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A CALL FOR MANUSCRIPTS

Concerned Demography will devote a subsequent issue to an evaluation of the formation of population policy. We especially invite papers which analyze two major efforts in this area: The President's Commission on Population Growth and the American Future, which deals with domestic population policy; and the National Academy of Science's Rapid Population Growth: Consequences and Policy Implications, which deals with population policies for the Third World. We would like papers which deal with the general policy recommendations of these two groups and papers which specifically focus on one or more of the studies commissioned by these groups.

Manuscripts and suggestions of material for this issue should be sent to: Reid T. Reynolds, Dept. of Sociology, Ithaca College, Ithaca, N.Y. 14850.

INTRODUCTION

The lateness of this issue (scheduled to be published a year ago), might correctly be attributed to the organizational weakness of what was once a Concerned Demography "movement," or at least an active radical/liberal caucus within the Population Association of America. In contrast to organizational weakness, we feel that the issue's contents reveal a growing critical strength on the part of our membership. (Such are the dialectics of Concerned Demography!)

Many justifications for the population control movement are based on images of "overpopulation" in the Third World. In discussing labor surplus, Hirschman argues ("The Labor Surplus Problem in Third World Countries: Alternative Explanations") that we should not only look at the supply side - rapid population growth due to natural increase and urbanward migration - but also to demand - "the social context of job creation." Third World countries which are trying to develop under the dependent capitalist strategy are faced with the low priority which capitalist development places on job creation and the exacerbation of this problem due to the low labor intensiveness of imported technology. Hirschman's analysis of labor surplus helps put some analytic and political flesh on the ambiguous concept of "overpopulation."

The remainder of our contributions are based on work done while the authors were members of Cornell's International Population Program. They reflect the concern of the Program's director, Dr. J. Mayone Stycos, and many of its members with various aspects of the development of population control policies for Third World countries.

The observation is frequently made that a "population policy" should include much more than a plan for implementing family planning. However, the implementation of comprehensive population policies is a rarity in both "developed" and Third World countries. Pool's discussion of the Tropical African context ("Assisting African Countries in the Field of Demography") yields an especially cogent argument for comprehensive population policies by pointing out "dysfunctions" of an emphasis on family planning. His critique of AID policy and his statement that "the role of outsiders can be merely in the field of technical aid" invites a reply from AID, which Concerned Demography would be anxious to publish in a subsequent issue.

Critics of U.S.-sponsored family planning programs often argue that they are often not adequately integrated with more comprehensive maternal and child health programs. Ignoring the Concerned Demographer credo of "nevermind the data, what are the politics?" Harrington brings an intricate analysis of data to bear on the often puzzling relationship between fertility and infant mortality ("The Effect of High Infant and Childhood Mortality on Fertility: The West African Case"). Her analysis shows how innovations in childrearing such as bottle feeding can decrease birth intervals and lead to increased morbidity and mortality

THE LABOR SURPLUS PROBLEM IN THIRD WORLD COUNTRIES: ALTERNATIVE EXPLANATIONS

CHARLES HIRSCHMAN

The growth of the labor surplus problem in most countries of the Third World has been declared a crisis by many international economists as well as the political leaders and economic planners in the countries affected. Labor surplus is the non-utilization of manpower resources or simply the difference between those who desire productive employment and the availability of jobs. The rising magnitude of this problem is evidenced by growing unemployment in urban areas and the continued prevalence of underemployment in rural areas. While the 'underemployed' may actually participate in some agricultural or petty service activity, their contribution to production is thought to be negligible if not zero. It has been suggested that 25-30% of the labor potential in developing countries is being wasted (Morse, 1970).

Background

Much of the interest in this topic has been stimulated by the potential threat to political stability. It is feared that the rising number of recent urban migrants who cannot find jobs will turn into an angry mob which might endanger the fragile status quo in many countries. These fears are often expressed in various degrees by incumbent political elites as well as by social scientists. The available evidence seems to indicate that these fears have little foundation in reality. (Nelson, 1969). However, there are other reasons why the present situation can be considered a crisis to neutral observers who seek improvements in living standards, yet have no vested interest in the maintenance of existing political regimes. First of all, the present situation is a waste of resources for development. Human labor in both its physical and mental aspects is the most basic resource of any society. While there may be a shortage of capital or other resources which prevent the optimal utilization of labor, there are always

numerous tasks in every society for which more allocation of manpower is needed. Another consequence of the labor surplus situation is the poverty of those who cannot find work. The general result of lack of employment is lack of income. This tragedy, idle men and the associated poverty, is evident to any casual observer who walks the streets of the major cities of Asia, Africa, or Latin America.

While awareness of the current problem is growing, the understanding of its causes as well as the analysis of policies to deal with it, is still enveloped in a cloud of confusing rhetoric and theoretical underdevelopment. Part of the problem has been the fixation of traditional economics on rising national product as the only criteria of economic development. Only recently have there been suggestions that social welfare measures (including full employment) be considered as integral in the economic development process (Seers, 1969). Perhaps the realization that problems of poverty, the deterioration of the cities, and social inequality have not been alleviated by substantial economic growth in the United States and other Western countries, have led social scientists to reconsider their earlier faith in simple economic growth as the solution to the problems of underdevelopment. This paper will review some of the conventional wisdom regarding the causes of and the remedies for the labor surplus problem. Many of these theories or hypotheses contain elements of truth and often insightful observations. However, these observations are not linked together with the dominant social-economic reality in many developing countries, the direct and indirect influence of international capitalism from the "developed countries."

Alternative Explanations: The Population Crisis

Let us now review the contemporary thinking about the labor surplus, then reconsider some neglected issues. The most recent explanation for the labor surplus problem comes from the "population explosionists." Their explanation — too high fertility. Since this is also their explanation for every social problem known to mankind, we are not too surprised. While it is true that recent declines in infant mortality have resulted in successively larger birth cohorts in most underdeveloped countries, this is only part of the total picture. There has generally been rapid population

growth from natural increase as a correlate of modern economic growth (Kuznets, 1966). For example, the extremely high fertility of eighteenth and early nineteenth century America did not result in large scale unemployment. To put the matter simply, equilibrium in the job market depends not only on the supply of labor, but also on the demand for labor. Those who argue that high fertility is the cause of rising unemployment are assuming that other societal factors affecting the absorption of labor are constant or unalterable. From a policy viewpoint, this perspective is weakened by the fact that any lowering of the birth rate would only have an impact on labor supply in fifteen to twenty years. Given the uncertainties of policies which are supposed to reduce fertility, it seems doubtful that efforts in this direction would be helpful in alleviating the current crisis.

The Traditional Economics Perspective

The traditional economics perspective is somewhat more sophisticated as it considers both aspects of supply and demand for labor. Generally, economists assumed that rising national income would generate enough jobs in developing countries. More specifically, it is thought that the occupational structure is transformed from a rural agricultural basis to an urban industrial one as a consequence of increasing capital investment and economic growth (Lewis, 1954; Clark, 1960). This sort of model implies that as the economy changes, its basic structure from agriculture to industry, new employment opportunities will be created in the growing modern sector to absorb workers leaving the traditional sector as well as the growing labor force. However, this model has not been able to account for empirical trends occurring in developing countries. In many countries with satisfactory rates of economic growth, not only is the present labor surplus not being absorbed into productive employment, but the ranks of the unemployed are growing (Harbinson, 1967). As a result, economists have been forced to reconsider their earlier thinking and come up with new explanations and policies. These have been addressed two aspects: (1) the increase in rural to urban migration, and (2) the lack of labor absorption in modern industries.

The Revisionist Economics Perspective

Rural to urban migration has been prevalent ever since the rise of cities. However, the magnitude of this flow in underdeveloped countries is probably greater than was the case during the course of development in the presently "economically advanced countries." Economists usually argue that this is due to wage differentials (Todaro, 1968). Because of higher incomes of urban workers, persons are "pulled" from rural areas to the cities. Another argument sometimes advanced is that the "bright lights" of the cities attract rural youth who desire more recreational activities than are available in the traditional village. This is thought to be stimulated by the expansion of schooling in rural areas which has resulted in higher aspirations of rural youth who are no longer satisfied by agricultural work. While these "pull" factors are probably present, there are often "push" factors which force people out of the rural sector no matter what the employment opportunities are like in the cities. Many rural peasants are landless and live a very precarious existence depending on the nature of the landlord. This is coupled with a generally declining terms of trade for most agricultural products with the urban market and also in the international market. The result is severe economic pressure on most peasant farmers just to remain alive, let alone put aside money for the education of their children or buy fertilizers for the next season. It is not surprising that many of the children of these peasant farmers take their chances in the cities no matter how bleak the opportunities there. Some economists have suggested policies of raising rural incomes, bringing movies and other entertainment to the villages, and land reform in efforts to persuade the rural peasantry to stay where they are. While these programs may have short-run effect, it is doubtful that they will be able to do more than slow down rural to urban migration. All modernized nations have become urban industrial ones in the process. This is due to the economic facts of life - there is generally higher productivity in industry than in agriculture, and there is almost unlimited demand for manufactured goods as opposed to the real limits of domestic demand for agricultural goods.

The conclusion of this discussion on rural-urban migration affecting the over supply of labor in urban areas is that while various policies might slow down this movement, the reality is that most future employment opportunities must be found in the towns and cities. Not all of these jobs will be in the manufacturing industry, but also in the many services needed to make urban life possible. The question of new employment creation, therefore, revolves around the nature of the industrialization and urbanization that occurs.

The other current explanation to account for the labor

surplus problem is that modern industrialization does not really create very many jobs. Because of both the composition of products produced and the mode of technology, the number of employment opportunities is much less than the number of job seekers. According to this perspective, modern industrialization offers very little choice in terms of labor-capital ratio, because modern technology is very capital intensive.

This perspective was summed up:

"In many respects, the technology of a hundred years ago would be desirable for them (underdeveloped countries) and would make their development easier. But that technology has been scrapped and rightly scrapped in the industrialized countries, and the technology of the industrialized countries is the only existing technology." (Singer, 1969).

After considering the situation, economists and other policy makers have suggested several alternatives such as expansion of public employment, especially military forces, doing more research into labor-intensive technology, and developing capital goods industries.

While some of these policies might be profitably employed depending on the circumstances, it is necessary to understand the series of structural changes which have led to the present situation. Why hasn't there been more interest in developing labor-intensive techniques for industry in the developing countries? Why don't employers take advantage of the large supplies of excess labor? In order to understand these anomalies, let us review the changing institutional framework of job creation.

The Social Context of Job Creation

Historically, in subsistence economies, most jobs were created by individuals who worked in order to survive. With a little land or simple tools, a man could become a farmer or craftsman and produce enough food and other necessities to support himself and his dependents. While there may have been occasional underemployment, all persons who had economic needs could create their own jobs, and the concept of labor surplus was probably rather meaningless. Gradually, as open land disappeared, and production became more specialized, it became impossible for many individuals to create their own jobs. In most of the present day world, including underdeveloped countries, it takes resources, including capital and technology to create jobs. As a result, in the present world, most jobs

are created by organizations which have the necessary resources. This evolutionary trend is evident in most time-series statistics on "employment status" which show a decline in "own account workers" and "unpaid family workers" and a rise in "wage and salary employees." This fundamental change is crucial in determining the availability of jobs. In a subsistence economy all those who have economic needs can create their own jobs, while in present day societies, most jobs are created by organizations for whom employment creation is not their primary objective. Jobs are created by such organizations only because labor is a necessary ingredient in the attainment of their organizational goals of profit making, economic expansion, or some other objective.

This digression has served to make a rather simple point, because the bulk of the job creation is done by organizations which are not necessarily responsive to the economic needs or hardships of individuals, there is no reason to believe that labor demand will be equal to labor supply in any contemporary capitalist society - developed or underdeveloped.

The social context in which employers make decisions relating to using various factors of production, especially labor is of utmost importance. Thus, the fact that modern industry in underdeveloped countries is capital intensive, and unalterably so, needs to be understood in terms of the social context, especially the influence from the already industrialized countries. Traditional economic theory would suggest that labor absorption is a function of supply and demand in the marketplace. Thus, the aggregate demand for goods and services will determine the production objectives in a society. Industrial entrepreneurs and managers then consider the relative availability of cost of the factors of production, including labor, and combine them in the most profitable manner in order to produce the goods and services which are demanded. This seems to be a reasonable explanation, and it probably describes the industrialization process as it occurred in most western countries. Since technology was underdeveloped during this earlier period, the basic factors of production were probably just labor and raw materials. As markets increased, so did the demand for labor. Gradually, the inputs of science in the form of new technology were applied to the production process. While this lessened the demand for labor in industry as development proceeded, there were increasing employment opportunities made available by the expansion of other sectors of the economy.

