years result in a population .100 smaller than it would otherwise be. Such a birth control program would be 250 times more effective a means of raising per capita income per unit of resources so employed.

There are many contraceptive methods that could and should be made more available in LDCs. Any comprehensive program would probably include IUD's condoms, diaphragms, foam tablets, etc. Simply for illustrative purposes in this section, the comparative effectiveness of resources invested in vasectomies and IUDs only will be demonstrated. ^{14/}

How much can vasectomies for instance, contribute to a reduction in population ($\Delta P/P$) over 15 years?

Let V be the number of vasectomies a year and f the otherwise expected annual fertility of the volunteers' wives, averaged over the next 7.5 years, say. Then, ignoring gestation lags, the first year's vasectomies will

reduce births after N years by V.f.N. The second year's operations will reduce births by V.f (N - 1) from start of the program. So, after N years, the absolute change (ΔP) in births is approximately $V.f.N^2/2$.^{15/}

The proportionate change is ΔP divided by P.

How can the proportionate change in output ($\Delta Y/Y$), related to this $\Delta P/P$, be estimated after N years? If the resource cost of a single vasectomy is \$c, then the resource cost of a constant scale vasectomy program is V. c dollars each year. Different resources of equal value, if invested in factories and the like, would earn a rate of return of i, say a year. So the absolute change in national annual output (ΔY) at the end of N years is about V. c. i. N. The proportionate change is ΔY divided by Y.

Thus the comparative effectiveness ratio, of resources invested in reducing births rather than increasing output, is

$$\frac{\Delta P/P}{\Delta Y/Y} = \frac{V. f. N^2. Y}{2. V. c. i. N. P} = \frac{f. N. (Y/P)}{2 c. i}$$

Some not wholly unreasonable values can be ascribed these parameters. Suppose f is 0.2 a year, N is 15, (Y/P) is \$100, c is \$4, and i is .15 a year. This makes the ratio

$$\frac{\Delta P/P}{\Delta Y/Y} = \frac{\$300.00}{\$1.20} = 250.$$

A 250 times superior effectiveness is a staggering ratio to encounter in socio-economic affairs. It therefore needs stressing that the values attributed to f, c, and i are approximate at best. But even if each of these three parameters was adversely wrong by a factor of 2, so that f was .1, c was \$8, and i was .3, the revised superiority ratio would still be over 30. If

the period considered was 10 years rather than 15 years, the effectiveness ratio would be only $2/3$ as great.^{16/} (Contrarily, in many Latin American countries typical Y/P values are more like \$250 a year than \$100, thus raising these ratios 2.5 times again.)

Noteworthy is the adaptability of this comparative effectiveness formula to certain other birth reduction methods than vasectomy. Suppose IUDs were evaluated instead. The only values that might be changed in the final expression are \$c (which might be \$2 rather than \$4) and N (which might be 5 rather than 15 years if IUDs are used to postpone rather than permanently prevent a birth.) The effective ratio is then almost 170.

The main conclusion must be that resources used effectively in birth reduction programs can make an extraordinary contribution to income per capita in LDCs.

This does not mean, of course, that conventional development projects should be cancelled and all resources devoted to birth reduction programs. Practically, available resources that can be used for vasectomies and IUDs are limited by the number of volunteers, and they may continue so far to be few. But these and other birth control methods, some of them only moderately less effective according to this criterion, are likely to become far more acceptable.^{17/}

PART II - HOW REDUCE BIRTHS?

The fact that birth reductions may be a necessary condition of economic development in many LDCs is not unfortunately a sufficient condition to ensure ameliorating action. Not all governments fully recognize even yet the need to lower birth rates if their development aspirations are to be realized. Not all governments have the political courage to promote family planning campaigns that run counter to traditional cultures. And there is uncertainty as to the extent that the peoples in these countries are behind or ahead of their governments in supporting lower birth rates as a national policy. Nevertheless, throughout Part II it will be assumed that governments are serious and cooperating in this regard, and do request U.S. assistance. How governments can overcome the possibility of very limited public acceptance of family planning will be considered in the final section of this part.

A. Probable Magnitude and Cost of Major Programs

How large a birth reduction program is needed to be effective in some sense? How costly will it accordingly be? What sorts of programs make medical and economic sense?

Magnitude of Program

Exact birth reduction goals are a matter for a host government to decide. Japan halved its birth rate since World War II, from 34 to 17 per thousand a year in ten years, abortion being widely and openly used, but that nation cannot be considered typical of underdeveloped countries in Asia

or elsewhere. Any realistic goal might have to be more modest, although this only experience can reveal.

Suppose several LDCs wished in one decade to reduce their natural increase rate from 2 to 1 per cent a year. Typically, present crude birth rates could be 42 per thousand a year and death rates 22. But crude death rates will presumably continue to decline -- unless deaths from malnutrition increase significantly -- to perhaps 18 per thousand annually by 1975. The crude birth rate would then have to be cut to 28 to meet the stated goal. This would constitute a one-third cut of 14 points in the birth rate.

A one third reduction in the crude birth rate unfortunately requires a greater contraceptive program than is superficially apparent. It certainly does not mean for example that all exposed couples should practice effective contraception one third of the time during which the women are pregnable. Nor does it mean that it is enough for one third of fertile and exposed couples successfully to use contraception during the number of months that the wife is now typically pregnable.

A reduction in birth rates over say 10 to 15 years, decreases the fraction of population too young to procreate and increases the fraction of child-bearing age. Hence, for the crude birth rate to remain even constant, age specific fertility rates must fall. Perhaps these fertility rates have to fall by something approaching one-half.

As birth and conception rates fall, the number of months that a woman is pregnable from birth to birth increases absolutely, and also relatively to the length of the birth cycle itself. This is because a woman who

conceives may be "safe" for the 10 to 20 months she is pregnant and lactating. The fewer conceptions, the more "unsafe" months in a 5 year period, and the more contraceptive devices will be needed if traditional methods (e.g. condoms) are used. ^{18/}

A typical LDC's population comprises over 35 per cent of procreative age. But some of these men and women are not fertile or not cohabiting. Thus perhaps 32 per cent are fecund and exposed. And about 16 of these are women and another 16 men of course.

During any month a substantial fraction of these 16 women (or their spouses) will not be eligible, because of pregnancies or post partem amenorrhea, as explained above. Another substantial fraction will be young wives who perhaps want their first children now. If these women who cannot or want to conceive are deducted, perhaps 8 women per 100 national population are eligible in any one month.

However, over even a five year period, substantial turnover is inevitable. If the 8 participating women are ordinarily older women with several children already, perhaps 2 will experience menopause. If the 8 participating women are representative of all fertile ages, 3 or 4 may drop out for 1 to 2 years during this period because they are deliberately having a child.

A policy issue for governments is whether to limit the "target" group to all older women who have had say 3 surviving births. In this case, assuming aggregate crude births are to be almost halved, these participants must have no more children. Is it reasonable to expect that participants' motivation and contraceptive effectiveness are together such that half the

fertile and exposed women, comprising all the women above say 30, will almost never conceive again?

With modern methods -- e.g., IUDs and vasectomies--this goal is not very likely to be achieved. With artificial and traditional methods -- e.g., condoms, diaphragms, and foam tablets -- it is probably not achievable. This is not only because these latter methods have higher failure rates in the contexts within which they are employed. But in addition they require sustained motivation, repeated acts, and continual supplies. For these reasons the drop out rate with traditional methods could presumably be as high as 40 per cent after 5 years.

A really inclusive program directed at "older" and high parity ("many children") women cannot be sustained with such turnover rates. For every 100 such participants, assuming half use traditional methods, about 20 might drop out and another 20 at least might cease to be fertile (menopause or death) during each five year period. These 40 must be replaced. But they cannot be replaced from other women who were over 30 say at the start of the 5 years, because the program had to be practically all-inclusive to attain its goals. Replacements must come from those who were 25 to 30 years old and are now 30 to 35 years of age. Given typical national age distributions, there will not be 40 of such women for every 100 between age 30 and menopause.

Consequently, although a national birth reduction program might initially recruit high parity couples, a program almost to halve crude birth rates must rapidly and increasingly include younger couples with few

children. In other words, because young couples naturally want some surviving children, this means that an effective national program must move from being only a birth prevention campaign for older couples to being also a birth postponement ("spacing") program for younger couples. This transition will be even more necessary to the extent that traditional and high drop out methods are retained in a national program.

The magnitude of a program that can almost halve crude birth rates over 10 years is likely to involve about 8 women per head of total population at any one time. These women may be older and have a low turnover due to aging. Or these 8 equivalent women may be 10 to 14 different women depending on their ages, contraceptive methods used, and drop outs.

Cost of Program

What a program of the magnitude described above would cost depends upon many uncertain variables.

One such variable, as explained above, is turnover. Costs will be higher over 5 years if the number of women participating during this period is 14 or 10 for every 8 women participating during any month. This ratio of period participants to monthly participants is likely to have a definite but less than proportionate influence on total program costs.

Another variable is length of program under evaluation. The annual cost of a 10 year period per unit effectiveness will be lower than the annual cost of a 3 year program for instance. There is a "start-up" cost associated with every participant and irrespective of method that can then be "amortized" longer.

The most important variable though is the mix of methods used to postpone or prevent births. A great variety of methods will always have to be offered because personal tastes and circumstances often limit acceptance by each couple to one or two. However, if a program is to achieve some stated birth reduction as economically as possible, the program directors cannot be indifferent to the mix of methods used.

