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BEYOND FAMILY PLANNING

THE following paper reviews various proposals made for dealing with "the population problem" beyond the current efforts of national programs of voluntary family planning. It was written by Bernard Berelson of The Population Council.

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This paper rests on these propositions: (1) among the great problems on the world agenda is the population problem; (2) that problem is most urgent in the developing countries where rapid population growth retards social and economic development; (3) there is a time penalty on the problem in the sense that, other things equal, anything not done sooner may be harder to do later, due to increased numbers; and accordingly (4) everything that can properly be done to lower population growth rates should be done, now. As has been asked on other occasions, the question is: what is to be done? There is a certain agreement on the general objective (i.e., on the desirability of lowering birth rates, though not on how far how fast), but there is disagreement as to means.

The 1960's have witnessed a substantial increase of awareness and concern with population matters throughout the world¹ and of efforts to do something about the problem, particularly in the developing countries. That something typically turns out to be the establishment of national family planning programs, or rough equivalents thereof. There are now 20 to 25 countries with efforts along this line, on all three developing continents, all of them either set up or revitalized in this decade. Thus, the first response to too high growth rates deriving from too high birth rates is to introduce voluntary contraception on a mass basis, or try to.

Why is family planning the first step taken on the road to population control? Probably because from a broad political standpoint it is the most acceptable one:

since closely tied to maternal and child care it can be perceived as a health measure beyond dispute; and since voluntary it can be justified as a contribution to the effective personal freedom of individual couples. On both scores, the practice ties into accepted values and thus achieves political viability. In some situations, it is an oblique approach, seen as the politically acceptable way to start toward "population control" on the national level by promoting fertility control and smaller family size among individual couples. Moreover, it is a gradual effort and an inexpensive one, both of which contribute to its political acceptability. Though the introduction of family planning as a response to a country's population problem may be calculated to minimize opposition, even that policy has been attacked in several countries by politicians who are unconvinced and/or see an electoral advantage in the issue.

How effective have family planning programs been as a means toward population control? There is currently some controversy among qualified observers as to their efficacy,² and this is not the place to review that issue. But there is sufficient agreement on the magnitude and consequence of the problem that additional efforts are needed to reach a "solution", however that is responsibly defined.

For the purpose of this paper, then, let us assume that today's national family planning programs, mainly via voluntary contraception, are not "enough"—where "enough" is defined not necessarily as achieving zero growth in some extended present but simply as lowering birth

rates quickly and substantially. "Enough" begs the question of the ultimate goal and only asks that a faster decline in population growth rates be brought about than is presently in process or in prospect—and, within the range of the possible, the faster the better.³ Just to indicate the rough order of magnitude, let us say that the proximate goal is the halving of the birth rate in the developing countries in the next decade or two—from, say, over 40 births per thousand per year to 20–25.⁴ For obvious reasons, both emigration and increased death rates are ruled out of consideration.

What is to be done to bring that about, beyond present programs of voluntary family planning?⁵ I address that question in two ways: first, by listing the programs or policies more or less responsibly suggested to this end in recent years; and second, by reviewing the issues raised by the suggested approaches.

Proposals: Beyond Family Planning

Here is a listing of the several proposals, arranged in descriptive categories. (There may be a semantic question involved in some cases: when is a proposal a proposal? Are "suggestions" or "offers for consideration" or lists of alternatives to be considered as proposals? In general, I have included all those cases presented in a context in which they were readily perceived as providing a supplementary or alternative approach to present efforts. The list may include both proposals for consideration and proposals for action.)

A. *Extensions of Voluntary Fertility Control*

1. Institutionalization of maternal care in rural areas of developing countries: a feasibility study of what would be required in order to bring some degree of modern medical or paramedical attention to every pregnant woman in the rural areas of five developing countries with professional back-up

for difficult cases and with family planning education and services a central component of the program aimed particularly at women of low parity (Taylor & Berelson⁶).

2. Liberalization of induced abortion (Davis⁷, Ehrlich⁸, Chandrasekhar⁹).

B. *Establishment of Involuntary Fertility Control*

1. Mass use of "fertility control agent" by government to regulate births at acceptable level: the "fertility control agent" designed to lower fertility in the society by five per cent to 75 per cent less than the present birth rate, as needed; substance now unknown but believed to be available for field testing after 5-15 years of research work; to be included in water supply in urban areas and by "other methods" elsewhere (Ketchel¹⁰); "addition of temporary sterilants to water supplies or staple food" (Ehrlich¹¹).
2. "Marketable licenses to have children", given to women and perhaps men in "whatever number would ensure a reproduction rate of one", say 2.2 children per couple: for example, "the unit certificate might be the 'deci-child', and accumulation of ten of these units by purchase, inheritance or gift, would permit a woman in maturity to have one legal child" (Boulding¹²).
3. Temporary sterilization of all girls via time-capsule contraceptives, and again after each delivery, with reversibility allowed only upon governmental approval; certificates of approval distributed according to popular vote on desired population growth for a country, and saleable on open market (Shockley¹³).
4. Compulsory sterilization of men with three or more living children (Chandrasekhar¹⁴); requirement of induced abortion for all illegitimate pregnancies (Davis¹⁵).

C. *Intensified Educational Campaigns*

1. Inclusion of population materials in primary and secondary schools systems (Davis¹⁶, Wayland¹⁷, Visaria¹⁸): materials on demographic and physiological aspects, perhaps family planning and sex education as well; introduced at the secondary level in order to reach next waves of public school teachers throughout the country.
2. Promotion of national satellite television systems for direct informational

effect on population and family planning as well as for indirect effect on modernization in general: satellite broadcasting probably through ground relays with village receivers (Ehrlich¹⁹, Meier & Meier²⁰, UNESCO²¹, Schramm & Nelson²²).

D. *Incentive Programs*: This term requires clarification. As used here, it refers to payments, or their equivalent, made directly to contracepting couples and/or to couples not bearing children for specified periods. It does *not* refer to payments to field workers, medical personnel, volunteers, *et al.*, for securing acceptance of contraceptive practice; that type of payment, now utilized in many programs, is better called a fee or a stipend in order to differentiate it from an incentive as used here. Beyond that distinction, however, the term is fuzzy at the edges: is the provision of free contraceptive consultation and supplies to be considered an incentive? or free milk to the infant along with family planning information to the mother? or free transport to the family planning service, which then provides general health care? or a generous payment in lieu of time off from work for a vasectomy operation? or even a financial burden imposed for undesirable fertility behavior? In the usage here, I try to limit the term to direct payment of money (or goods or services) to members of the target population in return for the desired practice. This usage is sometimes referred to as a "positive" incentive in distinction to the "negative" incentive inherent in tax or welfare penalties for "too many" children (E below).

1. Payment for the initiation or the effective practice of contraception: payment or equivalent (e.g., transistor radio) for sterilization (Chandrasekhar²³, Pohlmann²⁴, Samuel²⁵, Davis²⁶) or for contraception (Simon²⁷, Enke²⁸, Samuel²⁹).
2. Payment for periods of non-pregnancy or non-birth: a bonus for child spacing or non-pregnancy (Young³⁰, Bhatia³¹, Enke³², Spengler³³, Leasure³⁴); a savings certificate plan for twelve-month periods of non-birth (Balfour³⁵); a lottery scheme for preventing illegitimate births among teenagers in a small country (Mauldin³⁶); "responsibility prizes" for each five years of childless marriage or for vasectomy before the third child, and special lotteries with tickets available to the childless (Ehrlich³⁷).

E. *Tax and Welfare Benefits and Penalties*: i.e., an anti-natalist system of social services in place of the present pro-natalist tendencies.

1. Withdrawal of maternity benefits, perhaps after N (3?) children (Bhatia³⁸, Samuel³⁹, Davis⁴⁰) or unless certain limiting conditions have been met, like sufficient child spacing, knowledge of family planning, or level of income (Titmuss & Abel-Smith⁴¹).
2. Withdrawal of children or family allowances, perhaps after N children (Bhatia⁴², Titmuss & Abel-Smith⁴³, Davis⁴⁴).
3. Tax on births after the Nth (Bhatia⁴⁵, Samuel⁴⁶, Spengler⁴⁷).
4. Limitation of governmentally provided medical treatment, housing, scholarships, loans and subsidies, etc., to families with fewer than N children (Bhatia⁴⁸, Davis⁴⁹).
5. Reversal of tax benefits, to favor the unmarried and the parents of fewer rather than more children (Bhatia⁵⁰, Titmuss & Abel-Smith⁵¹, Samuel⁵², Davis⁵³, Ehrlich⁵⁴, David⁵⁵).
6. Provision by the state of N years of free schooling at all levels to each nuclear family, to be allocated by the family among the children as desired (Fawcett⁵⁶).
7. Pensions for poor parents with fewer than N children as social security for their old age (Samuel⁵⁷, Ohlin⁵⁸, Davison⁵⁹).

F. *Shifts in Social and Economic Institutions*: i.e., broad changes in fundamental institutional arrangements that could have the effect of lowering fertility.

1. Increase in minimum age of marriage: through legislation or through substantial fee for marriage licenses (David⁶⁰, Davis⁶¹); or through direct bonuses for delayed marriage (Young⁶²); or through payment of marriage benefits only to parents of brides over 21 years of age (Titmuss & Abel-Smith⁶³); or through a program of government loans for wedding ceremonies when the bride is of a sufficient age, or with the interest rate inversely related to the bride's age (Davis⁶⁴); or through a "governmental 'first marriage grant' . . . awarded each couple in which the age of both (*sic*) partners was 25 or more" (Ehrlich⁶⁵); or through establishment of a domestic "national service" program for all men for the appropriate two-year period in order to develop social services, inculcate mod-

ern attitudes including family planning and population control, and at the same time delay age of marriage (Berelson, Etzioni⁶⁶).

2. Promotion or requirement of female participation in labor force (outside the home) to provide roles and interests for women alternative or supplementary to marriage (Hauser⁶⁷, Davis⁶⁸, David⁶⁹).
3. "Direct manipulation of family structure itself—planned efforts at deflecting the family's socializing function, reducing the noneconomic utilities of offspring, or introducing nonfamilial distractions and opportunity costs into people's lives"; specifically, through employment of women outside the home (Blake⁷⁰); "selective restructuring of the family in relation to the rest of society" (Davis⁷¹).
4. Promotion of "two types of marriage, one of them childless and readily dissolved, and the other licensed for children and designed to be stable;" the former needs to be from 20–40 per cent of the total in order to allow the remainder to choose family size freely (Meier & Meier⁷²).
5. Encouragement of long-range social trends leading toward lower fertility, e.g., "improved and universal general education, or new roads facilitating communication, or improved agricultural methods, or a new industry that would increase productivity, or other types of innovation that may break the 'cake of custom' and produce social foment" (Hauser⁷³); and improved status of women (U.N./ECOSOC⁷⁴).
6. Efforts to lower death rates even further, particularly infant and child death rates, on the inference that birth rates will follow them down (Revelle⁷⁵, Heer & Smith⁷⁶).

G. Approaches via Political Channels and Organizations

1. U.S. insistence on "population control as the price of food aid", with highly selective assistance based thereon, and exertion of political pressures on governments or religious groups impeding "solution" of the population problem, including shifts in sovereignty (Ehrlich⁷⁷).
2. Re-organization of national and international agencies to deal with the population problem: within the United States, "coordination by a powerful governmental agency, a Federal Department of Population and Environ-

ment (DPE) . . . with the power to take whatever steps are necessary to establish a reasonable population size" (Ehrlich⁷⁸); within India, creation of "a separate Ministry of Population Control" (Chandrasekhar⁷⁹); development of an "international specialized agency larger than WHO to operate programs for extending family limitation techniques to the world . . . charged with the responsibility of effecting the transfer to population equilibrium" (Meier & Meier⁸⁰).