Factors Inhibiting Economic Development and Employment Expansion in Less-Developed Countries

The social context in the present day underdeveloped

countries is quite different. Not only is industrial technology brought in from the outside, independently of the course of indigenous development, but there is only minimal competition in modern sector industries. Although there were traditional industries in these countries, most of these have disappeared or stand in a state of arrested development because of the stronger competition from industries in the developed countries. During the Colonial era which is almost universal history for the underdeveloped world, manufactured goods from the colonial powers were marketed in the colonies. Because of the advantages of technology and capital, these metropolitan industries were able to undercut local craftsman. Often in collusion with the colonial governments, the metropolitan industries carved up world markets and developed monopoly control. With the political independence of most of the countries of the Third World in the post World War II era, the situation changed. Most countries, anxious to encourage domestic industries, set up tariff walls affecting the imports of manufactured goods. But the metropolitan industries, along with many growing international corporations were anxious not to lose their profitable markets. So they set up foreign subsidiaries or branch plants in the former colonies to manufacture what had formerly been imported. While this seems to be an improvement over the colonial situation, the difference was actually rather superficial. The new industries in the developing countries continued to import capital goods, spare parts, as well as raw materials. Such industrialization did not create the backward and forward linkages, which are crucial to sustained economic development. For instance, in many of the automobile assembly plants being set up in the developing countries, each car arrives complete in a separate box. The local industry simply puts the car together with a screwdriver and a few other hand tools. It is obvious that such industrialization will not create very many employment opportunities. It is also difficult for these new industries to develop an export market, since the control is in outside hands, usually in international companies, who have divided up the world market, similar to the colonial era. Thus, any growth of these industries is limited to the domestic market.

While not all the industrialization in the Third World is owned and directed by international corporations, their influence is felt on locally owned industries as well. This might be because of a wish to emulate modernity from the West or simply because it is the most profitable way. Another factor which works in concert with foreign capital to encourage capital intensive and otherwise inappropriate industrialization is the public policies of the governments of both developed and less developed countries. The pattern of economic aid from the developed countries has encouraged the emphasis on capital intensive technology (Griffin and Enos, 1970). The governments of less developed countries have

subsidized the import of the most modern machinery with generous tax policies, including rapid depreciation allowances. The policies of the developed countries are understandable in terms of providing support for their international corporations as well as maintaining the existing arrangement of international dependencies. (See Magdoff, 1969 for discussion). However, the policies of less developed countries are more difficult to explain. Perhaps, they are following the advice of "economic advisors" from the developing countries. Another possible explanation is that local elites are given lucrative positions such as seats on Board of Directors of many international businesses in the domestic market. In this way, they legitimize and protect such businesses, yet play only token roles in formulating the policies. Such questions deserve more research in order to understand how foreign businesses gain entry to the local economy and then continue to pursue policies which are inimical to the full utilization of local manpower resources. Presently, our understanding is clouded by questionable statements which are accepted as fact. One of these is that because urban workers, through trade unions, have forced wages so high, that capital intensive industrialization is the only alternative left. Wages are only one cost in the production process, and it is likely that inefficient management, excessive salaries for managers, and surplus profits could more readily be adjusted in order to pursue alternative policies. Because of these factors, it is not necessary to prove that international firms own all industries in the developing countries, but rather that their large holdings influence the course of industrialization in the Third World.

Alternative Explanation of Slow Employment Growth

Perhaps, the two most important consequences of this foreign influence (both direct and indirect) on the slow employment growth via industrialization are the "product mix" and the "technology mix." The "product mix" is the composition of goods and services produced. In most developing countries, there is an overemphasis on producing high-cost consumer items rather than inexpensive manufactured goods for the mass market. This is true of modern sector industries, both foreign and indigenous, which produce middle class luxury goods such as automobiles, air conditioners, and other expensive goods. The motivation for such production is probably based upon the high profit margins on sales of expensive goods. However, the market for such goods is limited, because the majority of the people in developing countries are quite poor. The result is often industrialization with excess capacity, when the productive potential of a factory is much greater than the potential market. The conventional economics wisdom suggests that excess capacity is a problem of lack of aggregate demand in the society. Perhaps the demand is there, but not for the

luxury products which are being produced. Because international firms have both the background and relevant technology to produce such products, as well as the knowledge that such production has a high profit return, they would be most anxious to participate in the production of such products. The result of an over investment of capital and other scarce resources in industries producing luxury goods would probably be slower growth of industrialization and industrial employment than would be the case if the emphasis were on the production of inexpensive necessities for the mass market.

Closely related is the "technology mix" of choice of technology for industrial production. The prevalence of capital - intensive techniques has been noted in many traditional as well as most all modern industries in the underdeveloped world (Baer and Herve, 1966). Since labor is the surplus factor (often unemployment is quite high even among the highly educated) and capital is scarce in most underdeveloped countries, this practice seems contrary to the standard business practice of efficient utilization of available resources. This anomaly can be seen as the result of the penetration and influence of international capitalism from the developed countries in the economy. This is the technology with which foreign firms are familiar and perhaps corresponds to the relative availability of the factors of production in the developed countries. Since most of these industries are already making sizable profits, there is little incentive to set up research and development branches abroad in search of a more efficient technology. Besides, there are disadvantages to having a large labor force, such as potential labor unrest, which might outweigh any potential economic efficiency.

Thus, the statement that modern industrialization is capital - intensive and unalterable is a consequence of international capitalism's influence upon the growth of secondary industries in "Third World" countries. In order to create greater opportunities for employment, it will be necessary to alter the present structural links between the advanced capitalist countries and the path to industrialization in developing nations. Perhaps more emphasis on the development of indigenous technology which is relevant to local conditions and expansion of trade between underdeveloped countries themselves would be more advantageous than the flow of technology and investment from the developed countries. It is interesting to note the experience of China in this regard. China often relies on average factory workers to adapt foreign machinery, and even to construct new machinery which is relevant to the conditions of production in China. From the journalistic evidence available (Unger, 1971), it seems that the result has been the full utilization of the labor force as well as a rapidly growing industrial sector.

In summary, I argue that simple generalizations like: too high fertility, too rapid rural to urban migration, or modern industrialization is too capital - intensive, are inadequate explanations to the present labor surplus crisis in most underdeveloped countries. A more thorough analysis based upon the influences of international linkages upon the creation of technology and the social organization of production is necessary. From the hypotheses presented in this paper, it is suggested that these influences are detrimental to the goal of efficient utilization of manpower and full employment.

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ASSISTING AFRICAN COUNTRIES IN THE FIELD OF DEMOGRAPHY

D. I. POOL

In the area of development aid one of the more controversial fields is assistance with "demographic" problems. In reality, "Demographic" aid has come to be primarily concerned with human fertility, while "population policies" have concerned themselves mainly with family planning.

Recently, radical American demographers have attacked the demographic "establishment," the foundations and technical aid specifically because of U.S. government involvement and in the light of U.S. foreign policy.^{1/} They have suggested that the family planning movement in the U.S. and externally has been motivated by "racism," "neo-colonialism," and even "genocide." Other demographers are questioning the over-emphasizing of family planning as a "demographic" factor while suggesting that "population policy" must concern itself equally with mortality, migration, and other demographic areas.

Much of the controversy has centered on Latin America, Asia, and the U.S., but Africa Report has recently published an African viewpoint on aspects of this question.^{2/} I would like to add an expatriate's view based primarily on my recent experience in Niger and Upper Volta.

^{1/} e.g., Paper presented to the Population Association of America Conference 1970, by Barclay, W., et al, and published in North American Congress on Latin America Newsletter, Vol. IV, No. 8 (Dec. 1970).

^{2/} Okorafor, Apia. "Africa's Population Problems," Africa Report, June 1970. A critical analysis of current approaches which, however, outlines sympathetic and sensible strategies is in Pierre Pradervand's Family Planning Programmes in Africa, OECD, Background paper, Population Programme Meeting, Paris, April 1970.

By way of an introduction, I should state the following factors which I consider basic to my argument:

1. That there is a need for population policies in Tropical Africa.^{3/}
2. That these should cover a wide range of areas not just fertility, and, in fact, that a concern for the growth and distribution of the population requires that population policies be an integrated part of the entire planning process.
3. That no sector of an administration should plan in isolation (a measles vaccination campaign, for example, can have demographic, economic and social implications which extend far beyond the realm of a health department).
4. That in numerous African countries infant mortality and geographical distribution are population variables of prime current significance.
5. That, however, national growth, resulting from generally high fertility and declining mortality, will become or has already become the factor of major importance in African countries, perhaps leading to a desire to limit growth.
6. That control of fertility is a humane method of population control, but is no more a single panacea of development than, for example, is an increase in productivity resulting from the development of "miracle yield" crops. Moreover, it must be recognized that all changes will have profound effects on the entire economy and social structure.
7. That population policies can be developed only on the initiative of Africans themselves -- the role of outsiders can be merely in the field of technical aid.

^{3/} See Pool, D.I. "The Development of Population Policies," J. Modern African Studies, Vol. IX, No. 1, 1971, pp. 91-105. The actual status of population policies in Africa is described in Heisel, D.F. "The Emergence of Population Policies in Subsaharan Africa," Concerned Demography, Vol. II, No. 4, March 1971, pp. 30-35.

8. That aid in the population and related fields in tropical Africa has been relatively free of some of the negative considerations which have tainted development aid projects in Asia and Latin America;^{4/} the blemishes have largely resulted from administrative blunders rather than underlying motives.

The opportunities for external aid in the field of demography are many. Mainly it must take the form of financial aid and the supplying and training of professional manpower, for Africa lacks above all, development capital and skills. This has, of course, been the major thrust of assistance to date. My criticism is not with the initiative of past projects, but rather their emphasis and the often offensive form in which aid has been provided. In this regard, I must add that Africa has been the site of some, to my mind, rather modest but successful technical assistance projects, as well as some which are unsuccessful.

Success, if one can measure it, would be seen very simply in (i) the development of a local cadre of demographers to replace initial expatriate manpower, and (ii) the development by local planners of knowledge of population trends and the implementation of viable policies suited to local needs. Built into the first measure is the need, often extremely difficult to realize, for all parties to recognize that expatriate staffing is temporary. The second takes heed of the fact that the first element in a population policy for almost any African country is the provision of better statistics. It is nonsense, therefore, to raise the issue of fertility and family planning, the "population" variable most frequently discussed by visiting American foundation (research and action oriented) and government experts, at this stage in many African countries. Indeed such an emphasis may be dysfunctional.

^{4/} Undoubtedly some officials see aid projects in terms of ideology, so that the implication, made by U.S. Secretary of State Rogers during his African trip, that Africa was not really uppermost in the State Department's mind, may not be entirely to Africa's disadvantage. Nevertheless, it seems to me that U.S. Aid, at least in Africa, is not the villain some of its critics would suggest.

Problems

The problem of assistance results from the fact that "demographic" aid is often presented in the wrong way and, quite frankly, offends African countries. Bearing in mind the urgent need for basic statistics, particularly on the part of the savannah francophone countries, let us list two major errors:

1. The categorizing of countries as emphasis or non-emphasis countries; or the spending of money in a very few, mainly Anglophone countries by donor organizations, American and others.^{5/} One realizes that, for example, AID is tied by Congressional decree and that AID officials are extremely concerned about these constraints, but it is offensive to have to say that country X does not "exist" except as part of a regional bloc.
2. A second problem is the over emphasizing of family planning, particularly at a time when general development aid is declining. One recognizes that family planning aid is a small proportion of total aid, but if a time series of congressional allocations were graphed logarithmically (and this is how many foreign governments see the allocation) one would gain a different perspective on this problem.

This over-emphasis of family planning, particularly as it is usually discussed in social policy rather than individual terms, offends fundamental aspects of African social mores relating to the family. The crucial demographic factor uppermost in the minds of many, if not most, African planners is that very low levels of replacement still occur in their countries; most women are concerned with keeping alive those children they manage to bear.

Do not mistake my case. I do not accept uncritically

^{5/} There can be overemphasis too; the concentration of foreign, particularly American, demographic and family planning experts in Ghana is creating a "population problem" which is somewhat unique and might even prove counter-productive for Ghanaians trying to implement their own rather comprehensive population policy.

all the arguments that are raised for many are perhaps inaccurate or unrealistic. For example, it is the structure and size of the nuclear family which is primarily affected by family planning; when Africans quote family values they are, by contrast, often discussing kin and affinal obligations, and we know from European case-studies that this area of family life can withstand 150 years of the demographic transition under highly urbanized conditions. What I am saying is that it is important to recognize that Africans have very strong feelings, and that even the notion of family planning being genocide, as raised by American blacks, is heard from time to time in Africa.