Table 2 illustrates this point. Three different "Method Mixes" are compared, with varying stress on traditional methods such as condoms and foam tablets as compared with new methods such as IUDs and vasectomies. The annual cost per acceptor varies from \$1.94 to \$0.87 with changes in the mix. If Mix #3 were to prevail, the cost is almost exactly a dollar.

Per head of population this would mean an annual cost of 8 cents if 8 per 100 people are participants, 10 cents if 10 per 100 are, etc.

How substantial a fraction of current development budgets a 10 cents per capita annual cost would be is shown in Table 3. Column 2 gives the estimated annual cost for birth reduction programs for selected countries. The penultimate column gives this annual budget as a percentage of current U.S. economic assistance. The last column gives this budget as a percentage of that country's total expenditures for development, including its own contribution and all foreign economic assistance.

The countries selected for Table 3 include several that well recognize their serious demographic situation and are attempting to provide family planning assistance. A full scale program would in most cases cost roughly from 1 to 2 percent of their present development budgets. Such

a birth reduction program costs a higher per cent of total U.S. economic assistance of course (e.g. 5.6% for India).

It can hardly be argued that these countries cannot afford birth reduction programs. And it has been shown that resources so employed are several hundred times more effective in raising per capita incomes than if traditionally employed in expanding output. So there would appear to be a serious gap between what is needed and what is being done.

Possible Specific Constraints

It is possible of course that, although local currency requirements of a major population campaign may not be limiting, other more specific constraints may exist.

Doctors.

If the more effective and recent methods are used, such as IUDs and vasectomy, the number of doctors or "paramedics" that will be needed should be estimated.

Under ideal conditions a doctor can probably insert 50 IUDs a working day or 12,500 a year. This assumes the patient comes to the doctor and various ancillary services are completed by his assistants. However each woman should be examined after her next period to check on expulsion. And some mothers who are "spacing" may occasionally wish the IUD removed and then reinserted after she has delivered. So each doctor can perhaps annually care for 6,250 women using IUDs. Similarly, a doctor can probably perform about 6,250 vasectomies a year, including removal of stitches and post operative checks.

Assuming Mix #3, and 100,000 acceptors per million head of population, 8 doctors would be needed for IUDs and 3 for vasectomies per million population.

At first glance doctors would therefore not appear a likely shortage. For example, in India which has over 80,000 doctors registered, the birth reduction program envisaged here would require under 5,000. Some other countries are not comparatively so well endowed with licensed physicians. Relative to the rural-urban distribution of people, doctors tend to be located in cities, out of reach of poor and common villagers. Moreover, a fully qualified physician will not wish to limit himself to IUD insertions and vasectomies. He will want a more varied practice, devoting perhaps no more than one day a week to providing these services.

Accordingly, unless the doctors' organizations prevent it, a new class of paramedic could be trained to supplement the services of regular doctors. These paramedics would be qualified only to provide these family planning services. In some cases their specific training would take no more than a month. They would first need a basic education however. Some of the younger and better educated midwives might be so trained.

Buildings and Equipment

The number of clinic buildings required, and their size, will depend upon how dispersed operations of the birth reduction program are. Either operations may be intensive and concentrated, beginning in the cities, in which case fewer and larger buildings are needed. Or the program can be

extensive, using many small buildings in numerous small towns, in which case costs per participant are likely to be much higher unless the birth control clinics are associated with other medical services such as Maternal Health and Child Care.

Transportation equipment is within limits a substitute for clinic buildings. Official jeeps and buses can bring paramedics and their equipment to the villages, or villagers to towns where clinics are located. However, while the program is still far from being socially acceptable in general, "acceptors" may not favor the publicity afforded them by official transport and prefer money for a bus ticket home.

One uncertainty is the extent to which mass media equipment will be needed to explain and popularize the goals and methods of the birth reduction program. Mobile sound trucks and film projection units are examples. But all this presupposes that governments are willing to urge family planning on their countries.

Foreign Exchange

The foreign exchange component of a birth reduction program is likely to be a small fraction of its total expenditures, perhaps not more than a fifth, and less in the case of high population countries.

Coils and inserters can be domestically and economically produced for any country that will need more than several hundred thousand. Vasectomies require only imported surgical instruments and sometimes imported anesthetics. Thus the two most effective methods, which eventually might be used by over

half of all participants, occasion relatively small foreign exchange needs.

Economical production volume on condoms is somewhat greater but not impossible. Thus, if a man using a condom requires 50 a year, and 30,000 do use condoms per million of population, there is a requirement of 15 million condoms a year in a country with 10 million population. It will then be as cheap to produce at home as to import.^{19/} But importation is to be preferred if the demand falls below 5 million a year, unless impossible for political reasons. Countries that do not produce domestically should remove existing duties on private imports of contraceptive devices.

Foreign exchange will be needed in larger proportions if and when the program uses mass media, transports many people, and keeps extensive records. The costs of justifiable office equipment may be not inconsiderable. But it is important that birth reduction officials do more than equip themselves with prestige items of furniture and transport.

B. Preferences Among Methods

There are two kinds of preferences among methods of birth reduction to be considered. There are the government's preferences. Then there are the public's preferences. Governments may prefer to concentrate on a few methods having high effectiveness per unit cost -- always assuming that the methods it selects are more or less equally acceptable to the public. Governments may also wish to offer free choice of methods to as large a segment of their population as is possible. Participating couples may have even more varied preferences than what governments find it possible or desirable to offer, and some of these popular choices may be quite uneconomic.

Government Determination of "Best" Method

What criterion should be applied by government to recognize the "best" birth reduction method?

Assuming alternative methods are equally acceptable, something can be said about the trade-off between biological effectiveness and resource economy. Except by coincidence, the "best" method is not that which during some period:

- (1) minimizes pregnancies by a given group of fertile and exposed women (i.e., has the lowest "failure rate");
- (2) minimizes the cost of assisting a given group of fertile and exposed women to reduce pregnancies;
- (3) minimizes pregnancies from a given group of fertile and exposed women, all of whom must be assisted, from a given budget; and
- (4) minimizes pregnancies from a given budget.

Criterion 1 and 2 are grossly inappropriate. Criterion 3 is a suboptimization of Criterion 4. And Criterion 4 in turn is a less invalid suboptimization of the true economic criterion described below as Criterion 5.

Hypothetical, but not wholly unrepresentative data, are presented in Table 4 to explain the logic. Nine kinds of contraception -- including zero control -- are listed. These are: 1) withdrawal, 2) rhythm, 3) condom, 4) foam tablets, 5) diaphragms, 6) pills, 7) IUD's and 8) vasectomy. It cannot be emphasized unduly that both the effectiveness and cost "guestimates" in this table need to be known for particular countries with far greater reliability, and should be obtained where lacking as soon as possible through sample surveys, etc.

Table 4. Nevertheless, Table 4 purports in Column 1 to show "starting" cost. This is a "fixed" or "once for all" cost per couple assisted. It covers initial contact of an exposed and fertile couple, their contraceptive education, and perhaps the supply or insertion of some "permanent" means that is biologically effective through many acts of sexual intercourse (e.g., vasectomy or IUD). Both withdrawal and rhythm are here assumed to involve some "starting" cost for contact and education.

Column 2 gives annual costs per couple. These annual costs are "variable" -- i.e., dependent on frequency -- in the case of condoms, foam tablets and contraceptive pills.^{20/} If an IUD has to be removed periodically, for inspection, drainage, etc., a time-dependent cost is occasioned, which has an annual rate.

Column 3 gives a supposed 5 year cost per 100 couples. It is assumed that these 100 couples become participants in the program at a steady rate throughout the 5 years. Hence, Column 3 equals 100 times the sum of Column 1 and 2.5 times Column 2, because on an average each couple only has 2.5 years of variable cost.

Column 4 gives expected number of conceptions, per couple over 5 years of practicing birth control. Some of these rates are based on studies.^{21/} The assumed conception rate of 2.0 per 5 years when no control is exercised is a guess.^{22/} Column 5 gives conceptions prevented for 100 couples over a phased 5 year period, in which 20 couples become participants in the program each year, and none terminate. Pregnancies prevented is obtained by multiplying the difference between expected pregnancies with contraception and expected pregnancies with zero control by 100. Hence, the guess about no control conceptions determines in part the absolute magnitudes of Column 5 but not the ranking of alternative methods.

Column 6 gives phased 5 year cost per conception prevented, and is obtained by dividing Column 5 into Column 3. Some of these prevented conceptions may be only postponed. However, in the case of vasectomy (and to a lesser extent IUDs and other devices), contraception once learned may be extended into future years beyond this period.

Column 7 shows the number of thousands of possible "customers" -- or couples assisted -- from a given budget of \$1 million for the entire 5 year period.^{23/}

Column 8 gives conceptions prevented in thousands, during the phased 5 year program, per million dollars, and is obtained by dividing Column 6 into one million dollars.

Column 9 gives the number of births prevented per million dollars. This equals Column 8 multiplied by 1 minus the probability of a conception resulting in a miscarriage, abortion, still birth, and infant death during first week of life. For present purposes this probability has been set arbitrarily at .33 so that three pregnancies equal two births.