3. Promotion of zero growth in population, as the ultimate goal needed to be accepted now in order to place intermediate goals of lowered fertility in proper context (Davis⁸¹).

H. Augmented Research Efforts

1. More research on social means for achieving necessary fertility goals (Davis⁸²).
2. Focused research on practical methods of sex determination (Polgar⁸³).
3. Increased research toward an improved contraceptive technology (NAS⁸⁴).

Proposals: Review of the Issues

Here are 29 proposals beyond family planning for dealing with the problem of undue population growth in the developing world. I naturally cannot claim that these are all the proposals made more or less responsibly toward that end, but my guess is that there are not many more and that these proposals are a reasonably good sample of the total list. In any case, these are perhaps the most visible at the present time and the following analysis is limited to them.

Since several of the proposals tend in the same direction, it seems appropriate to review them illustratively against the criteria that any such proposals might be required to meet. What are such criteria? There are at least six: (1) scientific/medical/technological readiness, (2) political viability, (3) administrative feasibility, (4) economic capability, (5) moral/ethical/philosophical acceptability, and (6) presumed effectiveness. In other words, the key questions are: is the scientific/medical/technological base available or likely? will governments approve? can the proposal be administered? can the society afford the proposal? is it morally acceptable? and finally, will it work?

Such criteria and questions have to be considered against some time scale. As indicated at the outset of this paper, I suggest the next decade or two on the double grounds that the future is dim enough at

that point let alone beyond and that in any case it is difficult to develop plans and programs now for a more remote future. National economic plans, for example, are typically limited to five years and then a new one made in accord with the conditions existing at that time. In any case, long-run social goals are normally approached through successive short-run efforts.

Since the population problem in the developing world is particularly serious in its implications for human welfare, such proposals deserve serious consideration indeed. What do the proposals come to, viewed against the indicated criteria? (I use India throughout as the major illustrative case since it is the key example of the problem; disregarding Mainland China, India has a much larger population than all the other countries with population programs combined.)

Scientific/Medical/Technological Readiness

Two questions are involved: (1) is the needed technology available? and (2) are the needed medical or para-medical personnel available or readily trainable to assure medical administration and safety?

With regard to temporary contraception, sterilization, and abortion, the needed technology is not only available now but is being steadily improved and expanded. The IUD (intrauterine device) and the oral pill have been major contraceptive developments of the past decade, and several promising leads are now being followed up⁸⁵—though it cannot be said with much confidence that any of them will eventuate for mass use within the next few years.⁸⁶ Improved technologies for sterilization, both male and female, are being worked on; and there has been a recent development in abortion technique, the so-called suction device now being utilized in Eastern Europe and the U.S.S.R.⁸⁷

However, neither Ehrlich's "temporary sterilants" nor Ketchel's "fertility control agent" (B-1) is now available or on the technological horizon—though that does not mean that the research task ought not to be pursued against a subsequent need, especially since such substances could be administered voluntarily and individually as well as involuntarily and collectively. In the latter case, if administered through the water supply or a similar source, the substance would need to be medically safe and free of side effects for men and women, young and old, well and ill, physiologically normal and physiologically marginal, as

well as for animals and perhaps plants. As some people have remarked, such an involuntary addition to a water supply would face far greater difficulties of acceptance simply on medical grounds than the far milder proposals with regard to fluoridation to prevent tooth decay.

Though a substantial technology in fertility control does exist, that does not mean that it can be automatically applied where most needed, partly because of limitations of trained personnel. In general, the more the technology requires the services of medical or para-medical personnel (or, what is much the same, is perceived as requiring them), the more difficult it is to administer in the developing countries. For example, such traditional contraceptives as condoms or foams can be distributed freely through a variety of non-medical channels, including commercial ones, though that network is not without limitations in the poorer countries. Oral contraceptive pills *are* now distributed in large numbers without substantial medical intervention in a number of countries—sold by pharmacies without prescription—but not with medical sanction; and most qualified medical specialists here and abroad believe that the pills should be given only after proper medical examination and with proper medical follow-up. IUDs were first inserted only by obstetricians, then by medical doctors, and now, in a few situations where female medical personnel are unavailable in sufficient numbers, by specially trained para-medical personnel (notably, on a large scale, in Pakistan).

In the case of sterilization and abortion, the medical requirement becomes more severe. For example, when the policy of compulsory vasectomy of men with three or more children was first being considered in India (see footnote 14), an estimate was made that the policy would affect about 40 million males: "one thousand surgeons or para-surgeons each averaging 20 operations a day for five days a week would take eight years to cope with the existing candidates, and during this time of course a constant supply of new candidates would be coming along"⁸⁸—at present birth rates, probably of the order of 3.5 million a year. Large-scale abortion practice, assuming legality and acceptability, might additionally require hospital beds, which are in particularly short supply in most developing countries. Just as an indication of order of magnitude, in India, for example, there are approximately 22 million births annually; to abort five million would require

the equivalent of about 800 physicians, each doing 25 a day five days a week fifty weeks a year, which is approximately 10 per cent of the obstetrical/gynecological specialists in India, or perhaps 25 per cent of the female specialists; and about 10 million bed days, which is over half the estimated number of maternity bed days in the country at present.⁸⁹ However, the newer abortion technique might not require hospitalization—theoretically, the abortion "camp" may be feasible, as was the vasectomy "camp," except perhaps for the greater sensitivities attaching to the status of women, though it is not medically desirable—and para-medical personnel may be acceptable as well. Reportedly, the newer technique does not involve hospitalization in some parts of Eastern Europe and Mainland China.

In short, the technology is available for some but not all current proposals, and the same may be the case for properly trained personnel.

Political Viability

As mentioned earlier, the "population problem" has been increasingly recognized by national governments and international agencies over the past decade, and favorable policies have been increasingly adopted: national family planning programs in some 20–25 countries, positive resolutions and actions within the United Nations family, large programs of support by such developed countries as United States and Sweden, the so-called World Leaders' Statement. There is no reason to think that that positive trend has run its course.

At the same time, the political picture is by no means unblemished. Some favorable policies are not strong enough to support a vigorous program even where limited to family planning on health grounds; in national politics "population control" can become a handy issue for a determined opposition; internal ethnic balances are sometimes delicately involved, with political ramifications; national size is often equated with national power, from the standpoint of international relations and regional military balances; the motives behind the support and encouragement of population control by the developed countries are sometimes perceived as politically expedient if not neo-colonialist or neo-imperialist; and on the international front, as represented by the United Nations, there is still considerable reluctance based on both religious and political considerations. In short, elite ambivalence and perceived

political liability are not absent even in the favoring countries. That state of affairs may not be surprising looked at historically and given the sensitive religious, military, and political issues involved, but it does not provide maximum support for energetic measures directed at the "necessary" degree of population control.

The question of political acceptability of such proposals becomes in effect two questions: what is presumably acceptable within the present situation? and what might be done to enlarge the sphere of acceptability (as, for example, in proposals G-1 and G-2)?

In the nature of the political case, population measures are not taken in isolation—which is to say, they are not given overriding claim upon the nation's attention and resources even though they have been given special authority in a few countries. They must thus compete in the political arena with other claims and values, and that kind of competition accords with the political bases of an open society.

Any social policy adopted by government rests on some minimum consensus upon goals and means. They need not be the ultimate goals or the final means; as noted above, the socio-economic plans of developing countries are typically five-year plans, not 20- or 40- or 100-year plans. Indeed, an ultimate goal of population policy—that is, zero growth—need not be agreed upon or even considered by officials who can agree upon the immediate goal of lowering growth by a specified amount or by "as much as possible" within a period of years. And since there are always goals beyond goals, one does not even need to know what the ultimate goal is, only the direction in which it will be found (which is usually more likely of agreement). Would the insistence *now* on the acknowledgment of an *ultimate* goal of zero growth advance the effort or change its direction?

The means to such ends need not be final either. Indeed, at least at the outset of a somewhat controversial program, the means probably must fit within the framework of existing values, elite or mass, and preferably both—for example, a family planning program for maternal and child health and for preventing unwanted births even though the resultant growth rate may still remain "too high" by ultimate standards.

Specifically, against this background, how politically acceptable do some of the proposals appear to be?

To start with, the proposal of involuntary controls in India in 1967 (B-4) precipi-

tated "a storm of questions in Parliament,"⁹⁰ was withdrawn, and resulted in a high-level personnel shift within the family planning organization. No other country has seriously entertained the idea. Leaving aside other considerations, political instability in many countries would make implementation virtually impossible.

Social measures designed to affect the birth rate indirectly—e.g., tax benefits, social security arrangements, etc.—have been proposed from time to time. In India, there have been several such proposals: for example, by the United Nations mission,⁹¹ by the Small Family Norm Committee,⁹² by the Central Family Planning Council (e.g., with regard to age of marriage, the education and employment of women, and various social welfare benefits),⁹³ and in almost every issue of such publications as *Family Planning News*, *Centre Calling*, and *Planned Parenthood* (illustrative recent headings: "Tax to Reduce Family Size," "Relief for Bachelors Urged," "Scholarships for Children, Family Planning for Parents"). As Samuel reports, with accompanying documentation, "the desirability of imposing a tax on births of fourth or higher order has been afloat for some time. However, time and again, the suggestion has been rejected by the Government of India."⁹⁴ In some cases, action has been taken by either the Central Government (e.g., income tax "deductions for dependent children are given for the first and second child only"⁹⁵) or certain states (e.g., "Maharashtra and Uttar Pradesh have decided to grant educational concessions and benefits only to those children whose parents restrict the size of their families . . ."⁹⁶ and the former state is reportedly beginning to penalize families with more than three children by withholding maternity leave, educational benefits, and housing privileges, though in the nature of the case only a small proportion of the state's population is affected by these disincentives⁹⁷). As an indication of political sensitivity, an order withdrawing maternity leave for non-industrial women employees with three or more living children—at best a tiny number of educated women—was revoked before it really went into effect.⁹⁸ There is a special political problem in many countries, in that economic constraints on fertility often turn out in practice to be selective on class, racial, or ethnic grounds, and thus exacerbate political tensions.

As another example, promoting female participation in the labor force runs up against the political problem that such

employment would be competitive with men in situations of already high male un- and under-employment. One inquiry concludes: "The prospective quantitative effect of moves in this direction seems very questionable. The number of unemployed in India has been rising by approximately 50 per cent every five years, and this is a well-known and very hot political issue. The government can hardly be blamed for being reluctant to promote female employment at the expense of male employment, which the great bulk of female employment almost surely would be."⁹⁹

Given the present and likely political climate both within and between countries, whether programs for lowering population growth and birth rates are politically acceptable or not appears to depend largely upon whether they are perceived as positive or negative: where "positive" means that they are seen as promoting other social values as well as population limitation and where "negative" means that they are seen as limited *per se*. For example, family planning programs, as noted above, are often rationalized as contributing both to maternal and child health and to the effective freedom of the individual family; a large-scale television network would contribute to other informational goals (though it is also politically suspect as providing too much power to the government in office); promotion of female participation in the labor force would add to economic productivity at the same time that it subtracted from the birth rate; extension of MCH services to rural areas is clearly desirable in itself, with or without family planning attached; incorporation of population material in school systems can be justified on educational grounds as well as population ones; a pension for the elderly would have social welfare benefits as well as indirect impact upon the large family as a social security system; contraceptive programs in Latin America are promoted by the medical community as a medical and humanitarian answer not to the population problem but to the extensive illegal and dangerous practice of abortion. On the other hand, imposing tax liabilities or withdrawing benefits after the Nth child, not to mention involuntary measures, can be attacked as a punitive means whose only purpose is that of population limitation.