We have not always been helped by some of the so-called KAP (Knowledge of, Attitude Towards, and Practice of Family Planning) Surveys and the way in which results have been presented. These surveys are intended to determine whether there is a need for family planning in a community, but sometimes the results reflect more the attitude of the surveyor than the surveyed. An objective appraisal of KAP questions which have been properly constructed and presented shows that the vast majority of Africans desire "large" rather than "small" families, if indeed they have ever thought about the subject at all; that few know modern methods of family planning; and that almost none have used any; but that this situation is changing in some urban areas such as Lagos or Accra.

Criticism of Critics of AID in the Population Field

I have attacked the way in which some AID and similar projects are offensive to recipients. Now I must turn my attention to the naivety inherent in some of the critiques. Much of the force of the arguments of critics has been lost because they attempted to be global and to ascribe to all donor organizations highly undesirable underlying motives. Whatever the role of U.S. Government aid in Asia or Latin America, one cannot on these grounds completely damn American aid to Africa; nor, on these grounds can one damn Swedish, Danish, United Nations, or any aid at all; nor should one suspect the motives of all government and foundation personnel, even Americans in Latin America and Asia.

Secondly, the critics assume that by introducing family planning programmes some third world governments attempt to avert implementation of real social change. I would agree with them that there has often been an over-emphasis on family planning at the expense of other areas of development, but much of the rest of this argument is based on premises -- for example, that there is some inherent need for radical

restructuring such as the redistribution of land -- which are perhaps less true for tropical Africa than for Asia or Latin America. Moreover, is family planning really antithetical either to the mere reordering of development priorities or to the total overturning of the existing social and economic structure?

I hope I have made my argument clear. -- Africa needs aid. Thus, although one can criticize the type of aid given to Africa so far in terms of its emphasis, it is just not realistic to make a blanket criticism, so that all aid is castigated and so that family planning is seen as a force inhibiting progress.

Recommendations

1. That aid be given to African countries to develop population policies.
2. That more sensitivity be shown toward potential recipient countries, particularly the smaller.
3. That fertility and family planning be seen as only one aspect of population policy.
4. That, as Father Ivan Illich and Dr. Paul Williams stressed during a recent conference on population at Cornell University, we once again must see family planning in terms of the individual rather than as an instrument of social engineering. Clearly, one must recognize changes that will be wrought by family planning which is freely available to couples on, as the Ghana Population Policy stressed, "a voluntary basis." But it has probably been the over-emphasizing of social engineering, of percentage declines in fertility as social planning goals, as family planning as a panacea for problems of development, of couple behavior as an artifact of desired economic and social change, which has led to the present critiques of "applied demography."
5. That aid be given urgently in the area of data collection and analysis, particularly census taking.
6. Finally, that the bulk of aid be through multilateral channels rather than bi-lateral, channelled through some organization such as the U.N.D.P. By this I do not preclude the continuation of work by responsible private foundations which have often been pioneers.

THE EFFECT OF HIGH INFANT AND CHILDHOOD MORTALITY ON FERTILITY: THE WEST AFRICAN CASE

JUDITH A. HARRINGTON

Increasing attention has been paid to the relationship between high infant and childhood mortality and high fertility and its effect on the adoption of family planning in developing countries. In essence, the argument has been that if a couple cannot be reasonably sure that their children will survive, they will be unlikely to want to restrict their family size, and will have more children than they actually want to have, either to offset anticipated child loss, or to make up for deaths that have actually occurred. Studies carried out in Egypt, India, Turkey and Taiwan¹ have established that women are more likely to want more children if they have experienced child loss than if they have not had this experience, and that such women are more likely to have more children than are their counterparts who have not lost any children. In these studies, however, the importance of mortality experience in explaining the high fertility varied and would seem, on comparing the four studies, to be a function of the level of mortality experienced in each case. In Taiwan, for example, where infant mortality is low relative to the other three areas the relationship was found to be less strong, and here it seemed to be the fear of child loss, rather than the experience, that was more important in determining family size.² It is important, then, to see the relationship of mortality on fertility under conditions of high infant and childhood mortality, and it is this situation that will be discussed in this paper.

Discussion here will center on findings of three surveys carried out in Ghana, Niger and Upper Volta, where levels of infant and child mortality are among the highest in the world. These particular data are interesting not only because of the high mortality conditions, but also because these mortality levels are seen as a major obstacle to family planning programs in the area, thus providing an opportunity to better spell out the policy implications of the mortality-fertility relationship for family planning in the West African situation.

Discussion will refer specifically to the effect of child death on subsequent births and the role played by a short birth interval between the death of one child and the birth of the next. This pattern, the death of one child followed very

quickly by the birth of another, has been noted in several studies and has engendered some confusion as to the mechanics of the situation. The difficulty has been determining whether high fertility is a conscious (or unconscious) behavioral response to child loss or merely the result of physiological factors. Central to this confusion is the presence of the short birth interval which can be seen as either the result of the mother becoming pregnant again as quickly as possible to 'replace' the dead child, or as the result of the early cessation of lactation at the death of the child which removes the inhibitory influence on ovulation and exposes the woman to pregnancy at an early date. Studies seem to indicate, however, that the short birth interval appears to be less a function of the shorter duration of lactation and consequent early resumption of ovulation and exposure to pregnancy and more a function of an effort to replace dead children.³ This paper will suggest that there is also another pathway to this same pattern of child death and birth after a short interval, that is important in the West African situation.

The discussion will draw on data collected by D.I. Pool⁴ in three KAP and fertility surveys in Ghana in 1965-1966, in Upper Volta in 1969, and in Niger in 1970. Information relating to mortality in both infancy and childhood were drawn from detailed retrospective pregnancy histories gathered from a total of 5536, 1834, and 2988 women respectively in each of the countries. While retrospective data of this type has been felt to be deficient, especially for infant mortality information, a larger study by this author⁵ found rather convincing evidence for the validity and usefulness of these particular data.

The relationship between high infant and childhood mortality and high fertility was investigated by seeing first if the higher rates of deaths in infancy and childhood in large as opposed to small families might be explained by the greater risks of death faced by high parity births.⁶ Next parity-specific analysis of deaths at ages 0-4 years in large and small families (defined as total number of children ever born alive to women 30 and above) was carried out to see if the high proportions dying in large families occurred at early or late parities. It had been argued that in larger families there is a greater burden placed on parents to feed and care for all of the children adequately.⁷ In such a case the high proportions dying in large families might be expected to occur at the later parity births and one could argue that it is the high fertility that has led to the high rates of mortality. In this case the provision of family planning services would become an important policy issue in the reduction of infant and childhood mortality. On the other hand, if it is the experience of child loss that in some way compels women to go on to have more births, that is, if it is high mortality that

leads to high fertility, one would expect the high proportions dying in large families to come at the early parities. If this indeed is the case, a decrease in the levels of fertility in West Africa and the acceptance of family planning services can be expected to depend on the lowering of the risks of death in infancy and childhood.

Findings on the Influence of Mortality on Fertility

Comparison of the proportions dying by parity and proportions dying by family size, (total number of children ever born alive)⁸ in Table 1 showed that in both Ghana and Upper Volta the proportion dying in large families were higher than might be expected on the basis of the higher risks of death to high parity births alone. Unfortunately, in Niger data are not strictly comparable in this case as the parity data were based on only a sub-sample of urban women and were not collected at all for the rural sample.

Information on the parity distribution of deaths in families of various sizes was available only for Ghana and Upper Volta but these data, presented in Table 2, seem to indicate that the higher proportions dying in large as opposed to small families do not seem to be the result of the increased burden of large numbers of children. There is a tendency for the higher proportions dying in large families to be spread out over all parities or to cluster at the early parities. Also, in larger families the proportions dying in the early parities were considerably higher than those dying at these same parities in small families. It would seem then that it is the early experience of child loss that leads women to have larger families.

Several comments need to be made regarding these data. First, it should be noted that differential exposure to both the possibility of having large numbers of children and to the risks of deaths in those children is largely controlled for here as these data refer only to women over age 30 and only to deaths within the 0-4 year age group.

Secondly, these data present rather strong evidence that the high proportions dying in larger families are disproportionately experienced early in the childbearing histories when the existence of two trends is taken into consideration. The first is the possible presence of the classic cases of women who have repeated infant deaths due to various sorts of reproductive inefficiencies that would tend to obscure the clustering at early parities. The second is the fact that deaths at early parities have occurred in the more distant past and thus would tend to be subject to memory error to a greater extent than deaths among later parity births, and are therefore likely to be understated.

TABLE 1

Comparison of Proportions of Children Dying by Parity and Total Number of Children Ever Born Alive

	Ouagadougou	Upper Volta		Niger	Ghana
		Bobo-Dioulasso	Rural-Urban Fringe	Niamey Rural (a)	Accra Rural
Parity					
1	.273	.230	.335	.212	.208 .308
2	.285	.249	.354	.108	.184 .303
3	.277	.221	.349	.167	.205 .270
4	.261	.200	.299	.282*	.200 .278
5	.236	.219	.290	.312	.190 .261
6	.224	.175	.286	.222*	.237 .264
7	.283	.218	.462	.182	.191 .269
8	.255	.270	.233		.184 .315
9					.170 .365
10+					.262* .358
Total Number of Children Ever Born Alive					
1	.185	.111	.158	.171	.911* .649*
2	.229	.121	.068	.360	.185 .265
3	.253	.147	.189	.158	.159 .213
4	.238	.184	.276	.202	.171 .241
5	.252	.280	.337	.210	.182 .241
6	.268	.292	.319	.198	.157 .295
7	.362	.241	.536	.275	.244 .254
8	.338	.194	.406	.365	.242 .340
9	.343	.330	.370	.311	.103 .328
10+	.340	.310	.458	.346	.258 .391

(a) Niamey parity data based on a sub-sample of urban respondents.

(b) Niger Rural parity data not available.

* Based on less than 45 births, results for cells based on less than 10 births not reported.

Table 2

Proportions Dying at Ages 0-4 of Children Born Alive to Women Aged 30+: Parity-Specific Death Rate Classified According to the Total Number of Children Born Alive: Upper Volta and Ghana.

Survey		Total Children Born Alive							
Upper Volta	Parities	-3	4	5	6	7	8	9	10+
Ouagadougou	N=	123	121	152	246	187	190	108	97
	1,2	.276	.259	.435	.208	.449	.250	.478	.167
	3,4	.222	.134	.148	.282	.396	.208	.292	.556
	5,6	--	--	.190	.198	.241	.375	.304	.368
	7,8	--	--	--	--	.258	.239	.261	.438
	9+	--	--	--	--	--	--	--	.077
Bobo-Dioulasso	N=	24	38	60	60	131	79	91	84
	1,2	.238	.111	.333	.350	.343	.167	.350	.462
	3,4	--	.150	.217	.316	.235	.053	.316	.333
	5,6	--	--	.375	.143	.189	.222	.250	.200
	7,8	--	--	--	--	.200	.125	.389	.400
	9+	--	--	--	--	--	--	.286	.154
Rural-Urban Fringe	N=	17	32	65	111	49	64	27	59
	1,2	.333	.286	.280	.368	.692	.375	.333	.455
	3,4	--	.333	.304	.270	.571	.438	.500	.455
	5,6	--	--	--	.143	.333	.462	.333	.455
	7,8	--	--	--	--	.500	.188	.167	.417
	9+	--	--	--	--	--	--	--	.286
Rural	N=	57	87	193	231	258	104	81	124
	1,2	.234	.195	.250	.217	.423	.500	.667	.583
	3,4	.200	.196	.387	.329	.301	.346	.278	.435
	5,6	--	--	.119	.221	.342	.346	.333	.348
	7,8	--	--	--	--	.171	.346	.333	.174
	9+	--	--	--	--	--	--	.222	.452
Ghana									
Accra	N=	239	221	329	391	336	316	248	486
	1,2	.145	.116	.181	.143	.107	.250	.097	.216
	3,4	.083*	.096	.089	.132	.189	.120	.081	.202
	5,6	--	--	.000	--	.154	.165	.145	.184
	7,8	--	--	--	--	--	.122	.071	.073
	9+	--	--	--	--	--	--	--	.089
Rural	N=	88	164	263	416	592	623	432	856
	1,2	.174	.206	.269	.191	.253	.343	.278	.353
	3,4	--	.113	.197	.190	.258	.335	.250	.335
	5,6	--	--	--	.176	.106	.210	.296	.324
	7,8	--	--	--	--	.063*	.146	.210	.302
	9+	--	--	--	--	--	--	--	.243

*Based on less than 45 births.