Criterion 1: Minimizing pregnancies by a given group of fertile and exposed women is not necessarily a valid criterion because there is no resource or funding constraint. In the abstract, the most biologically effective contraceptive means might be unjustifiably expensive, although this is unlikely to be the case if the "group" comprises all women that might be assisted. However, if the "group" were 100 women out of a larger community of, say 2,500 women needing assistance, it would be wasteful to spend \$400 on vasectomies for their husbands (thereby preventing 98 pregnancies in 5 years), when this sum could explain withdrawal to 1,600 couples (preventing 1,072 pregnancies).

Criterion 2: Minimizing the cost of assisting a given group of women is not necessarily a valid criterion because the same budget might prevent more pregnancies if used to give fewer women a more effective method of contraception. This conflict does not occur in the hypothetical cases of Table 4.

There the cheapest way to assist 100 women is to instruct them and their partners in withdrawal. This costs \$25, it is supposed. No other method has a superior cost effectiveness apparently.

Criterion 3: Minimizing pregnancies for a given group of women with a given budget is not necessarily a valid criterion, if all the women must be assisted and all the budget must be spent, because the method that appears best will, except by accident, not have the highest cost effectiveness. Thus, if \$300 is to be spent on 100 fertile and exposed women, which means \$3.00 each, diaphragms would have to be used in these examples. Pregnancies prevented would be 71 over 5 years. But more pregnancies would have been prevented if the same \$300 could have been spent on either fewer or more women. Thus, \$300 could finance the insertion of 200 IUDs during a phased 5 year program and thereby prevent 190 pregnancies. In this case the program's task is over-specified. Either the number of women to be assisted or the available budget should be a variable.

Criterion 4: Minimizing pregnancies from a given budget is a tempting and sometimes valid suboptimization. The contraceptive method that satisfies this criterion will be the one having the highest effectiveness per unit cost. Such a method will also, of course, minimize the cost of reducing pregnancies by some stated number.

The more or less representative data of Table 4 indicate that withdrawal occasions the lowest cost of \$.37 per birth prevented over the period. This method permits the assisting of 4 "customers" per dollar. Hence over 2

pregnancies are prevented -- always assuming 2.0 pregnancies per couple over 5 years with zero control.

It may seem paradoxical that one of the biologically least effective should appear to be one of the most financially effective. Part of the explanation is, of course, that withdrawal is here supposed to be so inexpensive. The rest of the explanation is that this criterion is valid only if the budget is irrevocably fixed at the time of selecting a method. Determining the budget then determines the method. But what should the budget be?

Criterion 5 -- The economic optimum: The fundamental economic optimization is not to maximize pregnancies reduced from a given budget (because the budget may be "wrong") or for a given size of group assisted (because it may be wasteful to assist no more or no less than such a group of fertile men and women). The basic criterion is neither cost effectiveness rating (Criterion 4) nor contraceptive performance (Criterion 1). The proper objective of a government birth control program is to use resources and increase the budget until the cost of preventing the "last" pregnancies is equal to the worth of doing so.

Figure 1 explains what is meant. The vertical axis represents number of pregnancies over five years from a given population of 100 fertile couples. The horizontal axis represents phased 5 year costs of using one method or another. The points on this scatter diagram are derived from Table 1. They indicate the pregnancy reduction effect -- measured horizontally downwards from Point 0, representing no contraceptive practices whatsoever -- and the total cost for each pregnancy control method.

An efficiency envelope can be fitted to the left and lower points of this set of points. Points on this envelope are efficient. Points lying within -- i.e., above or to the right of the envelope -- are inefficient.

Thus, accepting the assumptions of Table 4, withdrawal, IUDs, and vasectomies are efficient points. They dominate rhythm, condoms, foam tablets, and diaphragms. The pill is so inferior economically that, although reducing births more than all save two other methods, there is not enough horizontal (i.e., cost) scale to plot its point.

It remains to determine which of the efficient points is "best" by the basic economic criterion. This entails a comparison of ratios of incremental cost to incremental conceptions prevented as one "moves" along the efficiency envelope of Figure 1. These ratios must then be compared with the supposed economic worth of stopping a conception.

Consider the alternatives of withdrawal and IUD for example. Per 100 couples assisted, IUDs cost \$150 - \$25, or \$125 more, over 5 years. The incremental pregnancy reduction is 95-67, or 28. Thus the marginal cost to marginal effect ratio is $\$125/28$ or \$4.50. The extra cost of an extra pregnancy reduction is then \$4.50 over this range of the envelope during a 5 year phased program.

A change from IUD to vasectomy similarly occasions a ratio of $\$250/3$ or \$83 per extra conception prevented. $\frac{24}{3}$

These ratios must be compared with the "worth" of postponing a conception for at least 2.5 years on an average. A typical value from Table 1 is \$56 per birth postponed 2.5 years. However, if the ratio of conceptions to births is 3 to 2, the value of preventing a pregnancy is two-thirds this sum or \$37 .

Cost Effectiveness "Rays"

The cost effectiveness of any method can be illustrated by a ray from Point O in the figure to the scatter point representing a particular method. The steeper such a ray, the greater the effectiveness per cost of the method. Thus, in cost effectiveness terms, rhythm is superior to condoms and IUD's to vasectomy.

So far it has been assumed that acceptors are homogeneous as regards frequency of exposure, fertility, conditions of living, etc.^{25/} This supposition is unrealistic of course. Hence a practical birth postponement or prevention campaign must take into account these many differences.

Preferences of Acceptors

There is no reason to suppose that the few methods appearing "best" to government will be the preferences of most participants.

IUD. Although not many women in LDC's yet have experience of them, IUDs could well gain widespread acceptability. They can be used for "spacing" (postponing) childbirth. Cost and bother are not a function of frequency of intercourse. Hence they are well adapted to most young couples. Unfortunately, from 10 to 20 percent of women fitted with IUDs may not retain them, or may complain of unusual bleeding or pain. Some women may be too

bashful to attend a clinic for an insertion, or it may be too far away, Women travel less widely than men in some countries. Thus any program should probably assume that a substantial fraction of participants, perhaps a majority, will not adopt IUDs for years to come.

Condoms. The condom is often preferred by young men engaged in temporary affairs with women who have less ready access to contraceptive devices for their own use. And in most parts of the world premarital intercourse is not uncommon. Moreover, this preference for condoms sometimes carries over into marriage, although a married man often prefers to have his wife take precautions. The cost of condoms is proportional to frequency of intercourse. And, apart from expense, supplies have often not been available in villages.

Foam Tablets. For an established or married couple, where the woman is responsible for contraception and can obtain them, foam tablets have enjoyed reasonable popularity. Like condoms, cost per year depends on frequency of use. Unless well packaged, storage is a problem in a humid climate, for the tablet must be made so as to foam with the addition of little moisture.

Pills. At present costs of production, unless there are substantial government subsidies, contraceptive oral pills are too expensive for more than a very small fraction of families. Cost per coitus of contraception is especially high for low frequency couples. Determining the day in each monthly cycle to stop taking the daily pill is too much for some users.

Also tiresome is having to take the pill for 20 days each month at the same time each day. Ordinarily contraceptive pills are available only upon prescription from a doctor. Currently they are available only in a few major cities and special sources in most LDCs.

Diaphragm. The inconvenience of being fitted for a diaphragm is probably as great as having an IUD insertion. In addition a woman must keep on hand a supply of jelly or other spermicide to use with it. Also a problem for any village woman usually living in crowded dwellings, is care in privacy of her diaphragm. Cost is practically independent of frequency of use. Presumably acceptance of diaphragms will tend to be limited to better housed and urban wives. And even in their case a diaphragm and jelly in future may be the first choice only of those who cannot retain an IUD.

Rhythm. Determination of safe periods involves some record keeping at best. If monthly periods are irregular, complete safety can only be had by abstaining from intercourse for more successive days each month. Successful adoption of the rhythm method, therefore, requires exceptional motivation. It does have the advantage of privacy however (see below). It is costless. And for some couples, because of religious doctrine, it is the only permissible method.

Withdrawal. One of the oldest methods of preventing conception, withdrawal requires self-discipline by the man, and possible frustration for the woman. It is a method that costs the couple nothing for devices. No supplies or records are necessary. Hence withdrawal is a method

especially suited to uneducated couples remote from stores or clinics. Moreover, like rhythm method, withdrawal can be utilized with only the sexual partners knowing. There is no need to purchase materials from a storekeeper who might gossip, or visit a clinic where one might be recognized, both of which can be important considerations for couples living in cultures placing a high value on fertility.

Vasectomy. This operation should ordinarily be considered irrevocable. Therefore it can only appeal to men who are reasonably convinced that they want no more children. Such a man, especially if still having frequent intercourse, might prefer a single vasectomy at low, zero, or negative price, to repeated outlays for condoms, etc. This factor could be strongest in the case of established couples where the wife cannot retain an IUD.

These bases for preference are summarized in Figure 2. Briefly, some methods do or do not have a recurrent money or bother "cost", do or do not involve clinic visits or device purchases that prevent "privacy", and do or do not depend primarily upon the women. That some methods have far lower failure rates than others should rationally be an even more powerful element of preference, but such comparative rates are often unknown, and among the ignorant and uneducated there is probably a tendency to suppose that all artificial devices are sufficiently effective.

Reconciling the Preferences of Government and Public

The preferences of government and public may fortunately overlap to a degree, IUDs may prove to be a case in point, being economical for

government and convenient for acceptors. But there are also many ways in which presently disparate preferences can be rendered more coincident.