It would thus require great political courage joined to very firm demographic convictions for a national leader to move toward an unpopular and severe prescrip-

tion designed to cure his country's population ills. Indeed, it is difficult to envisage such a political move in an open society where a political opposition could present a counter view and perhaps prevail. Witness the views of two strong advocates of additional measures beyond family planning:

A realistic proposal for a government policy of lowering the birth rate reads like a catalogue of horrors. . . . No government will institute such hardship simply for the purpose of controlling population growth.¹⁰⁰

If a perfected control agent were available now, I am certain that it would not be utilized in any democratic country, for no population would be likely to vote to have such agents used on itself. This means that the effects of overpopulation are not yet acute enough for people to accept an unpleasant alternative.¹⁰¹

The political problem of population control, like many political matters of consequence, is a matter of timing: in the 1950's nothing much could be done but in the 1960's a number of countries and international agencies moved at least as far as family planning programs. Political accommodation is typically a matter of several small steps with an occasional large one; and in this case it rests upon the seriousness with which the population problem is viewed. That is growing, hence political acceptability of added measures may also grow. Regardless of what the future may bring in this regard, several social measures like those in the list of proposals have been made from time to time and have encountered political obstacles. At least for the time being, such obstacles are real and must be taken into account in any realistic proposal.

The governmental decisions about measures taken to deal with undue population growth must be taken mainly by the countries directly involved: after all, it is their people and their nation whose prospects are most centrally affected. But in an interconnected world, with peace and human welfare at issue, others are properly concerned from both self-interested and humanitarian standpoints—other governments from the developed world, the international community, private groups. What of the political considerations in this connection?

A recommendation (G-1) that the United States exert strong political pressures to effect population control in developing countries seems more likely to generate political opposition abroad than acceptance. It is conceivable that such measures might be adopted by the Congress, though if so certainly against the

advice of the executive agencies, but it is hardly conceivable that they would be agreed to by the proposed recipients. Such a policy is probably more likely to boom-erang against a population effort than to advance the effort.

The proposal to create an international super-agency (G-2) seems more likely of success, but not without difficulty. WHO, UNICEF, and UNESCO have moved some distance toward family planning, if not population control, but only slowly and against considerable political restraint on the international front.¹⁰² A new international agency would find the road easier only if restricted to the convinced countries. Certainly the present international organizations at interest would not be expected to abdicate in its favor. If it could be brought into being and given a strong charter for action, then almost by definition the international political climate would be such as to favor action by the present agencies, and then efficiency and not political acceptability would be the issue.

Administrative Feasibility

Given technical availability and political acceptability, what can actually be done in the field? This is where several "good ideas" run into difficulties in the developing world, in the translation of a theoretical probability into a practical program.

One of the underdeveloped elements of an underdeveloped country is administration: in most such countries there is not only a limited medical infrastructure but also a limited administrative apparatus to be applied to any program. Policies that look good on paper are difficult to put into practice—and that has been true in the case of family planning efforts themselves, where the simple organizational and logistic problems of delivering service and supplies have by no means been solved in several large countries after some years of trying. Again, this is one of the realities that must be dealt with in any proposals for action.

It is difficult to estimate the administrative feasibility of several of the proposals listed above, if for no other reason simply because the proponents do not put forward the necessary organizational plans or details. How are "fertility control agents" or "sterilants" to be administered on an involuntary mass basis in the absence of a central water supply or a food processing system? How are men with three or more children to be reliably identified in a peasant society and impelled to

undergo sterilization against their will; and what is to be done if they decline, or if the fourth child is born? What is to be done with parents who evade the compulsory programs, or with the children born in consequence? How can an incentive system be honestly run in the absence of an organized network of offices positioned and staffed to carry out the regulatory activity? How can a system of social benefits and penalties, including marriage disincentives, be made to work under similar conditions?

Such questions are meant only to suggest the kinds of considerations that must be taken into account if proposals are to be translated into program. They are difficult but perhaps not insurmountable: somewhat similar problems have been addressed in the development of family planning programs themselves, as with the availability of medical and para-medical personnel. But it would seem desirable that every responsible proposal address itself to such administrative problems in the attempt to convert a proposal into a workable plan.

Some proposals do move in that direction. The plan to institutionalize maternal care in rural areas with family planning attached (A-1) is currently under study in several developing countries with regard to feasibility in administration, personnel, and costs. The plans for a national television system for informational purposes (C-2) have worked out some of the administrative problems, though the basic question of how to keep a television set working in a non-electrified area of a non-mechanical rural culture is not addressed and is not easy (as in the parallel case of keeping vehicles in working order under such conditions). The plan to build population into the school curriculum (C-1) has been carried forward to the preparation of materials and in a few cases beyond that.¹⁰³ The plans for incentive programs sometimes come down to only the theoretical proposition that people will do things for money, in this case refrain from having children; but in some cases the permissible payment is proposed on the basis of an economic analysis, and in a few cases an administrative means is also proposed.¹⁰⁴ The plan for wedding loans tied to the bride's age appreciates that a birth registration system might be needed in order to control against misreporting of age.¹⁰⁵

Thus the *why* of population control is easy, the *what* is not very hard, but the *how* is difficult. We may know that the extension of popular education or the in-

crease of women in the labor force or a later age of marriage would all contribute to population control in a significant way. But there remains the administrative question of how to bring those developments about. For example, the proposal (F-1) to organize the young men of India into a social service program, directed toward later age at marriage and general modernization of attitudes, is extremely difficult from an administrative standpoint even if it were acceptable politically and financially: consider the administrative, supervisory, and instructional problems in the United States of handling nine to ten million young men (the number affected in India), many of them unwilling participants easily "hidden" by their families and associates, in a series of camps away from home.¹⁰⁶ As has been observed, if a country could administer such a program it could more easily administer a family planning program, or perhaps not need one.

In short, several proposals assume administrable workability of a complicated scheme in a country that cannot now collect its own vital statistics in a reliable manner. Moreover, there is a near limit to how much administrative burden can be carried by the typical developing country at need: it cannot carry very many large-scale developmental efforts at the same time, either within the population field or overall. For population is not the only effort: agriculture, industry, education, health, communications, the military—all are important claimants. And within the field of population, a country that finds it difficult to organize and run a family planning program will find it still harder to add other programs along with that one. So difficult administrative choices must be made.

Economic Capability

From the standpoint of economic capability there are two questions: is the program worthwhile when measured against the criterion of economic return? and can it be afforded from present budgets even if worthwhile?

Most of the proposals probably pass the second screen: if scientifically available and politically and administratively acceptable, an involuntary fertility control agent would probably not be prohibitive economically; incorporation of population materials into the school curriculum is not unduly expensive, particularly when viewed as a long-term investment in population limitation; imposition of taxes or withdrawal of benefits or increased fees

for marriage licenses might even return a net gain after administrative cost.

But a few proposals are costly in absolute if not relative terms. For example, the institutionalization of maternal care (A-1) might cost the order of \$500,000,000 for construction and \$200,000,000 for annual operation in India, or respectively \$25,000,000 and \$10,000,000 in a country of 25 million population¹⁰⁷ (although later estimates are substantially lower). The plan for a "youth corps" in India would cost upwards of \$450,000,000 a year if the participants were paid only \$50 annually. The plan for pensions to elderly fathers without sons could cost from \$400 million to \$1 billion a year, plus administrative costs.¹⁰⁸ The satellite television system for India would cost \$50,000,000 for capital costs only on a restricted project,¹⁰⁹ with at least another \$200,000,000 needed for receiving sets, broadcast terminals, and programming costs if national coverage is to be secured (depending largely on distribution of sets); or, by another estimate, \$30-\$35,000,000 a year over 20 years (or \$700 million—\$440 million in capital outlay and \$250 million in operating costs) in order to cover 84 per cent of the population by means of nearly 500,000 receiving sets.¹¹⁰ All of these proposals are intended to have beneficial consequences beyond population and hence can be justified on multiple grounds, but they are still expensive in absolute amounts.

The broad social programs of popular education, rationalization of agriculture, and increased industrialization (F-4) already absorb even larger sums though they could no doubt utilize even more. Here, however, the better question is a different one. Presently less than one per cent of the total funds devoted to economic development in such countries as India, Pakistan, South Korea, and Turkey are allocated to family planning programs—in most cases, much less. Would that tiny proportion make a greater contribution to population control, over some specified period, if given over to education or industrialization or road-building, for their indirect effect, rather than utilized directly for family planning purposes?¹¹¹ From what we now know, the answer is certainly No.

Still other proposals, particularly those concerned with incentives and benefits, are more problematic, and unfortunately no clear directions are apparent. For comparative purposes, let us start with the generally accepted proposition that in the typical developing country today, one

prevented birth is worth one to two times the per capita income, on economic grounds alone. In that case, the typical family planning program as currently operated is economically warranted in some substantial degree.¹¹² The per caput annual income of the developing countries under consideration range, say, from \$75 to \$500. In similar order of magnitude, the typical family planning program operates annually at about six cents per caput, and in Taiwan and South Korea, where the programs are more effective, "each initial acceptor costs about \$5; each acceptor continuing effective contraception for a year costs about \$7-\$10; each prevented birth costs, say, \$20-\$30 (at three years of protection per averted birth); and each point off the birth rate at its present level costs . . . about \$25,000 per million population."¹¹³

This order of cost is not certified in all other situations, so even the economic value of family planning programs is not yet altogether clear¹¹⁴ although most indications to date are that it is strongly positive.¹¹⁵ Beyond family planning, the situation is still less clear. Assuming that some level of incentive or benefit would have a demographic impact, what would the level have to be to cut the birth rate by, say, 20 per cent? We simply do not know: the necessary experiments on either administration or effectiveness have not been carried out. There is, of course, the possibility that what would be needed could not be afforded and that what could be afforded would not be effective.

For guidance, let us review what has been proposed with respect to incentives. Again we take the Indian case; and for comparative purposes, the present budget of the Indian family planning program is about \$60,000,000 a year, far higher than in the recent past (only about \$11,000,000 in the 1961-1966 Plan) and not yet fully spent.

On the ground that incentives for vasectomy are better than incentives for contraception—easier to administer and check on a one-time basis and likely to be more effective in preventing births¹¹⁶—Pohlman proposes for India a range of money benefits depending upon parity and group acceptance: from \$7 to a father of four or more children if half the villagers in that category enter the program, up to \$40 to a father of three children if 75 per cent accept. If the 50 per cent criterion were met in both categories throughout India, the current plan would cost on the order of \$260,000,000 in incentives alone, omitting administrative costs (based on

these figures: 90 million couples, of whom about 40 per cent are parity four and above, and 15 per cent are parity three; or about 36.0 and 13.5 million respectively; half of each times \$7 and \$20 respectively). The decline in the birth rate would be slightly over one fourth, perhaps a third, or of the order of \$35-\$40 a prevented birth by a rough estimate.¹¹⁷

Simon proposes an incentive of half the per capita income "each year to each fertile woman who does not get pregnant."¹¹⁸ Here a special problem arises. In a typical developing population of 1000, about 25-30 per cent of the married women of reproductive age (MWRA) give birth each year: 1000 population means from 145-165 MWRA, with a birth rate of, say, 40. Thus, incentives could be paid to about three-fourths of the women with no effect on the birth rate—since they would not be having a child that year under normal circumstances—so that the cost could be three to four times larger than "needed" for any desired result. Even if the incentive were fully effective, and each one really did prevent a birth, a cut of ten points in the Indian birth rate would cost of the order of \$250,000,000 (or 5,000,000 prevented births at \$50 each)—and substantially larger if the anyway non-pregnant, including the non- or semi-fecund, could not be screened out efficiently. (Compare this level of incentive with Spengler's suggestion of "rewards to those who prevent births—say \$5-\$10 per married couple of reproductive age each year they avoid having offspring."¹¹⁹ In the typical case, the couple could collect for three years and then, as before, have the child in the fourth year; or, if an incentive of this size were effective, the cost would be four times the indicated level.)

