DISCUSSION

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I have found it helpful to restructure somewhat one of Parker Mauldin's classifications when considering the evaluation of family planning programs. The evaluation can be conducted by examining the presumed effects at at least two levels. First, there are the effects upon the knowledge, attitudes, acceptance, and persistence of use within the given population. Second, there are the effects upon population growth and particularly upon its fertility component. For brevity, we may call these the "KAP" effects and the "demographic" effects, respectively.

The KAP effects can be analyzed separately for individual methods and techniques of family limitation or of communication. These effects may be the most important concern of personnel whose responsibilities are limited to carrying out an action program in the field of family limitation. To the demographer, however, these KAP effects are essentially means to demographic ends; and the economic planner, in turn, looks ahead to the effects on such things as income per caput. With respect to the demographic effects themselves, moreover, the interest of economic planners tends to center on overall population growth, whereas the demographers are more likely to want to know what is happening to fertility and mortality -- and these programs do have effects on mortality. After the level and trend of the crude birth rate have been studied, the demographer soon begins to ask what is happening to completed size of family and even to child spacing and how those measures of fertility have been changed by a given program.

Expenditures on a given action program are reflected at both the KAP and demographic levels. The fact that not all of the change--or maybe none of the change--in the KAP or demographic variables is attributable to the given program, experimental or otherwise, is perhaps better recognized in the case of the former than the latter. The knowledge of contraception methods in a demonstration area may be received simultaneously from a broad general program and from a localized demonstration or experimental program. Since the demographic effects are causally further removed from the action program, the explanation of observed changes is even more complex, although administrators are sometimes quick to credit a decline in the birth rate, for example, to a particular program, even when there has obviously not been enough elapsed time between the presumed cause and effect. Changes in the birth rate, of course, may also be attributable to such factors as the changing structure of the population by age, sex, and marital status, to mention only one example.

As part of its second Five Year Plan, the Economic Planning Board of the Republic of Korea set as one of its goals the reduction of the annual rate of population growth from 2.9 percent, in 1955-60, to 2.0 in 1970. The Ministry of Health and Social Affairs was first asked to arrange for the insertion of 1 million I.U.C.D.'s in calendar year 1966. Possibly there was some sort of crude calculus involved here as to what was required to produce the target rate although I have not seen the model, or even the scratchpad calculations. At any rate, the Health Ministry argued EPB down to 400,000, pointing out that there were not enough medical and paramedical personnel available and that the task of persuasion becomes progressively more difficult once the more desperate cases have come forward.

In a country with good vital statistics, such as Taiwan or Japan, it is feasible to think about estimating the effects of a particular action program upon fertility. This is a problem in imputation, factoring out the important external factors.

In most of the other East Asian countries, the prior problem is that vital statistics are either very deficient or totally lacking. Hence, it is necessary to improve them or to institute stopgap measurement systems--sample surveys, demonstration registration areas, "supra" registration systems on a sample basis, matching studies between vital events registered and reported in household surveys, etc. In this situation, concern with just how the birth rate is being reduced, if it is being reduced, is obviously quite subordinate.

Just as funds are used to publicize an action program in the family planning field, so funds could appropriately be used to propagandize on behalf of the registration of vital events, in order to improve the evaluation of the ultimate success of the action program. Presumably, funds for these two purposes could often come from the same source,

or, in other words, some part of the funds used to publicize the action program could be used to publicize the importance of registering vital events.

What happened in South Korea shortly after the coup d'état of 1961 is instructive. As the result of underregistration in a decaying system of civil registration, the number of births registered in 1960 had fallen to 908,000, the equivalent of an unbelievably low birth rate. With a vigorous new administrator in temporary charge of the Bureau of Statistics and a modest expenditure of about $3,000 on a nationwide publicity campaign, registered births shot up to 2,387,000 in 1961. Many of these had occurred in earlier years, of course. Here again, it is difficult to say what part of the rise was attributable to the publicity campaign since there was no designed experiment.

Admittedly, complex analyses can be made of the KAP effects without regard to the demographic effects. Here vital statistics are not necessary. The double-decrement life-table technique described by Potter and his associates is an interesting example of this kind of analysis. Incidently, I wish we could develop a more self-explanatory terminology for what Tietze calls "net" and "gross" rates in this connection.

On the whole, however, I was a little disappointed in this afternoon's papers in that they were mainly descriptive in nature and paid limited attention to the technical problems of evaluation. Perhaps the American Statistical Association represents an audience so unfamiliar with the programs and problems in this field that a broad introduction was needed; but, on the other hand, it is certainly a good forum for technical discussion. I should have liked to have heard more, for example, along the lines of research by Tietze 1/ and by Lee and Isbister 2/ on the impact of birth control programs on fertility with explicit attempts being made to analyze the causal sequences, both theoretically and empirically. Mauldin discussed the use of a control population as a tool of such analysis, and it is certainly a useful tool.

Lee and Isbister also discussed very briefly the economic effects of a given reduction in the population growth rate. Obviously, this is a very complex problem in cost-benefit analysis because of our lack of knowledge about the interactions involved. As Takeshita suggests, the economic planners merely assume that a given drop in the rate of population growth is "consistent with their development plans".

In Taiwan it can be seen that good statistics breed good statistics. Not satisfied with a civil registration system that produces vital statistics and local population figures, promptly, accurately, and in considerable detail, Taiwan has gone ahead to design several imaginative sample surveys that yield valuable supplementary information on fertility. Freedman and Takeshita have been leading spirits in the formulation of that research.

A final comment on Takeshita's paper is that the acceleration of the decline of the crude birth rate in Taiwan somewhat antedated the provincial action program introduced in 1964. Perhaps then we need to know whether the acceleration itself was accelerated.

1/ Christopher Tietze, "Pregnancy rates and birth rates" Population Studies 16 (1): 31-37, July 1962.

2/ Byung Moo Lee and John Isbister "The impact of birth control programs on fertility" in: Bernard Berelson et al., editors Family Planning and Population Programs (Proceedings of the International Conference on Family Planning Programs, Geneva, August 1965), Chicago, University of Chicago Press, 1966: 737-758.