One way is to inform. Differences in failure rates are not generally known, sometimes because these have never been ascertained for developing countries, but even information about occidental experience would be better than nothing. Many methods of contraception are still not known by name, let alone understood, and little information about the newest methods has yet reached a majority of doctors in less developed countries.

Another way for governments to shape preferences is through differential subsidies, some methods justifying more assistance than others. Consider Table 4 estimates again. There is an advantage to government if 100 couples using foam tablets would switch to IUDs instead, for example. In "output" terms, there is the advantage of 37 more pregnancies prevented during a phased 5 year program. The advantage in resource cost savings is \$500, or \$5 per couple over an average of 2.5 years each. Government could well afford to grant financial subsidies of at least this amount to make IUD insertions more attractive.

Any government program must also take into account reasonable sequences of contraceptive practice by men and women before marriage, during marriage while "spacing" births, and in later years when no more children are wanted. Successive use of the condom, IUD, and vasectomy is one such sequence. Often it is easiest to introduce a couple to birth control by means of an occasional method requiring a minimum of involvement with clinics or officialdom.

In countries with populations too numerous and dispersed to be reached immediately save through mass media, and pending such time that more biologically effective methods can be explained and provided them, governments could well consider widespread "education" about withdrawal. Its effectiveness per unit cost is probably among the highest. For many rural families it could also serve as an introduction to better methods later.

C. Resource Costs and Bonuses to Increase Acceptance

Perhaps the most important policy dilemma facing governments anxious to reduce births is whether or not actively to encourage family planning within their countries. It is of little significance that \$X worth of resource may be several hundred times more effective in raising per capita incomes if used to reduce births, rather than to increase output, if couples of procreative age will not cooperate. Resources can only be used in this much more effective role of reducing births to the extent that these men and women come to want family planning. So an important question is whether to use extra resources for "education".

The present fact that very few couples in LDCs practise birth control must largely be due to a combination of unwillingness or inability. Many occidental observers suppose that the main explanation is inability, although occidental populations reduced their birth rates when none of today's more effective methods were available. Other analysts have suggested that unwillingness -- or at least ignorance of methods -- is a more frequent reason.

Using Resources for Popularizing Reductions

It may be shown eventually that knowledge and acceptance of family planning methods in LDCs will spread by word of mouth and force of example. Some reliance must be placed on this happening. But it is questionable whether there is time in some of these countries not in addition to use resources to popularize family planning in general and superior methods in particular.

Certain kinds of couples are easier to persuade than others. Couples who have four surviving children already are more susceptible to persuasion as a rule. But to fit the woman of such couple with an IUD, or perform a vasectomy on the man, is to achieve a limited success. Here is another policy question of some importance. Should government give prior birth reduction assistance to those who want and are likely to have fewer additional children, or should it urge the more permanent kinds of contraception upon those who are still relatively young and have small families.^{26/}

There are many media for changing public attitudes, all the way from films to personal discussion. In many contexts the impersonal approach through mass media may be more effective than direct face to face "persuasion". The latter could have adverse effects until such time that a couple is more or less "ready" psychologically. Most programs will have to use a variety of "educational" means. All these efforts to encourage couples to practice contraception must use valuable resources and are hence expensive.

In making cost effectiveness comparisons among different contraceptive methods, and in applying the economic criterion to determine what kind of methods government can properly afford to press, it is total resource cost that matters. Thus it is the costs of creating ability plus willingness to reduce births that must together be compared with the worth of preventing a birth. Resources are resources, however employed.

Financial incentives for program workers

Not all the doctors, paramedics, nurses, midwives, samplers, clerks, etc., who work in LDC birth reduction programs will be highly motivated. Many of them will be poorly paid, partly because their basic wages must be compatible with general civil service wage structures. Moreover, fear of dismissal from government jobs is usually remote in developing countries, where employment often depends on nepotism or politics.

Thus payment of a "finder's" fee to staff workers and others who "introduce" birth control participants to the program might be tried.

For many reasons it is important that village midwives do not spread adverse rumors or otherwise work against the program. As a successful birth reduction program would impair their livelihood, this could well happen. Some way should be found to train the more intelligent, educated, and reliable of these to assist in gathering information, introducing women to the program, and perhaps even inserting IUDs, all for a unit fee.

Financial incentives might also stimulate the distribution of condoms, foam tablets, etc. These could be supplied free by clinics as "wholesalers"

to midwives, country general stores, and travelling paramedics. These agents would be encouraged to "retail" these devices at a moderate stated price - printed on the wrapper possibly. The profit margin would encourage retail storekeepers, midwives, etc., to explain the advantages of contraception.

Financial incentives to attract participants

There is another way of inducing couples to practice birth reduction that should be effective in some circumstances and which involves few resource costs for administration. That way is to offer bonuses to participants. Ordinarily bonuses involve a transfer payment without resource costs. ^{27/}

Equity of bonuses

Taxpayers, who contribute to government the bonus that it pays, lose the purchasing power transferred through government to birth reduction volunteers. Why volunteers may have to receive a bonus needs no explanation. But is it equitable that taxpayers in general should be forced indirectly to pay the bonus?

In a society in which each married couple and their young children were exactly self-sufficient financially, on balance being neither a net contributor nor net recipient of aid from the State, levying taxes for bonus payments would well be considered inequitable. If such a family wants to have many children, and is prepared subsequently to consume less per head within the family, that might be considered its affair. And one would suppose that enlightened self-interest would be a sufficient inducement, without any bonus, to limit its progency.

This is not, however, the case in truly emerging countries. It is other taxpayers than the parents who finance the education of the children of a large family. It is taxpayers who often pay for subsidized food grains available at low price on ration to families that have too many mouths to feed. Although each working class family may not realize it, every extra child that another family bears and rears will reduce the productivity and earnings eventually of the first family's children. The more other people have children the more expensive one's own food becomes. In over populated countries, it is anti-social of a couple to have more than three living children.^{28/}

It is in the libertarian tradition that private parties who act against the public interest should be induced by taxes or subsidies - rather than be compelled by police - to behave more in accord with society's interests. Thus industrial communities suffering from air pollution have taxed themselves to subsidize neighboring factories that install smoke abatement equipment. There is no obvious reason in equity why the people of a nation should not protect themselves, by transfer payments through their government, against families that threaten them economically by overbreeding.

Specific bonus plans

Can such bonuses be large enough to persuade, and yet be economical, however? How large such bonuses can be depends upon the "worth" of preventing a birth, as described above. Bonuses would presumably be larger in the case of young married couples who already have no more than one or two

children than in the case of older couples possessed of numerous children.

Payments for vasectomy ^{29/}

Of all contraceptive methods available vasectomy can most obviously be rewarded with a bonus. If more detailed information were available regarding family formation, it should be possible to estimate the additional children that couples would be expected to have depending on their age, number of children, occupation, religion, etc. A vasectomy bonus could then be the "worth" of preventing a birth (say \$150), times the additional children otherwise expected (say 3), minus discounting for probable spacing of births (maybe 3 years apart). All this might indicate a bonus approaching \$325 for a vasectomy now. Such a sum, in terms of per capita income, would be analogous to around \$10,000 in the United States. Such a bonus would guarantee that most adult males would soon try to learn about this operation. And the more who know, the more will be inclined to volunteer.^{30/}

Non-pregnancy payments

Bonuses can also be paid economically to married women who remain non-pregnant.

If a woman were of an age group having a .25 annual fertility rate, and the value of permanently preventing a pregnancy were \$120, she could earn \$30 a year by remaining non-pregnant. To do so she would have to visit a clinic every 17 weeks (i.e., 4 months), plus or minus a few days, for an examination taking a few minutes of a doctor's time to "prove" non-pregnancy. Each 4 month successful examination would earn the participant \$10. This would be credited to an account in her and/or her husband's name. When

this account, with interest, reaches the supposed value of permanently preventing a birth, subsequent payments would be made in cash. As the woman graduates to older age groups with lower fertility rates, the bonus would decrease. Accumulated credits would be paid-out as soon as completion of menopause, or age of 50, or her demise. Should a woman not appear for examination, or prove pregnant on reporting, a varying fraction of her credits would be cancelled.

The main defect of such a non-pregnancy bonus plan is that it would occasion resource costs amounting to a substantial fraction of total bonus payments. But it has the advantage of not being as irrevocable, and probably far less repugnant, than bonuses for vasectomy. Also, to qualify for a bonus, each woman and her spouse can practice any method of contraception that their religion, culture, or other preferences dictate.^{31/}

How persuasive are bonus payments in attracting participants?

One question to which there can be no answer without experience is the degree to which bonuses will evoke voluntary participants in birth control programs.

The supply schedule of vasectomy volunteers, or of women seeking non-pregnancy payments by submitting to periodic examinations at a clinic, is quite uncertain. The only possible government policy is to experiment, beginning with bonuses almost as high as it can economically afford to pay, so that practically the entire worth of preventing a birth goes to the volunteer. Subsequently, as public acceptance and understanding increase, there could well be an increasing number of people seeking

contraceptive assistance. At such a time the government might lower its scale of bonus payments. This would give a larger fraction of the benefits of birth reductions to the economy at large. Moreover, if government clinics and medical personnel prove too few to meet the demand, the volunteer supply would have to be reduced in the market sense through lower "prices". And it is even possible that a policy of slowly reducing bonuses might stimulate a small speculative supply.^{32/}

In any event, although bonuses for participation will never substitute for "educational" campaigns, they would seem to have a role at some stage in any large birth reduction program. The great merit of such bonuses is that they are transfer payments and not resource costs. Hence, the evolving operating pattern for a national program may prove to be (1) extensive mass media offering impersonal explanations of "why", (2) subsequent offers of bonuses to those who "do", and (3) clinics, mobile units, and midwives, etc., directly to provide the "how".