Thirdly, it is interesting to note that clustering of deaths at early parities is more evident in the Upper Volta than in the Ghanaian data, and in particular in the rural samples, for it is in Upper Volta generally and in the rural samples where mortality was found to be highest. This tendency, while slight, would support the comment made above in reference to the studies carried out in other countries, that the strength of the findings on the relationship between mortality and fertility would seem to be a function of the level of mortality involved.

The Role of the Short Birth Interval

There were unfortunately no data on the length of birth intervals in these three surveys that could be directly related to survivorship experience and subsequent pregnancy, but there was indirect evidence that helped to further clarify the role of this short birth interval in producing the positive relationship between high fertility and high mortality. When the proportions of women ever becoming pregnant again after the survival or death of their previous child was compared (see Table 3), it was found that a woman was more likely to have a subsequent birth if her previous child died rather than survived (a finding in line with those discussed above). However, she was more likely to become pregnant again if that child had died between the ages of 1 and 4 rather than between the ages 0 and 1. The explanation for this finding would seem to lie not in the possibility that older children are 'missed' more than younger ones after their death and therefore are more likely to be replaced, but rather in the possibility that the proportions represented cases not where the death of child 1 led to the birth of child 2, but where the birth of the second child indirectly caused the death of the first. And the explanation for this pattern lies in the character of childhood death in West Africa.

The most striking feature of death under age 5 in West Africa is the age pattern. Here the proportions of children dying over the four-year age group 1-4 is in many cases as high as the proportions dying in the one year age group 0-1. Table 4 illustrates this by presenting age-specific survival ratios for the three countries under study. This age pattern results from the synergistic relationship between the tremendous range of infectious and parasitic diseases in West Africa, involving both tropical and common childhood conditions, and widespread protein-calorie malnutrition⁹. Malnourished children are more susceptible to infection, less able to combat it once acquired, more likely to have a more severe course of illness, more likely to have complicating conditions, and indeed, more likely to die from what in well-nourished children would be a simple childhood illness.

TABLE 4
Age Pattern of Child Mortality

	Proportion dying in age group:	
	0-1	1-4
Upper Volta		
Ouagadougou	.106	.135
Bobo-Dioulasso	.109	.107
Rural-Urban Fringe	.111	.179
Rural	.107	.184
Niger		
Niamey (a)	.065*	.102*
Rural	n.a.	n.a.
Ghana		
Accra	.060	.060
Rural	.096	.123

(a) data available for subsample of urban respondents alone.

* based on less than 45 births.

TABLE 3

Proportion of Women Ever Going on to Have a Subsequent Pregnancy
Given the Survival or Death at Various Ages of Previous Child

Proportion ever becoming pregnant after survival or death of
previous child of parity X.

Survey	Fate	No.	1	2	3	4	Parity	5	6	7	8	9	10	TOTAL
Upper Volta														
Ouagadougou	Survived	1637	.811	.734	.772	.771	.684	.550	.576	.389*	.455*	.583*	.727	
	Died 0-1	236	.855	.880	.783	.905*	.947*1.000*	.846*	.583*	---	---	---	.850	
	1-4	302	.987	.947	.930*	.897*	.917*	.900*	.667*	---	---	---	.921	
Bobo-Dioulasso	Survived	883	.792	.784	.787	.723	.744	.758	.628*	.625*	.563*	.727*	.752	
	Died 0-1	124	.938*	.958*	.950*	.923*	.889*	---	---	---	---	---	.944	
	1-4	122	.929*	.964*	.947*	.769*	.786*	---	---	---	---	---	.877	
Rural-Urban Fringe	Survived	492	.856	.892	.756	.691	.673	.400*	.857*	.706	---	---	.756	
	Died 0-1	81	.958*	.895*	.786*	---	---	---	---	---	---	---	.877	
	1-4	131	.931*	.932*	.960*	.900*	.909*	---	---	---	---	---	.921	
Rural	Survived	1075	.882	.870	.797	.776	.643	.602	.414	---	---	---	.755	
	Died 0-1	169	.956	.917*	.927*	.926*	.769*1.000*	---	---	---	---	---	.917	
	1-4	295	.938	.984	.942	.950*	.929*	.821*	---	---	---	---	.915	
Ghana														
Accra	Survived	3607	.736	.679	.684	.640	.573	.598	.660	.620	.455*	.533*	.674	
	Died 0-1	273	.840	.869	.825*	.838*	.933*	.750*	---	---	---	---	.821	
	1-4	271	.896	.920	.881*	.867*	.864*	.692*	---	---	---	---	.875	
Rural	Survived	4487	.774	.727	.717	.673	.673	.620	.587	.566	.636	.382*	.720	
	Died 0-1	577	.848	.872	.883	.840	.844	.842*	.667*	.714*	.417*	---	.827	
	1-4	776	.930	.943	.876	.900	.836	.909	.771*	.952*	.667*	.818*	.899	
Niger														
Niamey (a)	Survived		.707	.730	.620	.594 (b)							.667	
	Died 0-1		.818*	---	.800*	.741* (b)							.750	

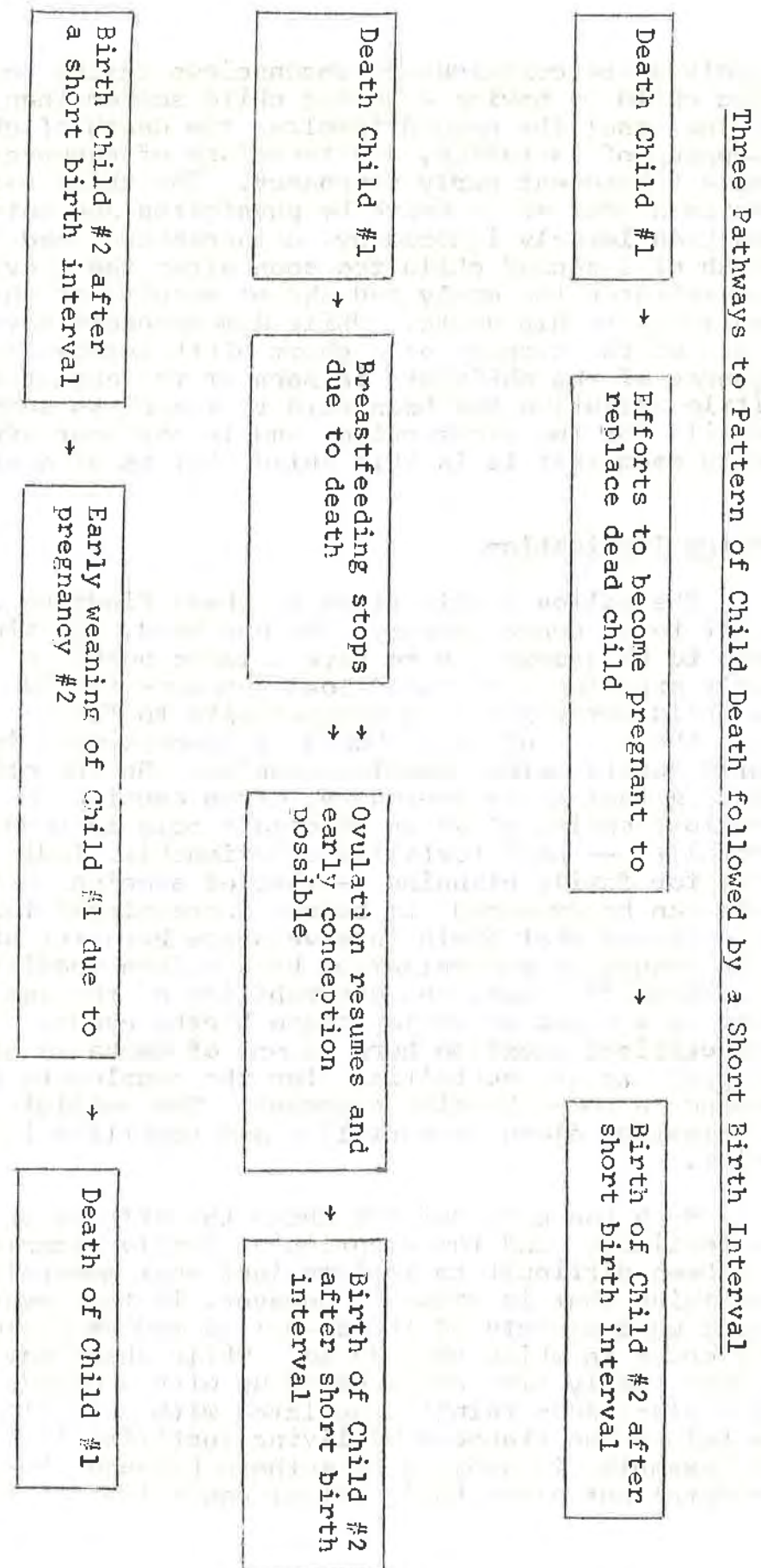
N= Number of Women

*= Less than 45 women in cell; results for cells with less than 10 cases not reported.

(a)= Data based on urban subsample respondents only; no rural data available.

(b)= Parities 4+

Figure 1



Malnutrition is then a decisive feature of the disease complex in this area, and a central factor in explaining the high incidence of malnutrition is a pattern of infant feeding and weaning that involves prolonged breastfeeding that may range from under one to over 3 years, followed by an often abrupt weaning to starchy adult diet.¹⁰ If the breast milk is not supplemented after the first six months by other foods, in particular protein, the child reaches weaning already undernourished. The process of weaning itself is a critical period, for when it occurs the child not only loses his primary, and perhaps sole source of protein, but he often undergoes considerable physical and psychological trauma in adjusting to an adult diet and the lack of his mother's attention. The net result is often a loss of appetite which further depletes the child nutritionally and helps to push him over into a severe malnourished state known as kwashiorkor. With lowered resistance to infection, the child is stricken with diarrheal disease, caused in some cases by organisms that in the well-nourished child would be innocuous. Diarrheal disease, in fact, is so closely associated with weaning that it has been termed 'weanling diarrhea.' The child, further weakened and dehydrated by prolonged and severe diarrhea, has little hope of survival.

A pattern of malnutrition that is an unfortunate product of 'modernization' is being seen with increasing frequency and involves the baby who is weaned at an early age onto a feeding bottle. Without proper kitchen or refrigeration facilities, and without adequate income, feeds given in this way are usually dilute and bacteriologically dangerous. The child is not only given a nutritionally poor feed that makes him more susceptible to infection, but he is also infected in the process. The end result is a baby suffering from diarrheal disease and malnutrition at an early age, with, again, a poor prognosis for survival.

In both the feeding bottle and the kwashiorkor cases the problem centers around weaning and the post-weaning diet. To a large extent the earlier and more abrupt the weaning, the greater the danger for the child, and one of the major reasons for abrupt early weaning is a subsequent pregnancy. Indeed the name kwashiorkor refers to this very situation, as it means the child that is displaced from its mother's breast by the birth of the next child.

It is this situation, a child's death indirectly caused by the birth of a subsequent child which entailed his abrupt weaning, that would seem to be making an important contribution to the positive relationships between high mortality and high fertility under study here.

Thus, one can say that there are at least three pathways to the pattern of the death of child 1, the birth of child 2, and a short birth interval in between (see Figure 1). The first

involves the conscious or unconscious desire to replace the dead child by having a second child sooner than would normally be the case; the second involves the death of child 1, the early stopping of lactation, and therefore of suppression of ovulation, and a subsequent early pregnancy. The third pathway is one that has been studied in depth by physicians and nutritionists, but has been largely ignored by demographers, and it involves the birth of a second child too soon after the previous birth which necessitates the early and abrupt weaning of the first child, and leads to his death. While demographers have always been aware of the dangers of a short birth interval on the survival chances of the child who is born at the end of the interval, little attention has been paid to the risks such an interval entails for the first child, and in the West African context it would seem that it is this child that is at greater risk.

Policy Implications

The policy implications of these findings would appear at first to be contradictory. On one hand, the finding that women seem to be spurred on to have a large number of births by the early experience of child loss supports the idea that a decrease in child mortality is a prerequisite to family planning and that therefore efforts should be concentrated in maternal and child health before family planning. On the other hand, the finding that early pregnancy, often causing the death of the previous child, plays an important role in producing the high mortality -- high fertility relationship, indicates an important role for family planning -- that of spacing births. Also, this role can be expected to become increasingly important as there is evidence that birth intervals are becoming shorter among certain groups as modernization breaks down traditional spacing practices.¹¹ Thus, the desirability of the use of family planning as a means to better space births cannot be denied. However, the critical question here is one of emphasis and coordination of programs and activities, for the complexity of the situation demands a comprehensive approach. The multiple effects of modernization alone on mortality and fertility illustrates this point.