Enke addresses himself to this problem by suggesting a system of blocked accounts for Indian women who would have to remain non-pregnant for three to four years with examinations thrice yearly.¹²⁰ Here again the cost could be high: about \$100 for three to four years of non-pregnancy at his proposed rates, or perhaps \$500,000,000 a year to effect a similar cut in the birth rate (i.e., over 20,000,000 prevented births over four years at \$100 each). And on the administrative side, the plan requires not only a substantial organization for management and record-keeping, but also the dubious assumption that the Indian peasant is sufficiently future-oriented and trustful of governmental bureaucracy.

Finally, Balfour has suggested an ingenious scheme for providing national

saving certificates to married women in the reproductive ages who remain non-pregnant for three, four, five, or more years at the rate of about \$3–\$4 a year.¹²¹ He estimates that this plan in action would cost about \$200 per year per thousand population, which comes to about \$100,000,000 for all India.

But these are only speculations; to date we simply do not know whether incentives will lower a birth rate or rather, how large they would have to be in order to do so. These illustrations show only that an incentive program could be expensive. In any case, incentive systems would require a good amount of supervision and record-keeping; and presumably the higher the incentive (and hence the greater the chance of impact), the greater the risk of false reporting and the greater need of supervision—which is not only expensive but difficult administratively.

Moral/Ethical/Philosophical Acceptability

Beyond political acceptability, is the proposal considered right and proper—by the target population, government officials, professional or intellectual elites, the outside agencies committed to assistance?

“One reason the policy of seeking to make voluntary fertility universal is appealing—whether adequate or not—is that it is a natural extension of traditional democratic values: of providing each individual with the information he needs to make wise choices, and allowing the greatest freedom for each to work out his own destiny. The underlying rationale is that if every individual knowledgeably pursues his self-interest, the social interest will best be served.”¹²² But what if “stressing the right of parents to have the number of children they want . . . evades the basic question of population policy, which is how to give societies the number of children they need?”¹²³ Thus the issue rests at the center of political philosophy: how best to reconcile individual and collective interests.

Today, most observers would acknowledge that having a child is theoretically a free choice of the individual couple—but only theoretical in that the freedom is principled and legal. For many couples, particularly among the poor of the world, it is not effectively free in the sense that the individual couple does not have the information, services, and supplies to implement a free wish in this regard. Such couples are restrained by ignorance, not only of contraceptive practice but of the consequences of high fertility for them-

selves, their children, and their country; they are restrained by religious doctrine, even though they may not accept the doctrine; they are restrained legally, as with people who would abort a pregnancy if that action were open to them; they are restrained culturally, as with women subject to the subordination that reserves for them only the child-bearing and child-rearing role. Hence effective freedom in child-bearing is by no means realized in the world today, as recent policy statements have remarked.¹²⁴

Where does effective freedom lie? With the free provision of information and services for voluntary fertility limitation? With that plus a heavy propaganda campaign to limit births in the national interest? With that plus an incentive system of small payments? large payments? finders fees? With that plus a program of social benefits and penalties geared to the desired result? Presumably it lies somewhere short of compulsory birth limitation enforced by the state.

One’s answer may depend not only on his own ethical philosophy but also upon the seriousness with which he views the population problem: the worse the problem, the more one is willing to “give up” in ethical position in order to attain “a solution.” As usual, the important and hard ethical questions are those involving a conflict of values. In some countries, for example, people who are willing to provide temporary contraception as a means for population control under present circumstances are reluctant to extend the practice to sterilization and firmly opposed to abortion¹²⁵—though again the wheel of history seems to be moving the world across that range under the pressure of population growth. But in some groups, notably religious groups, morality in this connection is absolute and no compromise with social need is to be tolerated, as for example in the case of Pope Paul’s encyclical of July 1968.

How much in ethical values should a society be willing to forego for the solution of a great social problem? Suppose a program for population control resulted in many more abortions in a society where abortion is not only morally repugnant but also widely unavailable by acceptable medical standards: how much fertility decline would be “worth” the result? What of infanticide under the same conditions? How many innocent or unknowing men may be vasectomized for a fee (for themselves or the finders) before the practice calls for a moral restraint? How large an increase in the regulatory bureaucracy, or

in systematic corruption through incentives, or in differential effect by social class to the disadvantage of the poor,¹²⁶ is worth how much decrease in the birth rate? How much association of child-bearing with monetary incentive is warranted before “bribing people not to have children” becomes contaminating, with adverse long-run effects on parental responsibility?¹²⁷ How much “immorality,” locally defined as extramarital sex, is worth importing along with how much contraceptive practice (assuming the association)? How much withholding of food aid is ethical, judged against how much performance in fertility decline? If it were possible to legislate a later age of marriage, would it be right to do so in a society in which young women have nothing else to do, and against their will? In countries, like our own, where urbanization is a serious population problem, is it right to tell people *where* to live, or to impose heavy economic constraints that in effect “force” the desired migration? Is it right to withdraw educational benefits from the children in “too large” families?—which is not only repressive from the standpoint of free education but in the long run would be unfortunate from the standpoint of fertility control. In the balance—and this is a question of great but neglected importance—what weight should be given to the opportunities of the next generations as against the ignorance, the prejudices, or the preferences of the present one?

These are not light questions, nor easy ones to answer. And they have not been seriously analyzed and ventilated, beyond the traditional religious concern about the acceptability of contraception and abortion. Most official doctrine in the emerging population programs is conservative—as is only to be expected at the outset of a great social experiment of this character.

Guidance on such ethical questions is needed. As an offer toward further consideration, these propositions are put forward: (1) “an ideal policy would permit a maximum of individual freedom and diversity. It would not prescribe a precise number of children for each category of married couple, nor lay down a universal norm to which all couples should conform”;¹²⁸ correlatively, it would move toward compulsion only very reluctantly and as the absolutely last resort; (2) “an ideal program designed to affect the number of children people want would help promote other goals that are worth supporting on their own merits, or at least not conflict with such goals”;¹²⁹ correlatively, it would not indirectly encourage

undesirable outcomes, e.g., bureaucratic corruption; (3) an ideal program would not burden the innocent in an attempt to penalize the guilty—e.g., would not burden the Nth child by denying him a free education simply because he was the Nth child of irresponsible parents; (4) an ideal program would not weigh heavily upon the already disadvantaged—e.g., by withdrawing maternal or medical benefits or free education from large families, which would tend to further deprive the poor; (5) an ideal program would be comprehensible to those directly affected—i.e., it should be capable of being understood by those involved and hence subject to their response; (6) an ideal program would respect present values in family and children, which many people may not be willing to bargain away for other values in a cost-benefit analysis; and (7) an ideal program would not rest upon the designation of population control as the final value justifying all others; “preoccupation with population growth should not serve to justify measures more dangerous or of higher social cost than population growth itself.”¹³⁰

Presumed Effectiveness

If proposals are scientifically ready, politically and morally acceptable, and administratively and financially feasible, to what extent will they actually work in bringing population growth under control? That is the final question.

Again we do not know the answer. We are not even sure in the case of family planning programs, with which we now have some amount of experience. But as order of magnitude and as a kind of measuring rod for other proposals, the impact of family planning programs, when conducted with some energy at the rate of investment indicated above, ranges roughly as follows: in situations like Singapore, South Korea, and Taiwan, they have recruited 20–33 per cent of the married women of reproductive age as contraceptive acceptors within 3–4 years, and in difficult situations like India and Pakistan, from 5–14 per cent of the target population.¹³¹ In other settings, like Malaysia or Ceylon or Turkey or Kenya or Tunisia or Morocco, either it is too early to tell or the program has been conducted under political or other restraints so that it is difficult to say what an energetic program could have achieved; as it is, family planning is being introduced into such situations at a pace politically acceptable and administratively feasible. Overall, it appears that a vigorous pro-

gram *can* extend contraceptive practices by an economically worthwhile amount wherever conducted.¹³²

What of the proposals beyond family planning? How well might they do, given administrative implementation?

To begin with, the compulsory measures would probably be quite effective in lowering fertility. Inevitably in such schemes, strongly motivated people are ingenious enough to find ways “to beat the system”; if they were numerous enough the system could not be enforced except under severe political repression.¹³³ Otherwise, if workable, compulsion could have its effect.

What about the proposals for the extension of voluntary contraception? Institutionalizing maternal care in the rural areas with family planning attached does promise to be effective over, say, five to ten years, particularly in its potential for reaching the younger and lower parity women. The International Postpartum Program did have that effect in the urban areas¹³⁴, and presumably the impact would extend to the rural areas though probably not to the same degree because of the somewhat greater sophistication and modernization of the cities. The importance of the particular target is suggested in this observation: “The objective in India is to reach not the 500,000,000 people or the 200,000,000 people in the reproductive ages or the 90,000,000 married couples or even the 20–25,000,000 who had a child this year—but the 5,000,000 women who gave birth to their first child. And this may be the only institutionalized means for reaching them”.¹³⁵ The total program is costly, but if it could establish family planning early in the reproductive period in a country like India, and thus encourage the spacing of children and not just stopping, it could have great demographic value in addition to the medical and humanitarian contribution.

A liberalized abortion system, again if workable, could also be effective in preventing unwanted births, but it would probably have to be associated with a contraceptive effort: otherwise there might be too many abortions for the system as well as for the individual woman (who might need three a year to remain without issue; in Mainland China, where abortion on demand is available, it is reported that a woman may have only one a year¹³⁶). Free abortion for contraceptive failures would probably make for a fertility decline, but how large a one would depend upon the quality of the contra-

ceptive program. With modern contraception (the IUD and the pill) the failure rates are quite small, but women who only marginally tolerate either method, or both, would be available for abortion. Free abortion on demand has certainly lowered fertility in Japan and certain Eastern European countries,¹³⁷ and where medically feasible would do so elsewhere as well; as a colleague observes, in this field one should not underestimate the attraction of a certainty as compared to a probability. Abortion for illegitimate pregnancies, whether voluntary (A-2) or required (B-4), would not have a large impact on the birth rate in most developing countries since known illegitimacy is small (assuming that the children of the numerous consensual unions and other arrangements in Latin America are not considered “illegitimate”).

The educational programs, whether in the school system or in the mass media, would almost certainly have an effect over the years though it will be difficult for technical reasons to determine the precise or even approximate degree of impact. Anything that can be done to “bring home” the consequences of undue population growth to family and nation will help reach the goal of fertility decline, but in the nature of the case education alone will have a limited effect if life circumstances remain stable.

The large question of the effect of the various incentive and benefit/liability plans (D and E) simply cannot be answered: we have too little experience to know much about the conditions under which financial factors will affect child-bearing to any substantial degree. Perhaps everyone has his price for everything; if so, we do not know what would have to be paid, directly or indirectly, to bring people not to bear children.