CONCLUSIONS

1. Resources devoted to reducing the number of births that would otherwise occur can contribute many times more - perhaps several hundred times more - to raising per capita income than other resources of equivalent value invested in conventional development projects that increase output.
2. In the poorest LDCs the present discounted value to its economy and inhabitants of permanently preventing a birth may be once to twice times more than annual per capita income. The value of postponing a birth by one year may be from half income per head in such countries. These values

are based mostly on the consumption costs that dependent and unproductive children ordinarily incur.

3. Preventing conceptions requires that fertile couples are or become able and willing to procreate less. A government can provide ability only through using resources. But part of the financial cost of promoting willingness can constitute resource-free bonuses that are transfer payments.

4. The costs of preventing conception during a phased five year program depend on contraceptive method used and are uncertain. Any cost estimates are most sensitive to a variety of assumptions. Perhaps the more economical methods involve a cost of about \$3 per prevented birth over five years.

5. There are two valid economic criteria for selecting the "best" contraceptive method. A cost effectiveness ratio, relating births prevented to necessary resource costs, determines the most efficient method given a budget. A higher optimization, treating the budget as a variable, would select among "efficient" methods that which yields a marginal birth reduction to marginal resource cost ratio approaching the value of preventing a birth. A method having moderate biological effectiveness -- such as withdrawal -- may have the best cost effectiveness ratio. But the higher optimization would reject withdrawal and might select IUDs. In practice, several methods must be offered. And what is "best" in terms of cost and acceptability for one couple may not be for another.

6. The extent to which resources can be invested in improving the ability of fertile couples to have fewer children is limited by the willingness of such couples to participate in a birth reduction program. Hence, because of

the fantastically high returns on resources invested in reducing births to raise per capita incomes (#1 above), it is economical to incur costs to make birth control more acceptable. Some of these costs may also be resource costs - for mass media, lecture, etc.

7. Other costs may be bonuses that are resource free. Bonuses can be given to women who remain non-pregnant - by whatever means they prefer. Bonuses amounting to several hundred dollars can be paid in cash or kind to certain men volunteering for a vasectomy. And other financial incentives can be accorded doctors, midwives, etc.

8. For a "typical" LDC, halving the natural increase rate from 2 to 1 per cent a year could require a one-third reduction in fertility rates. A birth control program to this end would have to include about one-half of the fertile women as participants - or their sexual partners. Thus roughly 8 per cent of the population would have to become involved in any month or 12 per cent over a 5 to 10 year period.

9. For a phased 5 year program of this scope, the annual resource cost of providing the ability to reduce birth rates by a third could very roughly be about \$1.00 for each participant depending on the mix of methods used. This approximates 10 cents per head of population a year. Other resource and financial costs to popularize family planning might increase these very rough estimates by two, three, or more times. The cost per capita of a really large program, implemented within 5 to 10 years and involving millions of people now largely apathetic, ignorant, and occasionally hostile, can only be intelligent guesswork.

10. A cost of 10 cents per head of population annually would constitute a very low percentage of total development expenditures in many LDCs with population problems. Examples are India 1.2 per cent, Nigeria 2 per cent and Taiwan 0.4 per cent. A national program of this scope, in terms of U.S. assistance only, would constitute small percentages also: examples are Brazil 5 per cent, Pakistan 3 per cent, and Turkey 2 per cent.

N.B. All estimates in this paper could be wrong by a factor of two. They will be refined so far as possible during coming months. The object of this paper is not to furnish parameter values but to establish a sound method or viewpoint for future use by others.

FOOTNOTES

1. Historically, given special circumstances, a rapidly increasing population can be advantageous economically. Thus, Canada's population at the turn of the century was growing at a rapid rate. This was not a disaster because birth rates were low, death rates were even lower, much of the population increase comprised immigrants reared and trained at the expense of other countries, capital inflows accompanied this labor inflow, and natural resources abounded.
2. This approximation is more likely to be true the more closely factors of production are rewarded according to their marginal productivity.
3. This would be consistent with a savings rate from gross income ($\Delta K/V$) of 9 per cent and a not atypical K/V ratio of 1.5 for one year.
4. The true rate of return on capital in this example -- not the ICOR -- accordingly about 14 per cent a year.
5. Thus some MDCs have savings to income rates of over .2. But they typically also have higher K/V ratios. So $\% \Delta K$ for an MDC is not necessarily greater than for an LDC.
6. Old age dependency used to be of little significance when life expectancies at birth were only 30 odd years in some of the Less Developed Countries. Today these expectancies are more like 50 and 60 years. And in most poor countries something like 5 per cent of the male population are 60 and over.
7. In such a country, for every sample 100 persons, there is an aggregate output worth \$10,000. Suppose 8 per cent or \$800 of this is saved. If roughly 40 persons are children under 15, consuming \$60 worth a year on an average, this leaves \$113 annual consumption per head for the 60 adults over 15 years. This is comparable with Professor Hoover's estimate that children under 10 consume .50 and .45 respectively of adult women and men.
8. A further benefit from reducing the number of dependents, but of second order importance, is that some small fraction of the consumption so "released" may be invested in capital assets. If 8 per cent of say \$60 released is invested, and this investment of \$4.80 each year in turn earns 15 per cent a year compounded, additional assets worth \$268 will have been accumulated at the end of 15 years. At 15 per cent rate of return, this would provide extra income from capital worth \$40 after 15 years, and having a present discounted value of about \$4.80.

9. Of course there is no "typical" infant. It is either male or female for example. So estimates have to be made in terms of a representative sample of, say a thousand infants (as described below).
10. This method of estimating the negative economic value of infants at birth was first developed for India and published in the Review of Economics and Statistics ("The Gains to India from Population Control", May, 1960.)
11. A more precise statement of what is meant by "worth", and especially "worth to whom", is included below (pp. 41,42).
12. This argument was first presented by the author in Economic Development and Cultural Change ("The Economics of Government Payments to Limit Population", June 1960.)
13. This implicit misallocation of resources compares investment in capital with accidental "investments" in population quantity and not quality. The rate of return on education and health in improving population quality may be very great. In many instances they are undoubtedly higher than the usual returns on industrial and agricultural capital investments.
14. A vasectomy sterilizes the male by cutting the vas ducts. This operation can be performed quickly under a local anesthetic and does not require hospitalization. IUDs or intra-uterine devices, can be fitted in ten minutes or so: unless expelled involuntarily, they are the almost perfect contraceptive for couples who want to "space" their children.
15. An average value for f over 7.5 years is taken because in this example N is 15 years. In a more accurate formulation the average survival rate to 7.5 years of age should be multiplied with f . Second generation effects are ignored.
16. Because $\Delta P/P$ is a stock, and $\Delta Y/Y$ a flow, this ratio increases proportionately with the length of the assessment period, N .
17. This comparative effectiveness ratio was advanced by the author in "Government Bonuses for Smaller Families", Population Review, July 1960.
18. In translating failure rates of contraceptive devices into numbers of pregnancies the concept of "ovulatory ratio", that is the ratio of the pregnable period to the interval between births, is most useful and indeed necessary.

19. A more serious question than cost may be whether high enough quality control can be maintained in production.
20. In estimating variable costs for Table 4, an annual coitus frequency of 50 has been assumed.
21. The rates for withdrawal, condom, diaphragm (cap), rhythm, and IUD are based on data published by the Population Council and the International Planned Parenthood Federation, but for groups of women whose experience may not be very pertinent to LDCs.
22. A five year conception rate of 2.00 involves lower exposure frequencies and higher pregnancy wastage than often assumed.
23. This is assumed to be a phased 5 year program, with the same number of participants being added each year, with no terminations. Thus the annual "variable" expense will increase each successive year. The 5 year budget is not expended at a uniform rate.
24. Application of the economic criterion to IUDs and vasectomies is not affected by uncertainties regarding the number of conceptions there would be if no controls are practiced.
25. This discussion of economic criteria is essentially a consideration of a three dimensional surface. The vertical axis can represent numbers of pregnancies (or births). One horizontal axis represents cost. The other horizontal axis represents number of women (or their spouses) who are participating. In other words, graphically the problems include Figure 1, with an additional dimension (numbers of women). The economic optimum has three attributes. The total budget must be right, the number of women (or their spouses) participating must be right, and the method must be right. This optimum point on the three dimensional surface is determined by applying to it a plane representing the worth of a pregnancy (or birth) prevented.
26. Greater effectiveness per dollar of resources may in time come from concentrating on the "harder" cases of acceptance.
27. A transfer payment is a payment for something other than productive services and does not ordinarily affect output of goods and services.
28. Within extended families so typical of many LDCs there is an artificial economic incentive to have excessive children that can best be countered by a bonus perhaps. In these families young married couples live within

the household of either the husband's or the wife's parents. In that household there will be other young married couples. All contribute labor and outside earnings to the older head of the extended family. Under these circumstances each extra child that a young couple has affects their consumption, and that of their own children, only a little. All their children's cousins and aunts and uncles then eat less too. However, when the youthful parents have become old, their children will be grown and mature enough to support them in their last years. Hence, to the couples having them, infants are not much of an immediate liability and potentially are an asset. A countervailing bonus, especially if held in trust, bearing interest meanwhile, and denominated in real terms as a safeguard against inflation (e.g., sacks of grain), might prove effective if generous enough.