Much has been written about the effects of modernization on fertility and the adoption of family planning, even if it has been difficult to isolate just what modernization is or does. One thing that is evident, however, is that people are selective about what aspects of the so-called modern world they adopt and the order in which they do so. While there may be a time lag before family size norms catch up with a change in the standard of living, some things associated with being 'modern' are picked up before the standard of living justifies it. Bottlefeeding, for example, is adopted by mothers because they want to be 'modern' but given their actual conditions of living, they only

assure the child's death. Modernization also tends to decrease spacing between births by shortening lengths of lactation and weakening post-partum abstention prescriptions. Given the lack of concomitant change in desired family size, this not only works to increase fertility directly by allowing more children to be born over the woman's childbearing years, but also indirectly by increasing the risks of death to the children who will be subjected to early weaning and bottlefeeding as a consequence.

Because of these types of interrelations, comprehensive programs that will take such factors into account are needed. Family planning services will have little success if mortality conditions do not improve. However, providing curative and only isolated preventative services will not affect the mortality situation greatly. A baby that is already marasmic or a child who already has kwashiorkor has a poor prognosis for survival, let alone freedom from long-term physical and mental deficiencies, even given the best curative services. Such services require an intensity of care that is simply impossible to deliver to more than a minority of these populations. Vaccination programs may prevent specific diseases, but they do not touch a whole range of infectious and parasitic conditions, nor do they prevent the compounding effects of malnutrition on disease. It is obvious that in such a situation there is a need to coordinate and restructure the emphasis placed in programs of maternal and child health, nutrition and health education, vaccination programs, preventive and curative services and family planning.

Maternal and child health must not be added to family planning programs to make them more palatable to African governments, or more desirable to African families, for the health situation cannot afford to have its resources, activities, and services dominated by family planning. Rather, family planning must be made an integral part of a larger maternal and child health program and the funding that is so available for family planning activities must be channeled with as much zeal into these broader programs.

1. See Shafuk S. Hassan, Influence of Child Mortality on Population Growth, Ph.D. Thesis, (Cornell University, 1966); John B. Wyon and John E. Gordon, Chapter 7, "Deaths and Population Pressure," The Khanna Study: Population Problems in the Rural Punjab, (Cambridge, 1971); Arjun L. Adlakha, A Study of Infant Mortality in Turkey, Ph.D. Thesis, (University of Michigan, 1970); and Shea O. Rutstein, The Influence of Child Mortality on Fertility in Taiwan, Ph.D. Thesis, (University of Michigan, 1971).
2. Shea O. Rutstein, op. cit. p. 190.
3. Arjun L. Adlakha, op. cit. p. 2.
4. Descriptions of these studies may be found in: D.I. Pool, "A Note on a Demographic Sample Survey for the Study of Factors Effecting Fertility in Ghana," Africa, vol. XXXVII, no. 3, July, 1967; D.I. Pool, "Enquete sur la Fecondite en Haute-Volta," Notes et Documents Voltaiques, Ouagadougou, Upper Volta, July 1969, and D.I. Pool, "Enquete sur la Fecondite et la Famille au Niger: Methodologie," Collections Methodologiques, no. 1, C.N.R.S.H., Mamey, 1970.
5. See discussion in J. Harrington, A Comparative Study of Infant and Childhood Survivorship in West Africa, Ph.D. Thesis, (Cornell University, 1971), pp. 43-51.
6. High parity births (i.e., over parity 5) are associated with higher risks of death. See N.R. Butler and D.G. Bonham, Perinatal Mortality, Edinburgh, 1963.
7. See for example, United Nations, Foetal, Infant and Early Childhood Mortality, vol. II, Pap. St. No. 13, Department of Soc. Affairs, Pop. Div., 1954, p. 14.
8. It is important to distinguish carefully between the two concepts of parity and total born alive. The proportions dying by parity refers to a child's chances of dying depending upon whether he was the first, second, third, or so on, child born to his mother. Proportions dying by total children ever born alive refers to a child's chances of dying given the fact that he is born into a family of a given size, that is, that his mother has had a total of X children ever born both before and after his birth.
9. For a discussion of how the African child is subject to a series of risks that compound one another to produce the high rates of death, see M.I. Ogbeide, "The Relative Merits of Preventive and Curative Services in the Maintenance of Health and Nutrition in the Rural African Child," in Les Conditions de Vie de l'Enfant en Milieu Rural en Afrique, Centre International de l'Enfance, Reunions et Conferences, XIV, Dakar, 1967.

10. For a discussion of the role of infant feeding and the difficulties of the weaning period, see D.B. Jelliffe, "Culture, Social Change and Infant Feeding: Current Trends in Tropical Regions," American Journal of Clinical Nutrition, vol. 10, Jan. 1962.
11. See D.B. Jelliffe, op. cit., p. 35.

KAP SURVEYS AND THE POLITICS OF FAMILY PLANNING

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By mid-1970 the governments of 25 developing nations had both adopted an official anti-natalist policy and initiated a national family planning program. A number of other governments were either supporting family planning activities or had gone on record as favoring a slower rate of population growth (Nortman, 1969; Sills, 1971). Why do many governments of developing countries feel it is in the national interest to lower population growth rates and reduce fertility and, furthermore, why do public officials in these nations believe that a government-sponsored family planning program can be successful in achieving this goal? In this paper I will only briefly discuss the first part of this question. However, a more extensive treatment will be devoted to the issue of why it is believed family planning programs can succeed which, in turn, will allow us to focus on the topic of survey methodology in the field of family planning.

Economic Development and Population Growth

Although a number of objectives are stated when a government initiates a family planning program, such as the need to reduce the incidence of abortion, to upgrade maternal and child health care, or to strengthen the family unit, the main reason typically announced is the desire to slow down population growth in order to boost the pace of economic development (Population Council, 1970:a). A large body of research has been amassed purporting to document that rapid population growth acts as an impediment to economic development (e.g., Coale and Hoover, 1958; Coale, 1963; Enke, 1963; Spengler, 1964). This literature is characterized by simulation exercises or demographic models which project current population growth rates into the future to argue deductively that the high dependency ratio resulting from high fertility will compel developing nations to invest their scarce resources in social maintenance programs at the expense of infrastructure and industrial development.

Although these models seem persuasive, they do possess the major drawback of all models, namely, sacrificing "real" world complexity in order to gain conceptual clarity. It should be noted that no study has yet been able to document empirically that past or present economic growth rates have been adversely affected by high rates of population growth. Easterlin (1967), for example, correlated real per capita income growth with population growth rates for developing nations in the late 1950's and early 1960's and found no association between the two variables. Reviewing historical and current data, he concluded that the "evidence... suggests that in the past two centuries accelerated population growth has not typically prevented growth in per capita income, let alone compelled a decline." Easterlin cautioned against making generalization as to the effect of population growth on economic development in today's less developed areas" (Ibid.:107).

Few seem to have taken his advice, for such generalizations abound in the population literature. A not atypical one is: "For the developing regions, the problem is essentially one of growing numbers that are thwarting economic development plans and frustrating the aspirations of their people for a better way of life" (Nortman, 1969:1). Somehow overlooking the fact that a negative relationship between economic development and high population growth rates for developing countries has never been demonstrated for a set of "real" data, one demographer-economist (Notestein, 1967:167) asserts:

The problem in the real world is that the rate of population growth is proving to be a major obstacle to the technological development on which our future hopes must depend. The heart of the demographic problem is that of slowing the rate of population growth sufficiently to permit the development of the lagging economies....

Given the belief that reducing fertility (and thus population growth) will help to accelerate economic development, a series of cost-benefit studies, largely the work of one man, have been performed in order to show "how much" development may accrue from various levels and tempos of fertility reduction (Enke, 1960a; 1960b; 1963; 1966; Leasure, 1967; Enke, 1969; Enke and Zind, 1969; Simon, 1969; Enke, 1970). Apparently swayed by such studies the then President of the United States, Lyndon Johnson, in what has become something of a legendary quote, felt justified in telling an assemblage of the United Nations: "Let us act on the fact that \$5 invested in population

control is worth \$100 invested in economic growth" (New York Times, June 26, 1965, p.2). The increasing number of public-financed family planning programs is testimony that many governments have indeed been acting on this "fact," despite an equally increasing number of articles and studies contending that the assumed negative impact of rapid population growth on development, as well as the putative large monetary benefits of averting births, are based on simplistic assumptions that ignore the mix of many variables in the real world (e.g., Levin, 1965; Easterlin, 1967; Kuznets, 1967; Muhsam, 1968; Kuznets, 1969; Leibenstein, 1969; Barclay, et.al., 1970; Leibenstein, 1971; Pradervand, 1970; Raulet, 1970; Simon, 1970).

Regardless of whether or not future research will support the assertion that fertility control will boost economic growth, we must accept as a "social fact" that many governments are currently implementing policies and programs based on the belief that it will do so. In turn, this raises the question as to why many public officials believe that a family planning program will achieve the desired goal.

The Case for Family Planning Programs

The most important reason for believing that voluntary fertility control programs will meet with positive responses on the part of the population they intend to serve is evidence generated by the so-called KAP study (knowledge of, attitude toward, and practice of contraception). At last count, approximately "400 KAP surveys have been conducted in virtually all of the world's geographic and cultural areas" (Fawcett, 1970:38). Berelson (1966) (also Mauldin, 1965a; 1965b; Mauldin, et.al., 1970) has provided a convenient summary of what these studies generally uncover, listing six main findings: (1) in developing nations, family size preferences are much lower than the average number of children born, indicating many women want fewer children than they actually have; (2) large proportions state they do not want any additional children; (3) most approve of family planning and birth control and are favorable to government efforts to help them learn about them; (4) despite these favorable attitudes, existing knowledge of contraception is typically low; (5) practice of birth control is even lower; (6) and to the extent that some are currently using contraception, they are typically couples with many children, or better educated, urban residents, etc.

Given such a large number of similar studies, covering the spectrum of world societies and cultures, with most, as Berelson points out, arriving at the same general conclusions, one might expect little controversy concerning the evidence they uncover. Yet, KAP surveys have been criticized on three grounds: (1) their methodological shortcomings; (2) the possibility that KAP researchers often misinterpret or exaggerate their findings; and (3) the suspicion that KAP surveys are employed more as political instruments than as instruments of science (which, if true, could help explain points 1 and 2).

This latter criticism has been emphasized by Pradervand (1970). Referring to Stycos' (1968:63) observation that "the most important function of [KAP] surveys is similar to any market research project: to demonstrate the existence of a demand for goods and services, in this case for birth control," Pradervand (Ibid.:4) asks if "such an attitude is really conducive to serious scientific research." He contends that "these surveys, apart from their scientific aspect, are used as instruments of political pressure." Pradervand's assertion receives support from an unlikely source, the summary report of a conference attended by eminent North American and Latin American demographers, some of whom have been associated with KAP research. One of the conclusions of the conference was that "Much of the population research now being conducted on attitudes toward family size and family planning may not be of great scientific interest but it is of immense importance to policymakers and administrators" (Council on Higher Education, 1969:21).¹ One need not resort solely to anonymous sources, for such a highly visible figure as Bernard Berelson (1964a:11), President of the Population Council, the foundation most active in this area and sponsor of many KAP studies, says much the same thing in this rather pragmatic statement:

¹Among the American demographers at this conference to review the status of Demography in the University were Philip Hauser, Dudley Kirk, Frank Notestein, Roger Revelle, and J. Mayone Stycos. James F. Tierney signed the Foreward to the monograph and mentions that Stycos assisted in editing the manuscript. The report does not attribute any particular conclusion to individuals; rather, phrases such as "participants in the conference were generally agreed..." dot its pages. Thus, the very noticeable contradiction between the statement in the text above and the following may be explained by the fact that two different individuals or groups of individuals at the conference may be responsible for them: "demographers on the subject of family

...a survey should probably be done at the outset of any national program -- partly for its evaluational use...but also for its political use, in demonstrating to the elite that the people themselves strongly support the program and in demonstrating to the society at large that family planning is generally approved.

Aside from illustrating Pradervand's point about the uses of KAP surveys, and aside from demonstrating Berelson's remarkable confidence in what a study will uncover, the statement above also reflects a line of reasoning implicit throughout the family planning literature. Given that the masses must control their fertility for national birth rates to fall, and given that KAP surveys generally show that the majority know little about birth control, then an intensive communications and service program is viewed as a necessary first step toward controlling national fertility. Since favorable elite opinion is crucial in order to implement public policies and programs in developing countries, then it follows that the elites must be won over to the view that not only is it in the national interest to advocate fertility decline, but it is also quite feasible that a decline can be induced by a program given the interest of the masses, as KAP surveys claim, in birth control.