Such as it is, the evidence from the *pro*-natalist side is not encouraging. All the countries of Europe have family allowance programs of one kind or another¹³⁸, most of them legislated in the 1930's and 1940's to raise the birth rate; collectively they have the lowest birth rate of any continent. The consensus among demographers appears to be that such programs cannot be shown to have effected an upward trend in the birth rate where tried. A recent review of the effect of children's allowances upon fertility concludes:

It would be helpful to be able to state categorically that children's allowances do or do not increase the number of births among

families that receive them. Unfortunately, there is no conclusive evidence one way or the other. . . To argue that the level of births in the United States or anywhere else depends upon the existence, coverage, and adequacy of a set of family allowances is certainly simplistic. Such a conclusion can and ought to be rejected not only on logical grounds but also on the basis of the demonstrated complexity of the factors producing specific birthrates . . . Recent fertility statistics show no relation between the existence or character of a family allowance program and the level of the birthrate. In specific low-income agricultural countries with such programs, fertility is high. In specific high-income modernized nations with such programs, fertility is low . . . Whether the less developed countries have any form of family or children's allowances appears wholly unrelated to the level of fertility.¹³⁹

As in the case of abortion for illegitimate pregnancies, several of the benefit/liability proposals would affect only a trivial fraction of people in much of the developing world: for example, again in India, programs for governmental employees who make up perhaps 5 per cent of the labor force, tax or social security systems where the rural masses are not regularly covered, maternity benefits since so few women are covered, fees for marriage licenses, control of public housing which is insignificant, denial of education benefits to married students who are trivially few and not now covered in any case. Such measures are probably more relevant to the developed than the developing countries. However, because the impact of incentive and benefit/liability plans is uncertain and may become important, the field needs to become better informed on the possibilities and limitations, which information can only come from experimentation under realistic circumstances and at realistic levels of payment.

A higher age of marriage and a greater participation of women in the labor force are generally credited with effecting fertility declines. In India, average female age at marriage has risen from about 13 to about 16 in this century, or about half a year a decade, although the age of marital consummation has remained rather steady at 17 years (since most of the rise is due to the decrease in child marriages). In a recent Indian conference on raising age at marriage, the specialists seemed to differ only on the magnitude of the fertility decline that would result: a decline of 30 per cent in the birth rate in a generation of 28 years if the minimum female age of marriage were raised to

20¹⁴⁰ or a decline of not more than 15 per cent in 10 years¹⁴¹—"seemed to" since these figures are not necessarily incompatible. In either case, the decline is a valuable one. But the effectiveness of increased age of marriage rests in the first instance on its being realized; here are the perhaps not unrepresentative views of knowledgeable and committed observers:

. . . In the absence of prolonged education and training, postponing the age of marriage becomes a formidable problem (Chandrasekhar)¹⁴²

. . . Legislation regarding marriage can rarely be used as a measure of fertility control in democratic countries. The marital pattern will mostly be determined by social circumstances and philosophies of life and any measure by government clashing with them will be regarded as a restriction on freedom rather than a population policy (Dandekar)¹⁴³

Similarly, an increase in the proportion of working women—working for payment outside the home—might have its demographic effect,¹⁴⁴ but could probably come about only in conjunction with other broad social trends like education and industrialization, which themselves would powerfully affect fertility (just as a fertility decline would assist importantly in bringing them about).¹⁴⁵ Both compulsory education and restrictions on child labor would lower the economic value of children and hence tend toward fertility decline: The question is, how are they to be brought about?

Finally, whether research would affect fertility trends depends of course upon its nature and outcome, aside from the general proposition that "more research" as a principle can hardly be argued against. Most observers believe that under the typical conditions of the developing society, any improvement in the contraceptive technology would make an important difference to the realization of present fertility goals and might make an important contribution to turning the spiral down. Indeed, several believe that this is the single most important desideratum over the short run. Easy means for sex determination should have some effect upon the "need for sons" and thus cut completed family size to some extent. Research on the social-economic side would probably have to take effect through the kinds of programs discussed above.

The picture is not particularly encouraging. The measures that would

work to sharply cut fertility are politically and morally unacceptable to the societies at issue, as with coercion, and in any case unavailable; or they are difficult of attainment in any visible future, as with the broad social trends or shift in age of marriage. The measures that might possibly be tried in some settings, like some version of incentives or benefit/liability plans, are uncertain of result at the probable level of operation. Legalization of abortion, where medically available, would almost certainly have a measurable effect, but acceptability is problematic.

Conclusion

Where does this review leave us with regard to proposals beyond family planning? Here is my own summary of the situation.

(1) There is no easy way to population control. If this review has indicated nothing else, it has shown how many obstacles stand in the way of a simple solution to the population problem—or a complicated one, for that matter. By way of illustrative capitulation, let us see how the various proposals seem to fit the several criteria, in the large (Table 1).¹⁴⁶ That is only one observer's judgment of the present situation, but whatever appraisal is made of specific items it would appear that the overall picture is mixed. There is no easy way.

(2) Family planning programs do not compare unfavorably with specific other proposals—especially when one considers that any *actual* operating program is disadvantaged when compared with any competitive *ideal* policy. (As any practical administrator knows, when an "ideal" policy gets translated into action it develops its own set of realistic problems and loses some of the shine it had as an idea.) Indeed, on this showing, if family planning programs did not exist, they would have to be invented: it would appear that they would be among the first proposals to be made and the first programs to be tried, given their generally acceptable characteristics.

In fact, when such proposals are made, it turns out that many of them call for *more* family planning not less, but only in a somewhat different form. In the present case, of the proposals listed above, at least a third put forward in effect simply another approach to family planning, often accepting the existing motivation as to family size. In any case, family planning programs are established, have some momentum, and, importantly, would be use-

ful as the direct instrument through which other proposals would take effect. So that, as a major critic acknowledges, "there is no reason to abandon family-planning programs."¹⁴⁷

What is needed is the energetic and full implementation of present experience; this is by no means being done now. Much more could be done on the informational side, on encouragement of commercial channels of contraception, on the use of para-medical personnel, on logistics and supply, on the training and supervision of field workers, on approaches to special targets ranging from post-partum women to young men under draft into the armed forces. If the field did well what it knows how to do, that in itself would in all likelihood make a measurable difference—and one competitive in magnitude with other specific proposals—not to mention the further impetus of an improved contraceptive technology.

(3) Most of the proposed ideas are not new; they have been around for some time. So if they are not in existence, it is not because they were not known but because they were not accepted—presumably, for reasons like those reflected in the above criteria. In India, for example, several of the social measures being proposed have been, it would seem, under almost constant review by one or another committee for the past 10–15 years—withdrawal of maternity benefits, imposition of a child tax, increase in age of mar-

riage, liberalization of legal abortion, incorporation of population and family planning in the school curriculum.¹⁴⁸ In Mainland China, reportedly, later age of marriage is common among party members,¹⁴⁹ and in Singapore a 1968 law restricts maternity privileges beyond the third child for employed women and makes public housing available to childless couples.¹⁵⁰ As for general social development—compulsory education, industrialization, improved medical care, etc.—that is in process everywhere, though of course more can always be done (but not very quickly). So it is not correct to imply that it is only new ideas that are needed; many ideas are there, but their political, economic, or administrative feasibility is problematic.

(4) The proposals themselves are not generally approved by this set of proposers, taken together. All of them are dissatisfied to some degree with present family planning efforts, but that does not mean that they agree with one another's schemes to do better. Thus, Ohlin believes that "the demographic significance of such measures (maternity benefits and tax deductions for children) would be limited. By and large those who now benefit from such arrangements in the developing countries are groups which are already involved in the process of social transformation" and that "changes in marital institutions and norms are fairly slow and could not in any circumstances reduce

fertility sufficiently by itself when mortality falls to the levels already attained in the developing world."¹⁵¹ Ketchel opposes several "possible alternatives to fertility control agents":

Financial pressures against large families would probably be effective only in developed countries in which there are large numbers of middle-class people. In underdeveloped countries practically no financial inducements to have children now exist to be reversed, and the imposition of further taxes upon the many poor people would depress their living standards even further. . . . In order to be effective, economic pressures would probably have to be severe enough to be quite painful, and when they reached a level of painfulness at which they were effective, they would probably seriously affect the welfare of the children who were born in spite of the pressures. . . . The same objection applies to the use of financial rewards to induce people not to have children because such programs would make the families with children the poorer families. . . . The age at which people marry is largely determined by slowly changing cultural and economic factors, and could probably be changed quickly in a population only by rather drastic measures (in which) an inordinately severe punishment for violators would be required. . . . Statutory regulations of family size would be unenforceable unless the punishment for exceeding the limit was so harsh that it would cause harm to the lives of the existing children and their parents. Such possible procedures as vasectomizing the father or implanting long-

TABLE 1. *Illustrative Appraisal of Proposals by Criteria*

	Scientific Readiness	Political Viability	Administrative Feasibility	Economic Capability	Ethical Acceptability	Presumed Effectiveness
A. Extension of Voluntary Fertility Control	High	High on maternal care, moderate to low on abortion	Uncertain in near future	Maternal care too costly for local budget, abortion feasible	High for maternal care, low for abortion	Moderately high
B. Establishment of Involuntary Fertility Control	Low	Low	Low	High	Low	High
C. Intensified Educational Campaigns	High	Moderate to high	High	Probably high	Generally high	Moderate
D. Incentive Programs	High	Moderately low	Low	Low to moderate	Low to high	Uncertain
E. Tax and Welfare Benefits and Penalties	High	Moderately low	Low	Low to moderate	Low to moderate	Uncertain
F. Shifts in Social and Economic Institutions	High	Generally high, but low on some specifics	Low	Generally low	Generally high, but uneven	High, over long run
G. Political Channels and Organizations	High	Low	Low	Moderate	Moderately low	Uncertain
H. Augmented Research Efforts	Moderate	High	Moderate to high	High	High	Uncertain
Family Planning Programs	Generally high, but could use improved technology	Moderate to high	Moderate to high	High	Generally high, but uneven on religious grounds	Moderately high

acting contraceptives in the mother would require a direct physical assault by a government agent on the body of an individual.¹⁵²

Meier argues against the tax on children on both humanitarian and political grounds.¹⁵³ To the U. N. Advisory Mission to India, "it is realised that no major demographic effects can be expected from measures of this kind (maternity benefits), particularly as only a small proportion of families are covered . . . but they could contribute, together with the family planning programme, to a general change in the social climate relating to child-bearing."¹⁵⁴ Earlier, in supporting a family planning effort in India, Davis noted that "the reaction to the Sarda Act (the Child Marriage Restraint Act of 1929) prohibiting female marriage (below 14) shows the difficulty of trying to regulate the age of marriage by direct legislation."¹⁵⁵ Myrdal warns against cash payments to parents in this connection, as a redistributive reform, and supports social awards to the children in kind.¹⁵⁶ Kirk believes that "it might prove to be the height of folly to undermine the existing family structure, which continues to be a crucial institution for stability and socialization in an increasingly mobile and revolutionary society."¹⁵⁷ Raulet believes that "Davis' main observation . . . that alternatives to the present stress on familism will ultimately be required . . . obviously makes no sense for most less developed countries today . . . Aside from the repressive tone of some of (the proposed) measures, the most striking thing about these proposals is the impracticality of implementing them. . . . The application of social security measures and negative economic sanctions . . . are so far beyond the present economic capacities of these countries, and would raise such difficult administrative and economic problems, that they are probably not worth serious mention."¹⁵⁸ Finally, Ehrlich is contemptuous of the professors whose "idea of 'action' is to form a committee or to urge 'more research.' Both courses are actually substitutes for action. Neither will do much good in the crisis we face now. We've got lots of committees, and decades ago enough research had been done at least to outline the problem and make clear many of the steps necessary to solve it. Unless those steps are taken, research initiated today will be terminated not by success but by the problem under investigation."¹⁵⁹

(5) In a rough way, there appears to be a progression in national efforts to deal with the problem of population control.