29. There is a strong atavistic repugnance attached to the idea of reproductive powers being "sold". It is generally considered proper to spend resources to persuade a man but not to give him money directly. Thus bonuses might have to be paid in kind rather than in cash - examples being so many extra years of schooling for the eldest boy, equipment for agriculture of equal value, etc.
30. In India modest compensation is paid to vasectomy volunteers who have the consent of their spouse and some living children. This payment is ostensibly to compensate for loss of work following the operation. But sick leave is not necessary and the payment is in a reality a bonus.
31. Credits are temporarily blocked to ensure that a bonus based on permanently preventing a birth is not paid out in cash to a woman who it later proves has only postponed a birth (see "The Gains to India from Population Control: Some Money Measures and Incentive Schemes", Review of Economics and Statistics, May 1960).
32. It is to be hoped that favorable reactions to the program will over time increase the number of exposed women and their men who wish to participate in birth reduction programs. If the supply schedule of volunteers shifts to the right, the bonus can be cut. The elasticity of supply is most important because, if bonuses are offered to anyone, they must be available on equal terms to everyone.

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ANNEX I

DETERMINING PRESENT VALUE OF RELEASED CONSUMPTION BY REDUCING CHILD DEPENDENCY

For any given discount rate, the present value of the consumption "released" by having 100 fewer infants born, is the sum of values estimated for each year of age from 0 to 15.

Each annual value is the product of the number of children surviving from 100 born, times its assumed consumption for that year of age, times one minus the discount factor compounded by age in years. Survival rates are tabulated below and are considered representative.

Consumption rates were adjusted so that children under 15 on an average would consume .6 of what an adult male does and .67 of what an adult female does: they are also tabulated below.

The calculations are given in the attached table for a country in which it is assumed the annual income per head is \$100 of which \$8 is saved.

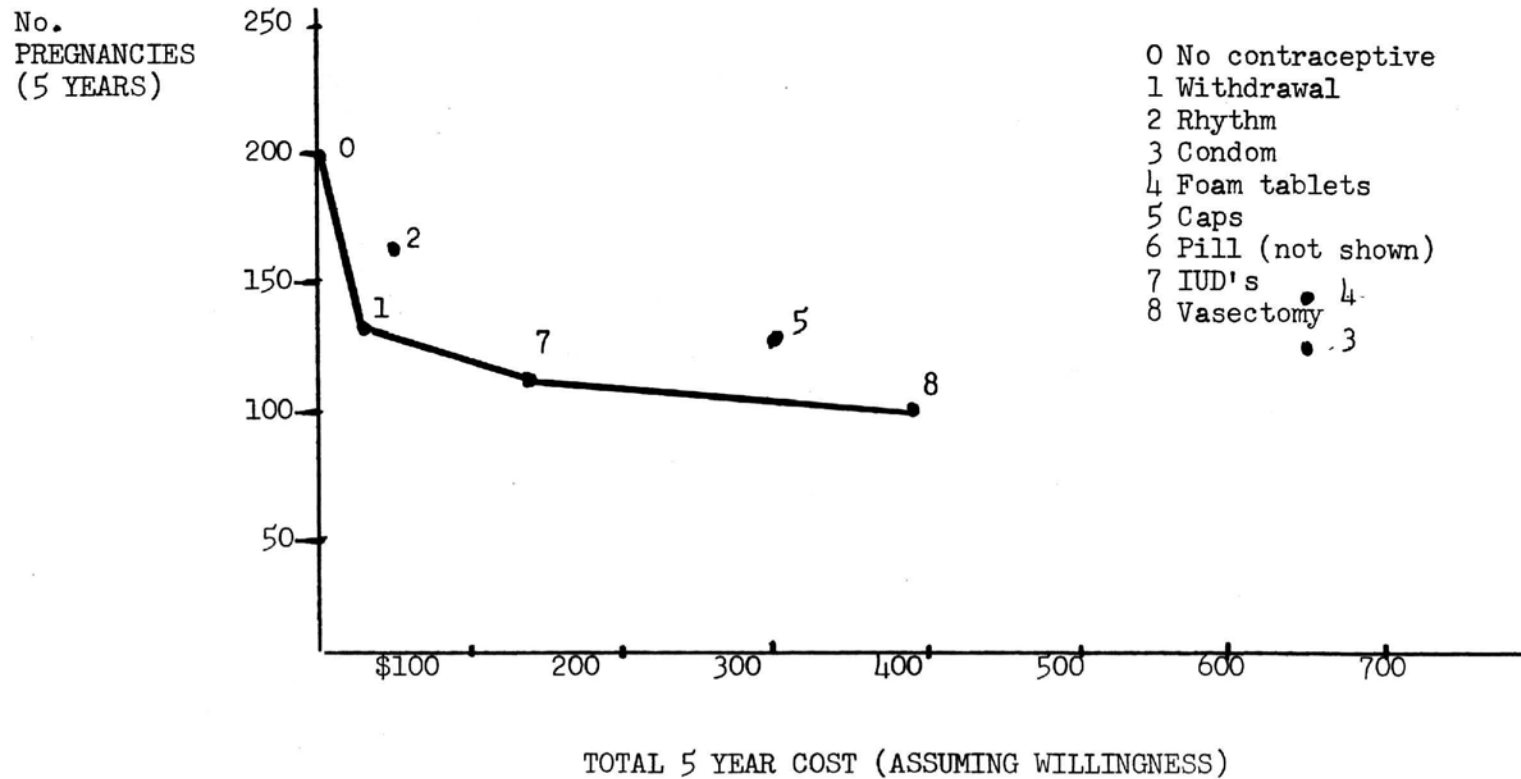
PRESENT VALUES OF RELEASED CONSUMPTION 0-15 YEARS OF 100 BIRTHS PREVENTED,
AT DIFFERENT DISCOUNT RATES

| (1) <u>Age</u> | (2) <u>Survivors per 100</u> | (3) <u>Consumption Per Head</u> | (4) (5) (6) <u>Discount Rates Compounded</u> | | | (7) (8) (9) <u>Present Value of Consumption Released</u> | | |
|----------------------|-------------------------------------|--|---|------------|------------|---|--------------------|--------------------|
| | | | <u>10%</u> | <u>15%</u> | <u>20%</u> | <u>10%</u> (00) | <u>15%</u> (00) | <u>20%</u> (00) |
| 0-1 | 90 | \$11.3 | .909 | .870 | .833 | \$ 9.2 | \$ 8.8 | \$ 8.4 |
| 1-2 | 88 | 45.0 | .826 | .756 | .694 | 32.7 | 29.9 | 27.5 |
| 2-3 | 87 | 51.8 | .751 | .658 | .579 | 33.8 | 29.6 | 26.1 |
| 3-4 | 87 | 56.3 | .683 | .572 | .482 | 33.4 | 28.0 | 23.6 |
| 4-5 | 86.2 | 60.8 | .621 | .497 | .402 | 32.5 | 26.0 | 21.1 |
| 5-6 | 85.4 | 65.3 | .564 | .432 | .335 | 31.4 | 24.1 | 18.7 |
| 6-7 | 84.6 | 68.6 | .513 | .376 | .279 | 29.8 | 21.8 | 16.2 |
| 7-8 | 83.8 | 72.0 | .467 | .327 | .233 | 28.2 | 19.7 | 14.1 |
| 8-9 | 83 | 75.4 | .424 | .284 | .194 | 26.5 | 17.8 | 12.1 |
| 9-10 | 82.5 | 78.8 | .386 | .247 | .162 | 25.1 | 16.0 | 10.5 |
| 10-11 | 82 | 81.0 | .350 | .215 | .135 | 23.2 | 14.3 | 9.0 |
| 11-12 | 81.5 | 83.3 | .319 | .187 | .112 | 21.6 | 12.7 | 7.6 |
| 12-13 | 81 | 85.5 | .290 | .163 | .093 | 20.1 | 11.3 | 6.4 |
| 13-14 | 80.5 | 87.8 | .263 | .141 | .078 | 18.6 | 10.0 | 5.5 |
| 14-15 | 80 | 90.0 | .239 | .123 | .065 | <u>17.2</u> | <u>8.9</u> | <u>4.7</u> |
| TOTAL PRESENT VALUES | | | | | | 383.3 | 278.9 | 211.5 |

FIGURE 1

HYPOTHETICAL PREGNANCY REDUCTIONS AND COSTS ASSOCIATED
WITH DIFFERENT CONTRACEPTIVE METHODS
PER 100 ACCEPTORS

(Phased 5 Year Program with Average Participation 2.5 Years)