Hence, the KAP survey's usefulness as a political instrument. Their findings allow advocates of family planning programs to offer governments advice on how to win elections, as does Stycos (1968:63) by claiming that "a program of population control could win votes rather than lose them." Visions of a landslide may be conjured up when Kirk and Nortman (1967:141) point out that KAP surveys "reveal a tremendous potential 'market' for birth control, if suitable methods and services can be provided." For those officials who still drag their feet there is Bogue (1967a:32) to admonish them that: "You are giving up if you say that some populations are too rural, too illiterate, too tradition-bound, or too fatalistic to respond to a family planning program." A kind of populist theme can be struck,

planning.... This research on attitudes and practices has resulted in one of the broadest cross-cultural surveys of any aspect of social studies, and it has led to wider recognition of the fact that population phenomena are as much the result of social influences and individual attitudes as of biological laws." (p.31)

as does Notestein (1967:172) when he bemoans the fact that "surveys and the public response to services clearly demonstrate that ordinary people have a much better understanding of their own problems than their lesser officials appreciate." While Notestein, diplomatically, is chiding the lesser officials, Berelson (1969a:349) bluntly, and with interesting imagery takes aim at the top of the bureaucracy: "the people are often ahead of their leaders: they want contraception more than the leaders are prepared to provide it." John D. Rockefeller, 3rd (1969:8), who among other things is a founder of the Population Council, echoes Berelson in offering his view of the situation:

...ordinary people have often been ahead of their leaders who sometimes failed to support family planning, mistakenly feeling that their people were not "ready for it." Not only do mere polls and questionnaires back up the view that the men and women are, indeed, "ready for it," but whenever and wherever family planning services have been made conveniently available to them, they have flocked to use the services, often eagerly and enthusiastically (sic).²

Continuing as spokesman of the contraceptively-deprived, Rockefeller (p. 9) laments that because of the slow response on the part of Governments to initiate family planning programs "hundreds of millions of parents throughout the world are denied the effective right of determining how many children they will have and when they will have them."

One may point out, correctly I think, that scientific research in the social sciences should have policy implications, or else such research would be irrelevant and meaningless. Thus, there is nothing improper about scientists or foundation officials, or wealthy private citizens bringing to the attention of public servants the findings of scholarly research and suggesting courses of action they might pursue. The point, however, is that the credibility of these "findings" should not depend on our sincere hope that they be valid, nor rest solely on the well-regarded credentials of those asserting their validity, but on their scientific validity and nothing else. It is on this issue, that many KAP findings may not be acceptable by scientific criteria, that we now focus our attention.

²May we conclude that this last phrase suggests that at times people flock to clinics "uneagerly" and "unenthusiastically?"

The Question of Validity

The relative simplicity of the typical KAP study is underscored by Sills' (1964:391) comment that "in reading many reports of family planning surveys, one gets the impression that sexual intercourse is comparable in emotional significance to cooking or washing clothes." Stephan (1962) makes much the same point in discussing the "pitfalls" of attitude and motivation research in general, counseling us to exercise caution in interpreting reported favorable attitudes toward family planning inasmuch as we have not looked closely at the complex set of conditions intervening between these attitudes and actual contraceptive behavior. Mauldin (1965a) suggests that the simple "yes - no" format of most KAP surveys tells us little about the intensity of the expressed interest in family planning. Pradervand (1970:4) sums up his view of KAP methodology in this manner:

Poorly-trained interviewers are sent to question at a very high speed illiterate women on problems they have never heard about in a totally artificial setting, (the interview situation), with questionnaires often composed by foreign experts who know little of the local culture, do not even speak the local language or dialects, and have often lived only a few weeks in the country. The results of such surveys tend to become self-fulfilling prophecies, as they nearly all show, in varying degrees, that the people interviewed have favorable opinions toward family planning.

Perhaps the best known critique of KAP surveys is Hauser's (1967:403). He contends these surveys have generally "failed to include adequate efforts to study the reliability and validity of these data; and second, they have failed to make adequate efforts to obtain measurements of intensity of opinion or attitude reported." In effect, he argues, KAP researchers have arrived at the conclusion that there is a "market" for family planning without producing evidence of "purchasing power," that is, sufficient motivation to suffer the "costs" of attempting to control fertility.

Actually, there have been a few studies on the reliability or validity of responses to KAP surveys in developing countries. Results indicate that slight changes in the wording of a question may produce significant

variations in response and that analysis of husbands' and wives' responses to the same question uncovers significant discrepancies, particularly in the area of contraceptive knowledge and practice (e.g. Poti, et al, 1962; Yaukey, et al, 1965; Choldin, et al, 1967; Green, et al, 1968; Stoackel and Chaudhury, 1969; Mauldin, et al, 1970). In addition, when the interviewers are instructed to accept without question a "don't know" response, as they were in Ghana and apparently nowhere else, much larger proportions of the sample are reported to not have an opinion to a question such as ideal family size than is normally found in other KAP surveys (Pool, 1967; 1970).

The usefulness of family size preference questions has come under some scrutiny, particularly by researchers working with American data. Again, it is clear that by altering the wording of questions significant response variations emerge, though more so among sub-groups or at the individual level than for the aggregate sample (e.g. Blake, 1969; Ryder and Westoff, 1969; Harkavy, et al, 1970; Namboodiri, 1970). Stycos (1968) reports a study of family size preferences using projective techniques in rural Haiti. (Photographs of large and small families were used to elicit comments on their relative desirability.) To date, it is the only study demonstrating clear lack of salience of family planning, though he is unsure if this finding is the result of Haitians having unique attitudes, or the result of a unique method turning up the first valid findings. At least two other studies implemented novel methodology on family size preferences (Goldberg and Coombs, 1963; Myers and Roberts, 1968), but the sophisticated scaling techniques used are rather cumbersome and hard to integrate in typical survey research instruments. Moreover, the authors seem unsure as to how to interpret their results.

Finally, Back and Stycos (1959) in what remains as the best study of the subject, devoted an entire monograph to an intensive analysis of response bias and interviewing problems of their Jamaican KAP survey. Although they conclude that in general their data seem to be within acceptable limits of error, they nonetheless find that on four questions concerning family size preferences two-thirds of their respondents were inconsistent on at least one item. Moreover, they found similar inconsistencies on the same questions in their Puerto Rican sample (Hill, Stycos, and Back, 1959). Back and Stycos (1959:26) conclude that the "fact that inconsistency is considerably greater here than in other substantive areas investigated suggests, as in Puerto Rico, that such attitudes are relatively unstable."

If family size preferences in developing countries are indeed unstable, as their data suggest, then one of the

main arguments of family planning program advocates, that women want fewer children than they have, is of dubious value because the women themselves are unsure of the number they want. Hauser (*Ibid.*:404) underscores this point in noting that questions on ideal family size are "highly correlated with actual or 'completed' family size; the ideal tends to be what has actually occurred." He asserts that although the aggregate ideal number does tend to be lower than the completed number of children, this may only

reflect the respondents sensitivity to what the interviewer wants rather than something meaningful to the respondent. It is quite possible that many of the responses in KAP surveys are efforts at politeness to meaningless queries or forced responses to questions which the respondent really has no answer either before or after the question is put.

The point Hauser makes concerning the high correlation of family size preferences and actual family size is critical. In Table 1 we see that this relationship shows up clearly for American women having three or more births.

Table 1. Ideal family size by number of births

Number of births	Mean number of children wanted if life could be relived
0	3.4
1	3.3
2	3.2
3	3.7
4	4.3
5+	5.6

Source: Whelpton, et al, 1966:65.

Since Americans could be classified as a "high-contracepting" population, we should expect this correlation inasmuch as the number of births couples have is at least in part a function of how many they wanted given their ability, though not perfect, to control fertility. But if women in developing countries really want fewer births than they have, then the correlation between family size preferences and actual family size should be very low. This is a point emphasized by KAP researchers who show that the ideal is, say, 4 while actual completed fertility typically falls in the 6-8 child range.

But it is important to remember that women who have completed their families, that is, have reached the end of their childbearing years, comprise a very small proportion of most KAP surveys. To compare the aggregate ideal family size of a sample of women 15-44 with the average completed fertility of women in that society is meaningless if ideal and actual are highly correlated. Hawley and Prachuabmoh (1966:326) found a strong positive association between living children and ideal family size. I suspect all KAP studies find likewise, though few present a table where ideals are inspected by parity.

For example, in the often-cited Taiwan study of Freedman and Takeshita (1969) this particular relationship remains unanalyzed. This seems odd for two reasons. First, the authors have a chapter titled "The Number of Children Wanted and the Number Born: Ideal and Reality." The expectation that this relationship will be presented rises when one notes that the page headings for the chapter are labeled "Number of Children Wanted vs. Number Born," or approximately the heading of the table desired. Yet the authors control the number of live births or the number of living children (which given attrition through mortality are not quite the same thing) only to look at the percentages of women by parity who want more children or who express a preference lower, equal to, or higher than the controlled variable (*Ibid.*:41). In the latter case, the authors find that only 18 percent of the sample wanted fewer children than the number of live births they already had. This suggests that most women at the time of the interview were not having more children than they wanted, or merely the methodological problem of the ideal and actual being highly correlated when they should not be.

More evidence for the correlation between family size preference and actual fertility in their data can be inferred from figures contained in Table II-1 on page 38. They control age and find that the number of children preferred by women 30-34 is 4.1 while the number of children these women have alive is also 4.1. For women 35-39,

the preference is 4.3 while the actual is 4.8. The number of children wanted by the aggregate sample of women ages 20-39 was 3.9, indicating that the younger women aged 20-29 had a preference of less than 3.9 for the aggregate sample to arrive at that figure. For some reason they do not show what the preference was for women 20-29. Based on the number of cases, I calculate it to be approximately 3.6. Thus, as age rises, which means, to a certain extent, as parity rises, the family size preference also rises, though of course the correlation is not perfect. But it does appear to be high, suggesting that many women must revise their family size preference upward as more children are born.

The second reason why I find it curious that the authors omit a direct inspection of the ideal and actual is that Freedman and Takeshita (p. 39) do display some sensitivity to at least part of Hauser's criticism:

Some critics of surveys like ours contend that the answers the women give may be only polite words to please the interviewer rather than a statement of real convictions. Undoubtedly it is true that some answers were influenced by politeness and by perceptions of what was expected by the well-regarded young women conducting the interviews. But at the very least this means that most respondents are aware of a "small family value;" and this awareness is in itself a social fact that can have some influence on behavior.

Based on my interpretation of their data, it would appear that the family size preference and actual fertility are highly correlated in their sample. If so, then their explanation, which does seem to reflect a certain unease concerning the question of validity, can be reversed. Instead of awareness of a small family value ultimately influencing behavior, the burden of the evidence is that behavior is currently influencing the value. Hence, in developing countries, since family size preferences seem quite unstable and at any one point in time are heavily influenced by current fertility, these questions have low validity as indicators of "interest" in fertility control; they may more accurately measure past behavior than present intent. It follows, therefore, that we need not accept Hauser's contention that a lower aggregate ideal mainly reflects response bias (though it may explain an important part); rather, since in any probability sample of, say, women 15-44 the majority are mothers of relatively

few children, then an aggregate ideal of 4 reflects not a true measure of interest in moderate fertility, but primarily the fact that the fertility of most women in the sample has yet to approach the average completed fertility of their society. It would be well to investigate the hypothesis that older women typically report a higher ideal primarily because they have more children, not because they are less educated, more rural, or less modern.

Approval of Birth Control

Even if they were to concede that family size preference questions should be discarded as inadequate measures of "interest" in family planning, program advocates might still point out that KAP surveys do find that most are in favor of contraception and, by inference, in limiting family size. But with regard to this issue I agree with Pradervand that the wording of the question may in large part explain the response. Of course we must sympathize with the self-inflicted plight of the KAP researcher who must plumb the depths of creativity to write a single question eliciting an opinion on a topic most claim to know little or nothing about. Thus, in looking at the many versions of the so-called birth control question incorporated in KAP surveys conducted in developing countries, one is immediately struck by the fact that the word "contraception" or the terms "birth control" or "family planning" rarely appear. Instead, the respondents are asked to register an opinion through remarkably oblique, and in most cases, very biased wording. For example: "Nowadays some married couples do something to keep from becoming pregnant too often or having too many children (more than they want). Generally speaking, do you approve or disapprove of their doing this kind of thing?" Given the use of phrases like "too often," "too many," or "more than they want" as explicit cues to the respondent, we may well marvel not at the fact that a majority approve of "this kind of thing," but that anyone could possibly disapprove! Moreover, since the specific action of "something" is never defined for the respondent, each person may define it as he wishes and, therefore, to conclude that they are thinking of birth control reveals more about the person interpreting the response than the one giving it.