The first step is the theoretical recognition that population growth may have something to do with the prospects for economic development. Then, typically, comes an expert mission from abroad to do a survey and make a report to the government, as has occurred in India, Pakistan, South Korea, Turkey, Iran, Tunisia, Morocco, and Kenya among others. The first action program is in family planning, and most of the efforts are still there. Beyond that, it apparently takes (1) some degree of discouragement over progress combined with (2) some heightened awareness of the seriousness of the problem to move the effort forward. To date those conditions have been most prominently present in India—and that is the country that has gone farthest in the use of incentives and in at least consideration of further steps along the lines mentioned above. It may be that in this respect the Indian experience is a harbinger of the international population scene. It is only natural that on matters of such sensitivity, governments try "softer" measures before "harder" ones; and only natural, too, that they move gradually from one position to the next to realize their goals. Indeed, some proposals require prior or simultaneous developments, often of a substantial nature: for example a loan system tied to age of brides may require a good system of vital registration for purpose of verification, instruction in population in the schools requires some degree of compulsory education, tying family planning to health programs requires a medical infrastructure.

Finally, it is also worth noting that more extreme or controversial proposals tend to legitimate more moderate advances, by shifting the boundaries of discourse.

(6) Proposals need to be specified—proposals both for action schemes and for further research. It is perhaps too much to ask advocates to spell out all the administrative details of how their plan is to operate in the face of the kinds of obstacles and difficulties discussed above, or even get permission to operate: the situations, settings, opportunities, and personalities are too diverse for that. But it does seem proper to ask for the fullest possible specification of actual plans, under realistic conditions, in order to test out their feasibility and likely effectiveness. The advocates of further research similarly ought to spell out not only what would be studied and how, but also how the results might be applied in action programs to affect fertility. Social research is not always readily translated into action, espe-

cially into administrative action; and the thrust of research is toward refinement, subtlety, precision, and qualification whereas the administrator must act in the large. Short of such specification, the field remains confronted with potentially good ideas like "raise the age of marriage" or "use incentives" or "substitute pension systems for male children" without being able to move very far toward implementation.

(7) Just as there is no easy way, there is no single way. Since population control will at best be difficult, it follows that every acceptable step be taken that promises some measure of impact. The most likely prospect is that population control, to the degree realized, will be the result of a combination of various efforts—economic, legal, social, medical—each of which has some effect but not an immediately overwhelming one.¹⁶⁰ Accordingly, it is incumbent upon the professional fields concerned to look hard at various approaches, including family planning itself, in order to screen out what is potentially useful for application. In doing so, on an anyway difficult problem, it may be the path of wisdom to move with the "natural" progression. Some important proposals seem reasonably likely of adoption—institutionalization of maternal care, population study in the schools, the TV satellite system for informational purposes, a better contraceptive technology, perhaps even liberalization of abortion in some settings—and we need to know not only how effective such efforts will be but, beyond them, how large a money incentive needs to be to effect a given amount of fertility control and how effective those indirect social measures are that are decently possible of realization. It may be that some of these measures would be both feasible and effective—many observers 15 years ago thought that family planning programs were neither—and a genuine effort needs to be made in the next years, wherever feasible, to do the needed experimentation and demonstration. The "heavy" measures—involuntary means and political pressures—may be put aside for the time being, if not forever.

(8) In the last analysis, what will be scientifically available, politically acceptable, administratively feasible, economically justifiable, and morally tolerated depends upon people's perceptions of consequences. If "the population problem" is considered relatively unimportant or only moderately important, that judgment will not support much investment of effort. If

it is considered urgent, much more can and will be done. The fact is that despite the large forward strides taken in international recognition of the problem in the 1960's, there still does not exist the informed, firm, and constant conviction in high circles that this is a matter with truly great ramifications for human welfare.¹⁶¹ Such convictions must be based on sound knowledge. Here it would appear that the demographers and economists have not sufficiently made their case to the world elite—or that, if made, the case has not sufficiently been brought to their attention or credited by them. Population pressures are not sharply visible on a day-to-day or even year-to-year basis nor, short of major famine, do they lend themselves to dramatic recognition by event. Moreover, the warnings of demographers are often dismissed, albeit unfairly and wrongly, on their record of past forecasts:¹⁶² after all, it was only a generation ago that a declining population was being warned about in the West. It is asking government leaders to take very substantial steps indeed when population control is the issue—substantial for their people as well as for their own political careers—and hence the case must be not only substantial but virtually incontrovertible. Accordingly, the scientific base must be carefully prepared (and perhaps with some sense of humility about the ease of predicting great events, on which the record is not without blemishes). Excluding social repression and mindful of maximizing human freedom, greater measures to meet the problem must rely on heightened awareness of what is at stake, by leaders and masses alike.

What is beyond family planning? Even if most of the specific plans are not particularly new, that in itself does not mean that they are to be disregarded. The questions are: which can be effected, given such criteria? how can they be implemented? what will be the outcome?

This paper is an effort to promote the discourse across the professional fields concerned with this important issue. Given the recent stress on family planning programs as the "means of choice" in dealing with the problem, it is natural and desirable that counter positions should be put forward and reviewed. But that does not in itself settle the critical questions. What can we do now to advance the matter? Beyond family planning, what?

FOOTNOTES

1. As one example, see "Declaration on Population: The World Leaders' Statement", signed by 30 heads of state, in *Studies in Family Planning*, no. 26, January 1968.
2. For example, see Kingsley Davis, "Population Policy: Will Current Programs Succeed?", *Science*, vol. 158, 10 November 1967, p. 730-739; Robert G. Potter, Ronald Freedman, and L. P. Chow, "Taiwan's Family Planning Program", *Science*, vol. 160, 24 May 1968, p. 848-853; and Frank W. Notestein, "Population Growth and Its Control", MS prepared for American Assembly meeting on World Hunger, Fall 1968.
3. See, for example, the section on "Goals" in Davis, *op. cit.*, p. 731-733, and the 1968 presidential address to the Population Association of America, "Should the United States Start a Campaign for Fewer Births?", by Ansley J. Coale.
4. For current targets of some national family planning programs, see table 8, p. 39, and accompanying text in Bernard Berelson, "National Family Planning Programs: Where We Stand", prepared for University of Michigan Sesquicentennial Celebration, November 1967, which concludes: "By and large, developing countries are now aiming at the birth rates of Western Europe 75 years ago or the United States 50 years ago."
5. For a first effort to outline the matter, see point 12, p. 46-51, in Berelson, *op. cit.*
6. Howard C. Taylor Jr. & Bernard Berelson, "Maternity Care and Family Planning as a World Program", *American Journal of Obstetrics and Gynecology*, vol. 100, 1968, p. 885-893.
7. Davis, *op. cit.*, p. 732, 738.
8. Paul R. Ehrlich, *The Population Bomb*, Ballantine Books, 1968, p. 139.
9. S. Chandrasekhar, "Should We Legalize Abortion in India?", *Population Review*, 10, 1966, 17-22.
10. Melvin M. Ketchel, "Fertility Control Agents as a Possible Solution to the World Population Problem", *Perspectives in Biology and Medicine*, vol. 11, 1968, p. 687-703. See also his "Should Birth Control Be Mandatory?", in *Medical World News*, 18 October 1968, p. 66-71.
11. Ehrlich, *op. cit.*, p. 135-36. The author appears to dismiss the scheme as unworkable on page 136 though two pages later he advocates "ample funds" to "promote intensive investigation of new techniques of birth control, possibly leading to the development of mass sterilizing agents such as were discussed above".
12. Kenneth E. Boulding, *The Meaning of the Twentieth Century: The Great Transition*, Harper & Row, p. 135-36. For the record, I note a statement that appeared too late for consideration but does argue for "mutual coercion, mutually agreed upon by the majority of the people affected": Garrett Hardin, "The Tragedy of the Commons", *Science*, 162, 13 December 1968, p. 1247.
13. William B. Shockley, in lecture at McMaster University, Hamilton, Ontario, reported in *New York Post*, 12 December 1967.
14. Sripati Chandrasekhar, as reported in *The New York Times*, 24 July 1967. Just as this paper was being completed, the same author "proposed that every married couple in India deny themselves sexual intercourse for a year . . . Abstinence for a year would do enormous good to the individual and the country" (as reported in *The New York Times*, 21 October 1968). The reader may wish to consider this the 30th proposal and test it against the criteria that follow.
15. Davis, *op. cit.*, p. 738.
16. Davis, *op. cit.*, p. 738.
17. Sloan Wayland, "Family Planning and the School Curriculum", in Bernard Berelson et al., eds., *Family Planning and Population Programs*, University of Chicago Press, 1966, p. 353-62; his "Population Education, Family Planning and the School Curriculum", MS prepared for collection of readings edited by John Ross and John Friesen, *Family Planning Programs: Administration, Education, Evaluation*, forthcoming 1969; and two manuals prepared under his direction: *Teaching Population Dynamics: An Instructional Unit for Secondary School Students* and *Critical Stages in Reproduction: Instruction Materials in General Science and Biology*, both Teachers College, Columbia University, 1965.
18. Pravin Visaria, "Population Assumptions and Policy", *Economic Weekly*, 8 August 1964, p. 1343.
19. Ehrlich, *op. cit.*, p. 162.
20. Richard L. Meier & Gitta Meier, "New Directions, A Population Policy for the Future", University of Michigan, revised MS, October 1967, p. 11.
21. UNESCO Expert Mission, *Preparatory Study of a Pilot Project in the Use of Satellite Communication for National Development Purposes in India*, 5 February 1968, especially the section on "The Population Problem", p. 13-14, paras. 61-66.
22. Wilbur Schramm & Lyle Nelson, *Communication Satellites for Education and Development—The Case of India*. Stanford Research Institute, July 1968: "Family Planning", p. 63-66.
23. Sripati Chandrasekhar, as reported in *The New York Times*, 19 July 1967. Here again I note for the record a very recent "Proposal for a Family Planning Bond" by Ronald J. Ridker, USAID—India, July 1968. This memorandum is a comprehensive and quite detailed review of the issues involved in providing 20-year bonds for couples sterilized after the second or third child. Along this same line, see another late suggestion of a bond linked both to age of marriage and to number of children, in *Approaches to the Human Fertility Problem*, prepared by The Carolina Population Center for the United Nations Advisory Committee on the Application of Science and Technology to Development, October 1968, p. 68.
24. Edward Pohlman, "Incentives for 'Non-Maternity' Cannot 'Compete' with Incentives for Vasectomy", Central Family Planning Institute, India, MS 1967?
25. T. J. Samuel, "The Strengthening of the Motivation for Family Limitation in India", *The Journal of Family Welfare*, vol. 13, 1966, p. 11-12.
26. Davis, *op. cit.*, p. 738.
27. Julian Simon, "Money Incentives to Reduce Birth Rates in Low-Income Coun-