Source: Table 1

FIGURE 2

FACTORS DETERMINING PREFERENCES OF ACCEPTORS

| | <u>IUD</u> | <u>Condoms</u> | <u>Foams</u> | <u>Pills</u> | <u>Diaphragm</u> | <u>Rhythm</u> | <u>Withdrawal</u> | <u>Vasectomy</u> |
|---------------------------|------------|----------------|--------------|--------------|------------------|---------------|-------------------|------------------|
| Requires Regular Supplies | | X | X | X | X | | | |
| Must Visit Doctor | X | | | X | X | | | X |
| Record Keeping Needed | | | | X | | X | | |
| Costs: Zero | | | | | | X | X | |
| "once for all" | X | | | | | | | X |
| Frequency Dependent | | X | X | | | | | |
| Time Dependent | | | | X | X | | | |
| "Private" | | | | | | X | X | |
| Has Catholic Approval | | | | | | X | | |
| Irrevocable | | | | | | | | X |
| Responsibility: Male | | X | | | | | X | X |
| Female | X | | X | X | X | | | |
| Both | | | | | | X | | |

TABLE 1

ILLUSTRATIVE EXAMPLES OF THE ECONOMIC WORTH
OF PREVENTING OR POSTPONING A BIRTH

(Income Per Head \$100 Yearly)

| <u>Annual Discount Rate</u> | <u>Permanently Preventing A Birth</u> | <u>Postponing A Birth One Year* (Per- haps Forever)</u> | <u>Postponing A ^{FRACTION OF} Birth Exactly FOREVER One Year Only ("Spacing")</u> |
|---------------------------------|---|---|---|
| | (1) | (2) | (3) |
| .10 | 383 | 77 | -- |
| .15 | 279 | 56 | 36 |
| .20 | 212 | 42 | -- |

* Col. 2 = Col. 1 x fertility rate (.20 assumed here)

TABLE 2

COST PER ACCEPTOR AS FUNCTION OF CHOICE OF METHOD

| <u>Method</u> | <u>5 year*</u> <u>Cost per</u> <u>Acceptor</u> | <u>Method Mix</u> <u># 1</u> | | <u>Method Mix</u> <u># 2</u> | | <u>Method Mix</u> <u># 3</u> | |
|--------------------------|--|---------------------------------|--------------|---------------------------------|-------------|---------------------------------|------------------------------------|
| | | <u>Number</u> | <u>Cost</u> | <u>Number</u> | <u>Cost</u> | <u>Number</u> | <u>Cost</u> |
| IUD | \$ 2.00 | 20 | \$40 | 70 | \$140 | 50 | \$100 |
| Vasectomy | \$ 4.00 | 10 | 40 | 10 | 40 | 20 | 80 |
| Condoms/Tablets | <u>12.75</u> | 70 | <u>892.5</u> | 20 | <u>255</u> | 30 | <u>382.5</u> |
| 5 year cost | | | \$972.5 | | \$435 | | <u>562.5</u> \$190.5 |
| 5 year cost per acceptor | | | 9.72 | | 4.35 | | <u>5.62</u> 4.90 |
| Annual Acceptor cost | | | 1.94 | | .87 | | <u>1.12</u> .98 |

* Source: Table 4

TABLE 3

ESTIMATED COST OF MAJOR FAMILY PLANNING PROGRAMS RELATIVE TO
U.S. ASSISTANCE AND NATIONAL DEVELOPMENT
BUDGETS FOR SELECTED COUNTRIES IN 1964

| Country | Population (000,000) (1) | Est. Cost Family Planning Program (000,000 yr.) (2) | Economic Development Program | | | Estimated Family Planning Program Cost Relative to: | |
|----------|--------------------------------|--|--|---|---|--|-------------------------------|
| | | | U.S. Assistance (000,000) (3) | Coop. Country's Contribution (000,000) (4) | Total Developmental Expenditure (000,000) (5) | U.S. Assistance (6) | Total Develop. Exp. (7) |
| Brazil | 80 | \$ 8.0 | \$152 | \$1,675 | \$2,043 | .052 | .004 |
| Colombia | 16 | \$ 1.6 | \$ 80 | \$ 178 | \$ 334 | .020 | .005 |
| India | 470 | \$47.0 | \$837 | \$2,300 | \$3,921 | .056 | .012 |
| Korea | 28 | \$ 2.8 | \$ 34 | \$ 66 | \$ 105 | .083 | .027 |
| Mexico | 40 | \$ 4.0 | \$ 23 | \$ 398 | \$ 412 | .170 | .010 |
| Nigeria | 42 | \$ 4.2 | \$ 46 | \$ 139 | \$ 227 | .090 | .019 |
| Pakistan | 107 | \$10.7 | \$392 | \$ 612 | \$1,064 | .027 | .010 |
| Taiwan | 13 | \$ 1.3 | \$ 15 | \$ 129 | \$ 149 | .084 | .009 |
| Tunisia | 5 | .5 | \$ 38 | \$ 142 | \$ 200 | .013 | .002 |
| Turkey | 30 | \$ 3.0 | \$177 | \$ 301 | \$ 538 | .017 | .004 |

Col. 1, 1964 estimates.

Col. 2, population x10 cents.

Col. 3, U.S. owned local currency expenditures during FY 64 plus U.S. dollar obligations for the same period.

Col. 4, obtained from C 3 Revenue and Expenditure tables in the Country Assistance Program books.

Col. 5, includes U.S. assistance, coop. country's contribution, and expenditures from other external aid sources.

Col. 6, Col. 2 divided by Col. 3.

Col. 7, Col. 2 divided by Col. 5

TABLE 4

HYPOTHETICAL COSTS AND EFFECTIVENESS OF ALTERNATIVE CONTRACEPTIVE
MEASURES DURING A PHASED FIVE YEAR PROGRAM

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|--------------------------|---|--|---|---|---|------------------------------------|---|--|---|
| | Fixed Starting Cost per Couple | Variable Annual Cost per Couple | Phased 5 Year Cost per 100 Couples | Expected 5 Year Pregnancies per Couple | Phased 5yr. Prevention of Pregnan- cies per 100 Couples | Cost per Prevented Pregnancy | Number Customers Assisted per \$1 m (000) | Pregnan- cies pre- vented per \$1 m (000) | Births prevent- ed per \$1 m (000) |
| 0. Zero Birth Control | \$.0 | \$0 | \$0 | 2.00 | 0 | 0 | 0 | 0 | |
| 1. Withdrawal | .25 | 0 | 25 | .75 | 67 | .37 | 4,000 | 2,700 | 1800 |
| 2. Rhythm | .50 | 0 | 50 | 1.3 | 35 | 1.4 | 2,000 | 715 | 477 |
| 3. Condom | .25 | 2.5 | 650 | .58 | 71 | 9.2 | 154 | 109 | 73 |
| 4. Foam Tablets | .25 | 2.5 | 650 | .84 | 58 | 11 | 154 | 91 | 61 |
| 5. Diaphragms | 2.50 | .2 | 300 | .58 | 71 | 4.2 | 333 | 238 | 160 |
| 6. Pills | .50 | 8.0 | 2050 | .20 | 90 | 23 | 49 | 43 | 29 |
| 7. IUD | 1.0 | .20 | 150 | .10 | 95 | 1.6 | 667 | 625 | 417 |
| 8. Vasectomy | 4.0 | .0 | 400 | .05 | 98 | 4.1 | 250 | 244 | 163 |

N.B. These magnitudes are good at best to one significant digit. The variable costs assume about 50 exposures a year. Fiscal starting costs include "education" of the subject plus cost of supplying and perhaps inserting any "permanent" device good for many exposures. No account is taken of possible deaths or reconstorting during the year. ^{One} ~~Two~~-thirds of all conceptions are assumed to result in early mis-carriages, abortions, or neo-natal deaths. No allowance is made for drop-outs. Practically, because of uncertainties regarding costs and performance, these assumptions have limited significance.

Summaries of Recent Polls Concerning Birth Control

In recent months two national polling agencies asked questions having to do with birth control. The more detailed tabulations of interest follow:

Gallup. In January, 1965, the Gallup organization reported on the following question: "In some places in the United States it is not legal to supply birth control information. How do you feel about it -- do you think birth control information should be available to anyone who wants it, or not?"

| | <u>Should be</u> | <u>Should not be</u> | <u>No Opinion</u> |
|-----------------------|------------------|----------------------|-------------------|
| Entire sample (1,529) | 81% | 11 | 8 |
| Protestants (1,054) | 82% | 10 | 8 |
| Catholics (369) | 78% | 14 | 8 |

So the answer is overwhelmingly yes and there is only a slight difference between the two religious groups. The whole difference between the two groups is accounted for by Catholic women; the Catholic men are as affirmative as Protestant men and women. Gallup reports that on similar questions over the years, the percentage favoring has gone from 64% in 1947 to 72% in 1960 and 1962, to 74% in 1963, and now to 81%.

Here are the data within each religion by education:

| | <u>Percentage "Should be"</u> | |
|--------------|-------------------------------|------------------|
| | <u>Protestants</u> | <u>Catholics</u> |
| College | 89% | 79% |
| High school | 88% | 79% |
| Grade school | 70% | 77% |

Note that education makes no difference among the Catholics though it does among the Protestants, and that the grade school Catholics are even ahead of their counterpart Protestants.

And here is the corresponding table by age:

| | <u>Percentage "Should be"</u> | |
|-------------------|-------------------------------|------------------|
| | <u>Protestants</u> | <u>Catholics</u> |
| 21-34 years | 85% | 83% |
| 35-49 " | 86% | 75% |
| 50 years or older | 76% | 77% |

Note that the middle group is the only one with any real difference and, particularly encouraging, that the young Catholics have about the same opinion as the young Protestants.