I should point out that this question appears to be the most popular version of the birth control question (Population Council, 1967; 1970:B) and, for example, appears on the Taiwan instrument of Freedman and Takeshita and in the Turkey questionnaire designed by Stycos and

reported by Berelson (1964b). Indeed, this latter report can be used as a good illustration of how one of the most prestigious scientists (based on his earlier work in the field of communication research and public opinion polling) now in the field of family planning can interpret highly questionable data without any indication that he has qualms concerning their meaning.³

For example, in noting that 70 percent of the men and 79 percent of the female Turkish respondents think their Government "should have a program to give information to those people who want to keep from having too many children," Berelson (1964b:3) proclaims that the "result is a striking mandate, virtually an instruction." In the summary (p. 5), he is just as emphatic, asserting that these responses mean "they very strongly wish that the government would organize a program to inform them about family planning." These cosmic conclusions are drawn from the response to one inappropriately worded question, on a topic that most say they know little about, and who are provided no information whatsoever concerning what form the "program" would take in order to base a meaningful opinion. I can only regretfully point out that while Berelson's credentials may be exceptional, his manner of interpreting KAP data is typical of the field.

Not Wanting More Children

Let us turn now to the third set of data from KAP surveys cited as evidence that many people are interested in controlling fertility, viz., that most who have had a number of children state they do not want additional offspring. Mauldin (1965b:7) has provided an overview of these responses for 14 KAP surveys that shows a majority of those with 4 living children or more do not want more children. Perhaps only a compulsive methodologist would find fault with Mauldin's comparison of responses that were elicited by dissimilar questions (some were based on comparing actual parity to various phrasings of family size preference questions; some based on a direct question

³One may point out that Berelson's reputation as a survey expert was obtained when he was working primarily as a scientist. The study that I criticize here was written at a time when Berelson, as Vice-President of the Population Council, was employed primarily as an administrator. But isn't that the point?

asking if the respondent wanted more children), asked of samples drawn in a dissimilar manner, in studies of dissimilar quality.

But when one compares responses to the same question, and a straight-forward one at that ("Would you like to have more children or not?"), the results at times do not hang together in any theoretically plausible way. For example, in the Taichung City study of Freedman and Takeshita (1969:42) 36 percent of women with 3 living children said they wanted no more while 63 percent of those with 4 children said likewise. Compare these figures to the Jamaican sample of Stycos and Back (1964:22) where 68 and 80 percent, respectively, of 3 and 4 parity women said they did not want additional children. The Jamaican sample was heavily rural and included only lower class women while the Taiwan study interviewed a cross-sectional sample of women living in a large city. Moreover, the Jamaican sample was interviewed at a time fertility was rising in that country while the Taiwan interviewing was conducted during a period of declining natality. It seems apparent that these particular attitudinal data are rather poor predictors of behavior and, worse, perhaps even poor indicators of attitudes.

In the case of the Turkish study, 59 percent of the total sample (male and female) said they did not want additional offspring. Berelson (1964b:2) draws this conclusion: "This seems to be a basic finding of considerable importance: the desire to limit family size is substantial in Turkey.... What is lacking, apparently, is not the desire but the ability to realize the desire." Berelson and other program advocates assume this question accurately reflects desire or interest in family planning and go on to interpret "lack of ability" as the lack of contraceptive knowledge, lack of access to birth control services, and hard to use contraceptive methods. Holding the view that "lack of ability" is better interpreted as lack of intense desire to control fertility, (a logical consequence of their socio-economic environment), are such demographers as Hauser (1967), Blake (1969), Davis (1963; 1967; 1970) and some European students of fertility (Hawthorn, 1970: 36-46 for summary). In effect, one group of scholars emphasizes the importance of contraceptive technology (including its delivery system) while the other focuses on the role of motivation. I will now argue that while the "technologist" view has some merit, the burden of empirical evidence, as well as theory, supports the "motivationalists."

Motivation Versus Technology

Berelson (1969b:360) has provided an interesting hypothesis which I will use to illustrate the major points of contention between the two groups of scholars:

The greater the interest, the more will effective contraception be practiced at a given level of technology. The better the technology ("better" for the given population in convenience, cost, effectiveness, safety, etc.) the more will effective contraception be practiced at a given level of interest.

Viewed apart from the context in which it appeared, this hypothesis seems to define the dependent variable, the referent of the word "interest," as the practice of effective contraception. If it were, the hypothesis would be true because it is obviously a tautology. It would be no more illuminating as the insight that a man who is interested in killing his wife in an effective manner would be better off dropping an H-bomb on her than a stale marshmallow. But based on preceding remarks of Berelson it is clear that he is thinking of interest in family planning. Although this term is itself somewhat nebulous, I think most would agree that family planning means the intentional control of family size, regardless of the ultimate size desired. Thus, the dependent variable of the hypothesis is interest in the goal of contraception, not in the means.

With this clarification in mind, it is clear that the first part of the hypothesis, underscoring the importance of motivation, has ample documentation. For example, Potter and his associates (1962:167) have shown that for an American sample the effectiveness of contraceptive practice is related both to number of children desired and to pregnancy interval (Table 2). Based on additional data, they explain the decreasing pregnancy rate as parity nears the ideal as the result primarily of more regular practice of contraception and only secondarily due to the use of intrinsically more effective methods, increased contraceptive skill, or declining average fecundability. In addition, the late nineteenth and early twentieth century secular fertility decline in Western societies, during which time contraceptive technology improved only minimally, is explained by rising motivation to limit family size which, in turn, resulted in more efficient use of the methods already available (e.g., Davis, 1963; Carlsson, 1966; 1970; Hawthorn, 1970). Moreover, and this is often overlooked in the literature, even today in most European societies relatively few couples use the most technologically advanced

Table 2. Number of pregnancies per 100 years of contraceptive exposure, by number of children desired and pregnancy interval.

Pregnancy Interval	Number of Children Desired			
	2	3	4	Total
Marriage to first pregnancy	33.6	35.7	57.7	43.0
First to second pregnancy	15.5	28.9	39.3	29.2
Since second birth	16.5	16.6	27.1	18.6
Total	16.0	25.0	36.5	27.9

Source: Potter, et al, 1962:167

methods of contraception such as the pill (Jones and Mauldin, 1967).

These data lead to an important conclusion: the level of contraceptive technology should not be defined abstractly, it should only be defined in relation to the level of motivation to use the technology. As interest in controlling fertility rises, the "level" of contraceptive technology automatically rises. Berelson concedes this point when he defines the word "better," as he must, in terms of a word like convenience. Whether or not a particular method of contraception is convenient depends as much on a person's interest in controlling family size as it does on any intrinsic attribute of the method. If in the definition of the level of contraceptive technology we must include an element of motivation, then the former is not properly viewed as a separate, distinct variable from that of motivation. In short, the level of contraceptive technology lies chiefly in the eyes of the beholder. It follows, therefore, that if the level of technology is rising motivation cannot be at a constant level, it too is

rising. Thus, it is incorrect to assert, as the technologists do, that motivation and contraceptive technology are equally important. Motivation is clearly the dominant variable in the question.

This is not to deny that "better" contraceptive technology (narrowly defined to its non-evaluative aspects) will have some impact on contraceptive practice and fertility. To be sure, once a couple decides to use contraception, if they employ an intrinsically more effective method they run a reduced or non-existent risk of "accidental" pregnancy. And even if a couple is using their method to space, rather than terminate, child-bearing its lower or non-existent probability of failure can help to reduce fertility since, as Ryder (1969) shows, the longer a birth is postponed the more likely it becomes never to occur.

However, a major problem arises when technologists extend their argument to the contention that "better" technology (including both intrinsic and evaluative aspects) will encourage more couples to practice contraception. At first glance, this would seem as reasonable as saying that better transportation technology has resulted in influencing people to decide to go somewhere. But we must first start with the assumption that most people are not opposed to the idea of travelling and that most have the time and money to do so when given the opportunity by better technology. Better transportation facilities have resulted in many Americans taking long-distance trips; the number of Haitians doing likewise has not increased as dramatically. In other words, all technological innovations are subject to numerous intrinsic and extrinsic constraints, something their strongest adherents often overlook (e.g., the SST case). In the case of contraceptive technology, we cannot ignore the question of how many couples in developing nations are prepared to take advantage of it, that is, are past the stage of not even thinking about it, are also past the stage of being vaguely interested, and have reached the level of interest where they are prepared to suffer at least some (undefined as yet) costs for controlling family size. Kar (1968:34) is correct in pointing out that:

in the final analysis it is the level of motivation of individual couples which determines the acceptance of family planning. When motivation is strong, adoption takes place even if modern contraceptives are not available; on the other hand, if motivation is weak or absent, then even free services are not used.

By failing to recognize that they include within the definition of contraceptive technology some undefined level of motivation, technologists have incorrectly concentrated on the means, while minimizing the importance of interest in the goal. Hilmar (1970:30-31) is wrong when he asserts that: "Effective methods by which couples can control their fertility are the key to the success of the voluntary family planning efforts...." Harkavy (1970:9) is wrong when he contends that: "The greatest need worldwide is for radical new developments in contraceptive technology." And Berelson (1967:47) is not only wrong but flirting with the absurd when he states: "If there is an easy method available -- one that requires no sustained action, little learning or skill, and that is very effective, cheap, non-troublesome, non-bothersome, not unaesthetic, and so on -- then you don't need very much motivation." Needless to say, someone with very little motivation could never personally evaluate any contraceptive method in this manner, not even the "perfect" method now being sought in medical laboratories around the world. Indeed, the willingness to accept the cost in wealth and manpower in this perhaps quixotic quest itself establishes the paramount importance of motivation, at least on the part of those who are extremely interested in fostering a worldwide reduction in fertility. Better methods can make a difference, but not nearly as much as technologists seem to think.⁴

Intensity of Interest in Family Planning

One might point out that the preoccupation with technology manifested in the foregoing statements must be placed in the context of the program advocates' belief that motivation already exists. But before we can accept this assertion we must answer the question of how much motivation, on the part of how many people? Since I shall discuss it at length, consider carefully the following passage from a recent article by Polgar (1971: 7), one of the few anthropologists specializing in the field of population.

⁴Only in the extreme case of an involuntary family planning program would technology become equally important as motivation. If 2 percent of a society were extremely interested in controlling national fertility, even if the other 98 percent were not, then a 100 percent effective, easily administered method (say, dropped, like fluoride, in the water supply) could result in totally effective contraception. But this assumes that these 2 percent were the rulers of the society and had the power to implement their plan (and ensure

Where the modern techniques of contraception are still only sporadically available -- as in the cities of Latin America -- clandestine abortion is assuming truly epidemic proportions. Do the couples who resort to this all-too-often lethal means of birth control lack "motivation" to control family size? Do Puerto Rican husbands who run the gauntlet of bureaucratic red tape to obtain a sterilization for their wife manifest "machismo"? ...And the millions of poor women who, despite some unpleasant side effects, take contraceptive pills...are they manifesting "child hunger" or sexual irresponsibility -- traits often ascribed to them by elite and middle-class commentators...

Starting with the first sentence, Polgar is misinformed, modern techniques of contraception are quite abundantly available in Latin American cities. For example, the oral contraceptive can be purchased, often without prescription, at any drug store, and drug stores are not scarce in the average Latin American city. In fact, even before private or public family planning programs had made much headway in Latin America, there were proportionally more women (though only 5 percent of the married population) using the oral contraceptive there than in such low fertility areas as Europe and Japan (Jones and Mauldin, 1967).

To be sure, if we interpret availability to include cost factors, then many women cannot afford to purchase the pill or to visit a private physician (who are also in abundance in Latin American cities, though not in rural areas) to be fitted with a diaphragm or inserted with an IUD. But condoms are inexpensive and withdrawal, as elsewhere, is free. If the latter two methods are rarely used, might this be an indication that "machismo" is in fact a problem? (Given the context, I am sure Polgar means to suggest it is not, though his wording of the third sentence is indeed delightful).

that everyone drank the water, which might present some enforcement problems in certain Mediterranean countries). To those few technologists who in their weaker moments may contemplate this kind of contraceptive, I merely encourage them to consider the fluoride controversies of the 1950's, and the much greater strength of the groups who would not view with favor any attempt at restrictive legislation, let alone compulsory programs.

Thus, if "clandestine" abortions are of "epidemic proportions" the lack of alternative methods of natality control cannot entirely explain it. If they can afford a "clandestine" abortion (certainly not all are self-induced), then they can afford purchasing contraceptives.