- tries: A Proposal to Determine the Effect Experimentally"; "The Role of Bonuses and Persuasive Propaganda in the Reduction of Birth Rates"; and "Family Planning Prospects in Less-Developed Countries, and a Cost-Benefit Analysis of Various Alternatives", University of Illinois, MSS 1966-1968?
28. Stephen Enke, "Government Bonuses for Smaller Families", *Population Review*, vol. 4, 1960, p. 47-54.
 29. Samuel, *op. cit.*, p. 12.
 30. Michael Young, in "The Behavioral Sciences and Family Planning Programs: Report on a Conference", *Studies in Family Planning*, no. 23, October 1967, p. 10.
 31. Dipak Bhatia, "Government of India Small Family Norm Committee Questionnaire", *Indian Journal of Medical Education*, vol. 6, October 1967, p. 189. As the title indicates, this is not a proposal as such but a questionnaire soliciting opinions on various ideas put forward to promote "the small family norm".
 32. Stephen Enke, "The Gains to India from Population Control", *The Review of Economics and Statistics*, May 1960, p. 179-180.
 33. Joseph J. Spengler, "Agricultural Development is Not Enough", MS prepared for Conference on World Population Problems, Indiana University, May 1967, p. 29-30.
 34. J. William Leasure, "Some Economic Benefits of Birth Prevention", *Milbank Memorial Fund Quarterly*, 45, 1967, p. 417-25.
 35. Marshall C. Balfour, "A Scheme for Rewarding Successful Family Planners", Memorandum, The Population Council, June 1962.
 36. W. Parker Mauldin, "Prevention of Illegitimate Births: A Bonus Scheme", Memorandum, The Population Council, August 1967.
 37. Ehrlich, *op. cit.*, p. 138.
 38. Bhatia, *op. cit.*, p. 188.
 39. Samuel, *op. cit.*, p. 14.
 40. Davis, *op. cit.*, p. 738.
 41. Richard M. Titmuss & Brian Abel-Smith, *Social Policies and Population Growth in Mauritius*, Methuen, 1960, p. 130-31.
 42. Bhatia, *op. cit.*, p. 189.
 43. Titmuss & Abel-Smith, *op. cit.*, p. 131-36.
 44. Davis, *op. cit.*, p. 739.
 45. Bhatia, *op. cit.*, p. 189-90.
 46. Samuel, *op. cit.*, p. 12-14.
 47. Spengler, *op. cit.*, p. 30.
 48. Bhatia, *op. cit.*, p. 190.
 49. Davis, *op. cit.*, p. 738.
 50. Bhatia, *op. cit.*, p. 190.
 51. Titmuss & Abel-Smith, *op. cit.*, p. 137.
 52. Samuel, *op. cit.*, p. 12-14.
 53. Davis, *op. cit.*, p. 738.
 54. Ehrlich, *op. cit.*, p. 136-37.
 55. A. S. David, *National Development, Population and Family Planning in Nepal*, June-July 1968, p. 53-54.
 56. James Fawcett, personal communication, September 1968.
 57. Samuel, *op. cit.*, p. 12.
 58. Goran Ohlin, *Population Control and Economic Development*, Development Centre of the Organization for Economic Co-operation and Development, 1967, p. 104.
 59. W. Phillips Davison, personal communication, 4 October 1968. Davison suggests a good pension (perhaps \$400 a year) for men aged 60, married for at least 20 years, with no sons.
 60. David, *op. cit.*, p. 53.
 61. Davis, *op. cit.*, p. 738.
 62. Young, *op. cit.*, p. 10.
 63. Titmuss & Abel-Smith, *op. cit.*, p. 130.
 64. Kingsley Davis, personal communication, 7 October 1968.
 65. Ehrlich, *op. cit.*, p. 138.
 66. Bernard Berelson, Amitai Etzioni, brief formulations, 1962, 1967.
 67. Philip M. Hauser, in "The Behavioral Sciences and Family Planning Programs: Report on a Conference", *Studies in Family Planning*, no. 23, October 1967, p. 9.
 68. Davis, *op. cit.*, p. 738.
 69. David, *op. cit.*, p. 54.
 70. Judith Blake, "Demographic Science and the Redirection of Population Policy", in Mindel C. Sheps & Jeanne Clare Ridley, eds., *Public Health and Population Change: Current Research Issues*, University of Pittsburgh Press, 1965, p. 62.
 71. Davis, *op. cit.*, p. 737.
 72. Meier & Meier, *op. cit.*, p. 9. For the initial formulation of the proposal, see Richard L. Meier, *Modern Science and the Human Fertility Problem*, Wiley, 1959, chapter 7, esp. p. 171 ff.
 73. Philip M. Hauser, "'Family Planning and Population Programs': A Book Review Article", *Demography*, vol. 4, 1967, p. 412.
 74. United Nations Economic and Social Council. Commission on the Status of Women. "Family Planning and the Status of Women: Interim Report of the Secretary-General", 30 January 1968, esp. p. 17 ff.
 75. Roger Revelle, as quoted in "Too Many Born? Too Many Die. So Says Roger Revelle", by Milton Viorst, *Horizon*, Summer 1968, p. 35.
 76. David M. Heer & Dean O. Smith, "Mortality Level and Desired Family Size", paper prepared for presentation at Population Association of America meeting, April 1967. See also David A. May and David M. Heer, "Son Survivorship Motivation and Family Size in India: A Computer Simulation", *Population Studies*, 22, 1968, p. 199-210.
 77. Ehrlich, *op. cit.*, p. 161-66, *passim*. The author makes the same point in his article, "Paying the Piper", *New Scientist*, 14 December 1967, p. 655: "Refuse all foreign aid to any country with an increasing population which we believe is not making a maximum effort to limit its population . . . The United States should use its power and prestige to bring extreme diplomatic and/or economic pressure on any country or organization [the Roman Catholic Church?] impeding a solution to the world's most pressing problem."
 78. Ehrlich, *op. cit.*, p. 138. In the earlier article cited just above, he calls for a "Federal Population Commission with a large budget for propaganda", presumably limited to the United States (p. 655).
 79. S. Chandrasekhar, "India's Population: Fact, Problem and Policy", in S. Chandrasekhar, ed., *Asia's Population Problems*, Allen & Unwin, 1967, p. 96, citing a Julian Huxley suggestion of 1961.
 80. Meier & Meier, *op. cit.*, p. 5.
 81. Davis, *op. cit.*, p. 731-33.
 82. Davis, *op. cit.*, p. 738, 739.
 83. Steven Polgar, in "The Behavioral Sciences and Family Planning Programs: Report on a Conference", *Studies in Family Planning*, no. 23, October 1967, p. 10. See also the recent suggestion of research on "the possibilities for artificially decreasing libido", in *Approaches to the Human Fertility Problem*, *op. cit.*, p. 73.
 84. National Academy of Sciences, Committee on Science and Public Policy, *The Growth of World Population*, 1963, p. 5, 28-36. This recommendation has of course been made on several occasions by several people: "we need a better contraceptive". For an imaginative account of the impact of biological developments, see Paul C. Berry, *Origins of Positive Population Control, 1970-2000*, Working Paper, Appendix to *The Next Thirty-Four Years: A Context for Speculation*, Hudson Institute, February 1966.
 85. For example, see Sheldon J. Segal, "Biological Aspects of Fertility Regulation", MS prepared for University of Michigan Sesquicentennial Celebration, November 1967.
 86. In passing it is worth noting that such expectations are not particularly reliable. For example, in 1952-1953 a Working Group on Fertility Control was organized by the Conservation Foundation to review the most promising "leads to physiologic control of fertility", based on a survey conducted by Dr. Paul S. Henshaw and Kingsley Davis. The Group did identify a lead that became the oral contraceptive (already then under investigation) but did not mention the intrauterine device. The Group was specifically searching for better ways to control fertility because of the population problem in the developing world, and considered the contraceptive approach essential to that end: "It thus appears imperative that an attempt be made to bring down fertility in overpopulated regions without waiting for a remote, hoped-for transformation of the entire society . . . It seems plausible that acceptable birth control techniques might be found, and that the application of science to developing such techniques for peasant regions might yield revolutionary results." (*The Physiological Approach to Fertility Control, Report of the Working Group on Fertility Control*, The Conservation Foundation, April 1953, p. 69.)
 87. Z. Dvorak, V. Trnka, and R. Vasicek, "Termination of Pregnancy by Vacuum Aspiration", *Lancet*, vol. 2, 11 November 1967, p. 997-98; and D. Kerslake and D. Casey, "Abortion Induced by Means of the Uterine Aspirator", *Obstetrics and Gynecology*, vol. 30, July 1967, p. 35-45.
 88. A. S. Parkes, "Can India Do It?", *New Scientist*, vol. 35, July 1967, p. 186.
 89. These are only illustrative magnitudes. Actually, the five million does not really represent 5/22nd of the birth rate since an aborted woman could again become pregnant within a period of months, whereas a newly pregnant woman would not normally become so for over a year. Thus it may be that abortion needs to be combined with contraceptive practice and used mainly for contraceptive failures or "accidents" in order to be fully effective as a means of fertility limitation in the developing countries.
 90. Report in *The New York Times*, November 17, 1967. The then-Minister had earlier suggested a substantial bonus (100 rupees)