Harris. In early 1964 Lou Harris asked two questions of a national sample. The first was: "Right now, Catholics are forbidden by the Church from using artificial birth control devices. Would you like to see the Catholic Church decide to allow Catholics to use birth control devices (contraceptives) or would you oppose that?" Here are the marginals:

| | <u>Like to see</u> | <u>Opposed</u> | <u>Not sure</u> |
|----------------------|--------------------|----------------|-----------------|
| Total sample (1,441) | 52% | 15 | 33 |
| Protestants (1,003) | 52% | 10 | 38 |
| Catholics (349) | 49% | 32 | 19 |

In the detailed analysis the one Catholic group that stands out as sharply affirmative are women aged 21 to 34 with 72% "like to see" and only 22% "opposed."

Harris also asked people why they favored or opposed the indicated change and has a range of "reasons" under each heading. For the total sample the major favoring ones are: "can't provide for child's needs" (17%), "curb world over-population" (16%), "individuals should decide, not Church" (13%), and "family too big now" (11%). The major reason to oppose was "children are God's will" (8%). Among Catholics the reasons are essentially the same except that "family too big now" is second on the affirmative side (12%) and "I'm Catholic, believe in Church" is strong on the other side (10%).

Harris also asked: "Incidentally, have you used birth control devices (contraceptives)?"

| | <u>Used</u> | <u>Not used</u> | <u>Not sure</u> |
|--------------|-------------|-----------------|-----------------|
| Total sample | 50% | 42 | 8 |
| Protestants | 53% | 36 | 11 |
| Catholics | 32% | 60 | 8 |

There are no sex and age differences worth mentioning (education was not asked).

Regional differences: Here are the distribution of responses.

| Gallup: "Should be" | | Harris: "Like to see" | | Harris: Have used contra- ceptive devices | |
|--|-----|-----------------------|-----|--|-----|
| New England | 68% | New England | 53% | New England | 40% |
| Balance of East | 86% | Middle Atlantic | 49% | Middle Atlantic | 47% |
| Midwest I (Ohio, Indiana, Illinois Michigan) | 83% | South | 41% | East North Central | 45% |
| Midwest II | 66% | East North Central | 49% | West North Central | 56% |
| South | 78% | West North Central | 45% | South | 47% |
| Mountain | 90% | West | 72% | West | 55% |
| West | 92% | | | | |

Minnesota: The Minnesota Poll asked two population questions in July, 1963:

"It is said that the world's population is growing rapidly -- so rapidly as to create a problem as big as the nuclear bomb about future peace and security in the world. Do you agree with that or disagree?"

| | <u>Agree</u> | <u>Disagree</u> | <u>No opinion</u> |
|---------------------|--------------|-----------------|-------------------|
| Entire sample (600) | 53% | 40 | 7 |
| Catholics (165) | 40% | 52 | 8 |
| Protestants (424) | 61% | 35 | 4 |

"If other countries ask our help in limiting their population growth -- through controlling family size -- do you feel the United States should or should not help them?"

| | <u>Should</u> | <u>Should not</u> | <u>No opinion</u> |
|---------------|---------------|-------------------|-------------------|
| Entire sample | 61% | 30 | 9 |
| Catholics | 38% | 50 | 12 |
| Protestants | 70% | 23 | 7 |

In each case the northern half of the state is slightly "behind" the rest of Minnesota -- largely, presumably, on educational grounds:

| | <u>Percentage "agree"</u> | <u>Percentage "should help"</u> |
|------------------------|---------------------------|---------------------------------|
| Northern half of state | 47% | 54% |
| Southern half of state | 56% | 62% |
| Twin City areas | 55% | 64% |

Prepared by the Office of Technical Cooperation and Research
Agency for International Development, Washington
April 7, 1965

WH - Mr. Komer
13
March 23, 1964
Miss Population

TO: S - Mr. Little
FROM: FE - Robert W. Barnett
SUBJECT: Population Problem

General William H. Draper, Jr., telephoned me on Saturday from New York to ask a favor. This memorandum is a record of my conversation with him, and a warning that I may, rather soon, be wanting to speak to the Secretary.

General Draper hoped for references to the population problem in the President's messages to the Alliance for Progress and to the Congress on FY 1965 aid, and found none.

He is fearful that progress made under President Kennedy will be lost, if the White House remains silent on the population question. Meanwhile, he has got President Truman and President Eisenhower to agree to serve as honorary chairmen for a 1965 National Drive, and expects to get President Hoover too.

General Draper has been urged to use his influence to get movement on the Clark-Gruening Resolution. This resolution calls for the creation of a Presidential Commission on Population (attached). Draper believes that the White House should, discreetly, indicate a wish to see it approved and do this in response to an approach by Eugene Black, Robert Anderson, Mariner Eccles and himself. He has asked that I approach the Secretary (or, possibly Dave Bell) with the suggestion that the President indicate a willingness to see these gentlemen, knowing that they wish to talk with the President about the Clark-Gruening Resolution.

General Draper has not finished his consultations with Hoover, Anderson and Black and does not want me to take the matter up with the Secretary until he has done so. Nevertheless, I think you should know that this is in the wind.

cc: White House - Mr. Komer
FE - Mr. Bundy
IO - Mr. Gardner

FE:RWBarnett:aws

MAR 25 1964

88TH CONGRESS
1ST SESSION

13a
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S. CON. RES. 56

IN THE SENATE OF THE UNITED STATES

AUGUST 15, 1963

Mr. CLARK (for himself and Mr. GREENING) submitted the following concurrent resolution; which was referred to the Committee on Labor and Public Welfare

CONCURRENT RESOLUTION

Whereas the expected growth of world population, if it does no more than continue at its present annual rate of 2 per centum, will double the number of inhabitants of the world, from three billion to six billion, by the year 2000; and

Whereas the application of public health measures, and the introduction of modern medical life-saving and life-prolonging techniques have contributed to a doubling of the annual rate of population growth within the past eighteen years, and may be expected to increase it even further; and

Whereas much of this population expansion will occur in the underdeveloped countries of the world, whose inhabitants do not now have sufficient food, clothing, shelter, or the means to industrialize their economies to supply these needs, and who can therefore least afford to share their already scarce resources with the billions waiting to be born; and

V

MAR 25 1964

Whereas the prospect for such countries, where increases in the gross national product will be largely offset by population increases, is not the prompt reduction of individual deprivation and misery, but rather the indefinite perpetuation of inadequate standards of living; and

Whereas the consequence of this uncontrolled rise in population is to doom to disappointment and angry frustration the newly awakened expectations of the underprivileged peoples of the world, and thus to heighten the threat of civil strife and world war; and

Whereas the means exist, or can be discovered by further research, to permit those who are charged with the responsibilities of parenthood to exercise freedom of choice, according to the dictates of their own consciences and within the precepts of their ethical and religious convictions, in determining the number of children which they wish to bear, and for which they are willing to accept the obligation of support and education; and

Whereas there is no significant body of responsible opinion among the adherents of any major religious, ethical, or ideological persuasion which advocates the total abnegation of free choice in determining family size; and

Whereas in his summary address to the recent and historic World Food Congress, Doctor B. R. Sen, Director General of the Food and Agricultural Organization of the United Nations, declared that "the time may soon come when not only the nation to which the individual belongs, but also the world as a whole may have to take a more direct and more dynamic role in assisting family planning measures through social education and hygiene"; and

Whereas the Committee on Science and Public Policy of the National Academy of Sciences, the Nation's principal scientific body, in a recent report on "The Growth of World Population" declared, "Other than the search for lasting peace, no problem is more urgent"; and

Whereas President Kennedy has given public support for increased research in fertility and the whole reproductive cycle, and has stated that the results of this research should be made available to the people of the world, so that each may exercise his own judgment; and

Whereas the United States, in a statement before the United Nations, has acknowledged the need for more facts about alternative methods of family planning which are consistent with different economic, social, cultural, and religious circumstances, and has formally declared a policy to "help other countries, upon request, to find potential sources of information and assistance on ways and means of dealing with population problems"; and

Whereas the Secretary General of the United Nations has sent an inquiry to all United Nations members, including the United States, asking for the views of each government concerning problems confronting them as a result of the reciprocal interaction of population growth and economic and social development: Now, therefore, be it

- 1 *Resolved by the Senate (the House of Representatives*
- 2 *concurring)*, That the President be urged speedily to imple-
- 3 ment the policies of the United States regarding population
- 4 growth as declared before the United Nations, by inaugurat-

1 ing substantially increased programs of research within the
2 National Institutes of Health and by taking steps to make the
3 results of such research freely available to countries request-
4 ing such assistance.

5 SEC. 2. The President is hereby requested to create a
6 Presidential Commission on Population which shall be
7 charged with the duty to inform, after investigation, the Gov-
8 ernment and the American people of the nature of popula-
9 tion problems at home and abroad, with respect to the im-
10 plications for all aspects of American life, and the relevance
11 to our efforts, in cooperation with international agencies and
12 other nations, to promote economic and social progress
13 throughout the world, and to make such recommendations as
14 may be appropriate.

88TH CONGRESS
1ST SESSION

S. CON. RES. 56

CONCURRENT RESOLUTION

Relative to population growth and requesting
the creation of a Presidential Commission on
Population.

By Mr. CLARK and Mr. GRUENING

AUGUST 15, 1963

Read twice and referred to the Committee on Labor
and Public Welfare