- for vasectomy, the funds to be taken from U.S. counterpart, "but both Governments are extremely sensitive in this area. Yet in a problem this crucial perhaps we need more action and less sensitivity" (S. Chandrasekhar, in *Asia's Population Problem*, *op. cit.*, p. 96).
91. United Nations Advisory Mission, *Report on the Family Planning Programme in India*, February 1966. See Chapter XI: "Social Policies to Promote Family Planning and Small Family Norms."
 92. Bhatia, *op. cit.*
 93. Central Family Planning Council, Resolution No. 8, January 1967, in *Implications of Raising the Female Age at Marriage in India*, Demographic Training Research Centre, 1968, p. 109; and *Centre Calling*, May 1968, p. 4.
 94. Samuel, *op. cit.*, p. 12.
 95. United Nations Advisory Mission, *op. cit.*, p. 87.
 96. *Planned Parenthood*, March 1968, p. 3.
 97. Report in *The New York Times*, September 12, 1968.
 98. *Planned Parenthood*, April 1968, p. 2.
 99. Davidson R. Gwatkin, "The Use of Incentives in Family Planning Programs", Memorandum, Ford Foundation, November 1967, p. 6-7.
 100. Davis, *op. cit.*, p. 739.
 101. Ketchel, *op. cit.*, p. 701.
 102. For a review of this development see Richard Symonds & Michael Carder, *International Organisations and Population Control (1947-1967)*, Institute of Development Studies, University of Sussex, April 1968.
 103. See footnote 17. At present population materials are being included in school programs in Pakistan, Iran, Taiwan, and elsewhere.
 104. As, for example, with Balfour, Mauldin, and Pohlman, *op. cit.*; and for the economic analysis, Enke and Simon, *op. cit.*
 105. Davis, *op. cit.* (footnote 64).
 106. In effect, Israel has a program of this general character, though not for population control purposes, but it is a highly skilled society especially from an administrative standpoint. I understand that the Ceylon Government has a program of "agricultural youth settlements", aimed jointly at youth unemployment and agricultural production but not population control. Of the 200,000 unemployed youth aged 19-25, the Government plans to settle 20-25,000 in the 1966-70 period.
 107. Taylor & Berelson, *op. cit.*, p. 892.
 108. Davison, *op. cit.* and revised figures.
 109. UNESCO Expert Mission, *op. cit.*, p. 23.
 110. Schramm & Nelson, *op. cit.*, p. 164-68, *passim*.
 111. For the negative answer, see Enke and Simon, *op. cit.* Data from family planning budgets and national development budgets contained in five-year development plans.
 112. Enke and Simon, *op. cit.*; see also Paul Demeny, "Investment Allocation and Population Growth", *Demography*, vol. 2, 1965, p. 203-232; and his "The Economics of Government Payments to Limit Population: A Comment," *Economic Development and Cultural Change*, vol. 9, 1961, p. 641-644.
 113. Berelson, *op. cit.* (footnote 4), p. 20.
 114. Warren Robinson, "Conceptual and Methodological Problems Connected with Cost-Effectiveness Studies of Family Planning Programs" and David F. Horlocher, "Measuring the Economic Benefits of Population Control: A Critical Review of the Literature," Working Papers nos. 1 & 2, Penn State-U. S. AID Population Control Project, May 1968.
 115. Even in the United States, where a recent study concluded that "Altogether, the economic benefits (of family planning programs) alone would be at least 26 times greater than the program costs": Arthur A. Campbell, "The Role of Family Planning in the Reduction of Poverty", *Journal of Marriage and the Family*, vol. 30, 1968, p. 243.
 116. Pohlman, *op. cit.*
 117. Mr. Pohlman has under preparation a major MS on this subject, entitled *Incentives in Birth Planning*.
 118. Simon, "Family Planning Prospects . . .", *op. cit.* (footnote 27), p. 8.
 119. Spengler, *op. cit.*, p. 29-30. The Population Council is just now completing an analysis of the possible effects and costs of incentive programs with differing assumptions as to acceptance and continuation.
 120. Enke, "The Gains . . .", *op. cit.* (footnote 32), p. 179.
 121. Balfour, *op. cit.*
 122. Coale, *op. cit.*, p. 2. However, the author does point out, a few sentences later, that "it is clearly fallacious to accept as optimal a growth that continues until overcrowding makes additional births intolerably expensive."
 123. Davis, *op. cit.*, p. 738.
 124. For example, The World Leaders' Statement, *op. cit.*; and the Resolution of the International Conference on Human Rights on "Human Rights Aspects of Family Planning", adopted 12 May 1968, reported in *Population Newsletter* issued by the Population Division, United Nations, no. 2, July 1968, p. 21 ff.
 125. The issue was sufficiently alive in classical times to prompt the great philosophers to take account of the matter in their political proposals. In Plato's *Republic*, "the number of weddings is a matter which must be left to the discretion of the rulers, whose aim will be to preserve the average of population (and) to prevent the State from becoming either too large or too small"—to which end certain marriages have "strict orders to prevent any embryo which may come into being from seeing the light; and if any force a way to the birth, the parents must understand that the offspring of such a union cannot be maintained, and arrange accordingly" (Modern Library edition, p. 412, 414). In Aristotle's *Politics*, "on the ground of an excess in the number of children, if the established customs of the state forbid this (for in our state population has a limit), no child is to be exposed, but when couples have children in excess, let abortion be procured before sense and life have begun . . ." (Modern Library edition, p. 316).
 126. After noting that economic constraints have not been adopted in South Asia, though often proposed, Gunnar Myrdal continues: "The reason is not difficult to understand. Since having many children is a main cause of poverty, such measures would penalize the relatively poor and subsidize the relatively well off. Such a result would not only violate rules of equity but would be detrimental to the health of the poor families, and so of the growing generation." *Asian Drama: An Inquiry into the Poverty of Nations*, Pantheon, 1968, vol. 2, p. 1502-3.
 127. Frank W. Notestein, "Closing Remarks", in Berelson *et al.*, editors, *op. cit.*: "There is a real danger that sanctions, for example through taxation, would affect adversely the welfare of the children. There is also danger that incentives through bonuses will put the whole matter of family planning in a grossly commercial light. It is quite possible that to poor and harassed people financial inducements will amount to coercion and not to an enlargement of their freedom of choice. Family planning must be, and must seem to be, an extension of personal and familial freedom of choice and thereby an enrichment of life, not coercion toward its restriction." (p. 828-29).
 128. Coale, *op. cit.*, p. 7.
 129. Coale, *op. cit.*, p. 7.
 130. Coale, *op. cit.*, p. 6.
 131. Figures based on monthly reports from national programs. Since most of the Indian achievement is in sterilization, it may have a more pronounced effect. For a sophisticated analysis of the Taiwan effort that concludes, "What we are asserting with some confidence is that the several hundred thousand participants in the Taiwan program have, since entering the program, dramatically increased their birth control practice and decreased their fertility", see Robert G. Potter, Ronald Freedman, and L. P. Chow, "Taiwan's Family Planning Program", *Science*, vol. 160, 24 May 1968, p. 852.
 132. Berelson, *op. cit.*, p. 35-38.
 133. In this connection, see the novel by Anthony Burgess, *The Wanting Seed*, Ballantine Books, 1963. At the same time, a long-time observer of social affairs remarks that "the South Asian countries . . . can, to begin with, have no other principle than that of voluntary parenthood . . . State direction by compulsion in these personal matters is not effective . . ." (Myrdal, *op. cit.*, p. 1501).
 134. Gerald I. Zatuchni, "International Postpartum Family Planning Program: Report on the First Year", *Studies in Family Planning*, no. 22, August 1967, p. 14 ff.
 135. Howard C. Taylor, Jr., personal communication.
 136. Edgar Snow, "The Chinese Equation," *The (London) Sunday Times*, January 23, 1966.
 137. For example, the repeal of the free abortion law in Rumania resulted in an increase in the birth rate from 14 in the third quarter of 1966 to 38 in the third quarter of 1967. For an early report, see Roland Pressat, "La suppression de l'avortement légal en Roumanie: premiers effets," *Population*, vol. 22, 1967, p. 1116-18.
 138. See U.S. Department of Health, Education, and Welfare, Social Security Administration. "Social Security Programs Throughout the World, 1964".
 139. Vincent H. Whitney, "Fertility Trends and Children's Allowance Programs," in Eveline M. Burns, editor, *Children's Allowances and the Economic Welfare of Children: The Report of a Conference*, Citizens' Committee for Children of New York,

- 1968, p. 123, 124, 131, 133.
140. S. N. Agarwala, "Raising the Marriage Age for Women: A Means to Lower the Birth Rate", in *Implications of Raising the Female Age at Marriage in India*, Demographic Training and Research Centre, 1968, p. 21.
141. V. C. Chidambaram, "Raising the Female Age at Marriage in India: A Demographer's Dilemma", in *Implications, op. cit.*, p. 47.
142. Chandrasekhar, *op. cit.* (footnote 79), p. 96.
143. Kumudini Dandekar, "Population Policies", *Proceedings of the United Nations World Population Conference*, 1965, p. 4.
144. However, see David Chaplin, "Some Institutional Determinants of Fertility in Peru", manuscript, April 1968, for some evidence that welfare and labor regulations in Peru discourage the employment of women in low-fertility occupations (factory work) by making them more expensive to employ than men. Laws thus designed to promote maternity do so only by default since the higher fertility of the disemployed women will occur outside the protection of adequate medical and welfare institutions.
145. Actually, recent research is calling into question some of the received wisdom on the prior need of such broad institutional factors for fertility decline. If further study supports the new findings, that could have important implications for present strategy in the developing countries. See Ansley J. Coale, "Factors Associated with the Development of Low Fertility: An Historic Summary", *Proceedings of the United Nations World Population Conference*, 1965, vol. 2, p. 205-209; and his paper, "The Decline of Fertility in Europe from the French Revolution to World War II", prepared for University of Michigan Sesquicentennial Celebration, November 1967.
146. As the roughest sort of summary of table 1, if one assigns values from 5 for High to 1 for Low, the various proposals rank as follows:
- | | |
|--|----|
| Family Planning Programs | 25 |
| Intensified Educational Campaigns | 25 |
| Augmented Research Efforts | 24 |
| Extension of Voluntary Fertility Control | 20 |
| Shifts in Social and Economic Institutions | 20 |
| Incentive Programs | 14 |
| Tax and Welfare Benefits and Penalties | 14 |
| Political Channels and Organizations | 14 |
| Establishment of Involuntary Fertility Control | 14 |
147. Davis, *op. cit.*, p. 739. The same critic was a strong advocate of family planning in India, and quite optimistic about its prospects even in the pre-IUD or pill era and with a health base. See Kingsley Davis, "Fertility Control and the Demographic Transition in India", in *The Interrelations of Demographic, Economic, and Social Problems in Selected Underdeveloped Areas*, Milbank Memorial Fund, 1954, concluding:
- "Although India is already well-launched in the rapid-growth phase of the demographic transition, there is no inherent reason why she should long continue in this phase. She need not necessarily wait patiently while the forces of urbaniza-
- tion, class mobility, and industrial development gradually build up to the point where parents are forced to limit their offspring on their own initiative and without help, perhaps even in the face of official opposition . . . Realistically appraising her situation, India has a chance to be the first country to achieve a major revolution in human life—the planned diffusion of fertility control in a peasant population prior to, and for the benefit of, the urban-industrial transition." (p. 87-88).
148. See, for example, Visaria, *op. cit.*, p. 1343; Bhatia, *op. cit.*; Samuel, *op. cit.*, p. 12; U.N. Advisory Mission, *op. cit.*, Chapter XI; Chandrasekhar, in *Asia's Population Problem, op. cit.*; Myrdal, *op. cit.*, p. 1502; *Implications . . . , op. cit.*; and "Shah Committee Recommends Liberalization of Abortion Laws", *Family Planning News*, September 1967, p. 23.
149. Snow, *op. cit.*
150. K. Kanagaratnam, personal communication, August 8, 1968.
151. Ohlin, *op. cit.*, p. 104, 105.
152. Ketchel, *op. cit.*, p. 697-99.
153. Meier, *op. cit.*, p. 167.
154. United Nations Advisory Mission, *op. cit.*, p. 87.
155. Davis, *op. cit.*, 1954, p. 86.
156. Myrdal, *op. cit.*, p. 1503.
157. Dudley Kirk, "Population Research in Relation to Population Policy and National Family Planning Programs," paper presented at meetings of the American Sociological Association, August 1968.
158. Harry M. Raulat, *Family Planning and Population Control in Developing Countries*, Institute of International Agriculture, Michigan State University, November 1968, pp. 5-6, 49-50.
159. Ehrlich, *op. cit.*, p. 191.
160. It begins to appear that the prospects for fertility control may be improving over the decades. After reviewing several factors that "favor a much more rapid (demographic) transition than occurred in the West"—changed climate of opinion, religious doctrine, decline of infant mortality, modernization, fertility differentials, grass roots concern, and improved contraceptive technology—Dudley Kirk shows in a remarkable tabulation that the later a country began the reduction of its birth rate from 35 to 20, the shorter time it took to do so: from 73 years (average) in 1831-1860, for example, to 21 years after 1951, and on a consistently downward trend for over a century. (In his "Natality in the Developing Countries: Recent Trends and Prospects", prepared for University of Michigan Sesquicentennial Celebration, November 1967, p. 11-13.)
161. Nor, often, among the general public. For example, in mid-summer 1968 the Gallup Poll asked a national sample of adults: "What do you think is the most important problem facing this country today?" Less than one per cent mentioned population. (Gallup release, 3 August 1968, and personal communication.)
162. For an old but enlightening review, see Harold Dorn, "Pitfalls in Population Forecasts and Projections," *Journal of the American Statistical Association*, vol. 45, 1950, p. 311-34.



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