But how high must the abortion rate be before it is interpreted as an epidemic? Certainly a devout Catholic or dedicated public health official could be expected to view an induced abortion rate of one percent as alarmingly high. But how about a scientist, like Polgar, who is cognizant, as he shows earlier in the same article, of research on the existence of abortion in pre-literate and pre-industrial societies? This research demonstrates that abortion was to some extent known and practiced in most societies so that some (unknown) rate of abortion has existed through the ages (e.g., Nag, 1962; Himes, 1963; Douglas, 1966). Unfortunately, Polgar does not cite any sources for his assertion concerning abortion in Latin America, nor does he explain why, as implied by his wording, he thinks it is on the rise.

Perhaps Polgar had seen a draft of Omran's (1971) recently published review of abortion literature. This article conveniently pulls together the major findings of abortion research in Latin America (and elsewhere) but, unfortunately, repeats some of the questionable methodological practices contained in the primary sources. A general tendency in abortion research is that if the author turns up a low incidence of abortion he laments that his manner of eliciting these responses was defective, and that abortion is certainly more prevalent than he found. On the other hand, if the incidence of abortion is discovered to be "high," as some have found, particularly in Latin America, then the tendency is to extrapolate the finding to the largest imaginable population.

Thus, we have Stycos and Back (1964: 70) inform us that the less than 5 percent in Jamaica who claim to have induced abortion must be an artefact of "underreporting." Conversely, Requeña (1965: 33), who did uncover a "high" rate of abortion accomplishes the dubious achievement of exaggerating his findings in three different directions in his initial sentence: "Induced abortion is the method of birth control in Chile, where one of every three or four pregnancies is deliberately interrupted." First, the sample he reports on was not a national probability one, but confined to one low status area of the capital city of Santiago. Second, we can be sure natality control methods other than abortion are used in Chile. Third, in his sample he actually found that the rate of induced abortion was 23.2 per 100 pregnancies, or slightly less than one out of four, not the high mark of one out of three he initially claims.

In his article, Omran devotes much space to the Latin American abortion studies. For example, he presents a table containing raw figures for live births and postabortion cases treated in Chilean hospitals from 1937 to 1964. Both sets of figures rise, but the data indicate that postabortion cases rise more rapidly. His interpretation of these data is that "induced abortion increased tremendously in the period from 1937 to 1964...the number of deliveries increased by 1.8 times, whereas the corresponding figure for postabortion hospital admissions increase was 4.4" (Ibid: 486). This may indeed be evidence that induced abortion rose during the period. (On the other hand, it may only be evidence that Chilean hospitals have improved their record collection system, or have recently begun classifying as postabortion those cases which had previously been classified in another manner, or that the number of hospitals had increased thereby enabling more postabortion cases to be treated, or that women in the later period were more likely to go to a hospital following a spontaneous or induced abortion, etc. In other words, before we conclude on the basis of these figures that induced abortion has risen in Chile, a number of alternative explanations should be explored. They are not.

Furthermore, throughout his article Omran consistently repeats a questionable practice used in much of the abortion literature of Latin America. This is to use the phrase "induced abortion" when the evidence actually pertains to total abortions, both spontaneous and induced. For example, Requena (1968:788-89. *Italics added*), in reporting data collected in seven Latin American capitals in the 1964 CELADE survey, describes the manner in which he will present the data:

The obtained figures on induced abortion show strong differences, which makes us think that the validity of data is different in each capital city. In some cities, figures reach zero, a fact that lead(s) us to discredit its validity. We have preferred to use the total abortions as a better comparative index, since figures represent this total. Our decision is based on some assumptions which may have more-or-less validity. In the first place, it is estimated that variations in spontaneous abortions must not be significant among one country and other.... In the second place, it is possible that the women interviewed confess their abortions but without recognizing them as induced.

This rather carefree manner of handling data makes anything subsequently reported in the article a great deal less than conclusive concerning "induced" abortions in Latin America.

Another example of this innovative technique of lumping all abortions together in order to get a better idea of "induced" abortion is the following:

Other pertinent data from our studies indicate that the most recent pregnancy in 20% of the women in the program terminated in an abortion or stillbirth.... These data plus the fact that abortion (induced?) is, next to delivery, the most frequent cause of admission to the hospital section of the Candelaria Health Center, indicate the constant state of anxiety in which these families live and, in defense, they resort to abortion and other condemned contraceptive measures with increasing frequency. (Oguirre, 1966:4)

Notice that the author guesses that these abortions are induced and then goes on to state explicitly that they are by the end of the passage.

In Latin America, where many people seem to scoff at the economic development-population growth argument in favor of family planning, the abortion "epidemic" argument has served as a successful proxy. Given the choice of appearing to favor abortion by objecting to contraception programs, it is no surprise that most Bishops have opted for silence. If abortion were in fact as widespread and popular as this research indicates, then in Latin America administrators should be trying to integrate medically supervised abortion into fertility control programs. But, of course, that would be political suicide, and if family planning research has any weaknesses it is certainly not in the political sphere. In any event, the issue at hand is not that we should be unconcerned about the debilitating effects of a botched abortion, but that serious scientists should be more careful about what the sudden discovery of abortion means and does not mean as a societal indicator of motivation to control fertility.

Let us return to Polgar. We may respond to his rhetoricalness with a display of our own in order to underscore a critical point. Granted that most women who practice abortion are demonstrating motivation to limit family size, should we therefore conclude that the overwhelming majority

who do not are lacking motivation? If some Puerto Rican men are interested in controlling their wives' fertility, does this mean that the majority who do not encourage sterilization are not interested? If millions of poor women use the oral contraceptive and thus by their behavior indicate motivation, what can we say of the hundreds of millions who do not take the pill? Are they motivated? And even if elites and middle class commentators have grossly distorted perceptions of lower-class attitudes, does this provide justification for scientists to encourage them to adopt what may be an equally distorted view of reality?⁵

Again, I raise the question ignored by Polgar and most other family planning program supporters -- how much motivation, on the part of how many people? Admittedly, there is evidence (of uneven quality) that most women in developing countries are not committed to the concept of all the children that God sends. But does this mean most are ready to suffer the "costs" of taking action to transform these attitudes into actual behavior, even granting that the cost may be reduced somewhat by better contraception, clinical facilities, and informational campaigns? When is a family planning program a success or failure? I submit that without knowing the intensity of interest, without having a good idea of the level and extension of motivation to control fertility, there is no scientific criteria by which a program can be evaluated.

⁵One point I have attempted to document throughout is that family planning advocates aim their remarks primarily at elites and laymen, and not at other scientists. Certainly, a vital function of the social sciences is to correct misinformation concerning human behavior. But this does not mean that scientists should allow these false views completely to dominate their interpretation of data. (Obviously they must be taken into account and, if possible, corrected). The claims made on their data by KAP researchers would be analogous to a sociologist, told by the local elite that "our Niggers are happy", to do a study of Southern blacks, find that most express dissatisfaction with the system, and then announce that "the majority of Negroes in the South are prepared to support the program of the Black Panther Party." Or, conversely, to do a survey of whites, find that most deny having racial prejudice, and proclaim that "since we find no evidence of prejudicial attitudes toward black people, we may conclude that the discriminatory behavior observed will soon cease."

Earlier I cited a statement by Rockefeller that in part asserted that "whenever and wherever family planning services have been made conveniently available...they have flocked to use the service...." The implication is clear, a priori when women do not flock to the clinics then these services must not be convenient. If we ignore the qualifier, Notestein (1967:172) states this explicitly: "...wherever there have been well-organized contraceptive services through which information and supplies are readily available, the response has been large. Where there is indifference, it usually has been poorly organized services poorly supported by educational effort...." These statements put forth a variation of the argument of infinite regression and provide additional insight into the problem confronting the technologist hypothesis.

Applied to family planning, the argument of infinite regression starts out with the assumption that the level of motivation, whatever it is, is at least sufficiently high for some version of a family planning program to succeed. If initial efforts do not achieve desired results (however defined, which is another major problem), then it is immediately obvious that something is amiss with the program's services, information, or perhaps the contraceptive methods being used. If after injecting additional resources such as money, facilities, and personnel and the program still fails to produce results, it is quite clear that the services are still not "conveniently available" or "well-organized." Hence, more attention must be given

When dealing with non-specialists there is always some need to simplify the material. But there is never a need to do so in an irresponsible manner, to substitute one set of unjustifiable conclusions with another. Hauser (1967:409) makes the same point in criticizing the recent work of Donald Bogue: "If so skilled a demographer and prodigious a worker as Bogue can be trapped by the conflict between science and action, or mind and heart, what may occur among the less skilled and industrious?"

I can sympathize with KAP researchers, particularly those who pioneered in the field, who had to contend with the silly notions of some elites and laymen with regard to lower class attitudes toward sex and reproduction. But the relevant hypothesis is not the null hypothesis of the elites that interest in controlling family size is zero. To continue interpreting KAP data in this manner suggests that many researchers in the field of family planning in developing countries are indeed too conscious of the political impact of their research.

to upgrading the services or in discovering a better method of birth control. These changes are implemented. Again few results. Another round ensues.

We are of course confronted with an argument that cannot be tested scientifically. It cannot be invalidated for program advocates simply assert that ultimate success is assured given more time, more money, more personnel, better administration, a better contraceptive method. A "good" program could never fail, like a "good" army could never lose a battle. Family planning programs have the potential of becoming the demographer's Vietnam!

It should be clear that a family planning program cannot be adequately evaluated without knowing the level of interest of the people deemed in need of its services. If a program is thought to be unsuccessful we cannot determine why without looking closely at both sides of the equation, at both motivation and the program. The former can be evaluated independently of the latter, like poverty can be assessed without knowing about a poverty program, but the quality of a family planning program, including its clinical facilities, the birth control methods it uses, and the informational campaign waged to attract clients, must be judged in the context of the relative resistance or favorability of the target population.

Indicators of Lack of Intensity of Interest

This of course raises the important question as to how we measure the level of motivation to control family size. I have evaluated and expressed reservations concerning their ability to measure motivation of three general types of KAP questions, those on family size preference, on approval of birth control, and on whether or not one wants more children. While the latter question uncovers some evidence of interest, it offers us no clue as to the intensity of that interest. Recall that in addition to the findings of these questions, there are three other main findings of KAP surveys. One could make as strong a case that the responses to these questions indicate the lack of motivation, as program supporters argue the contrary based on the first set of responses.

These findings are that, in general, respondents report a low level of knowledge of birth control methods, lower rates of use of these methods, and when used it is more likely by high parity couples or by higher status or more urban individuals. To program advocates these data mean not that the majority are uninterested in fertility control, but that such factors as low levels of education constrain individuals from learning about contraception. Undoubtedly these constraints in part explain the low knowledge and use of birth control, but the fact that

many lower status, higher parity couples ultimately use some method indicates that the motivating pressure of having many children can work to overcome factors that early in conjugal life impede the adoption of natality control. Thus, the absence of or imperfect knowledge of birth control is to some extent an indicator of low interest at that point in time. The converse need not be true, for high knowledge of contraception may be solely the result of being well-educated or well-informed and not of being highly motivated to control fertility.

In addition to the KAP finding that high parity couples are able to obtain information on birth control, we have evidence uncovered by anthropologists and historical demographers to support the hypothesis that low knowledge may be more a function of low motivation than of low education. For example, Douglas (1966) documents how four pre-literate societies very successfully control natality through such means as infanticide, abortion, and coitus interruptus. If most cultures negatively evaluate the first two methods we should inquire as to why these four do not and, furthermore, why other societies have permitted norms and values against abortion and infanticide to develop. The first question can be answered by noting that other methods of natality control (other than delayed marriage, celibacy, and abstinence) are not known in these four societies which may in part be an effect of not needing to know since the desired goal is attained with the means available. And if most societies possess negative evaluations of abortion and infanticide it is in part because other means of natality control are available and in part because few societies evaluate population control as positively as those discussed by Douglas. In one sense, the emergence of more favorable attitudes toward abortion in the United States can be explained by the increasing concern for more effective control of fertility.

An increasing volume of research is emerging concerning fertility control in preindustrial Europe and America (e.g., Gille, 1949; Banks and Banks, 1954; Blacker, 1957; Hollingsworth, 1957; Bash, 1963; Leasure, 1963; Hollingsworth, 1964; Coale, 1965; Meuvret, 1965; Carlsson, 1966; Hair, 1966; Knodel, 1967; Demeny, 1968; Livi-Bacci, 1968a; 1968b; Van de Walle, 1968; Coale, 1969; Laslett, 1969; Carlsson, 1970; Hawthorn, 1970; Wells, 1971). In general, it is found that pockets of low fertility existed long before a secular decline and that the control of marital fertility is part of the reason. In addition, some very low status groups evidence use of birth control in one generation, but not in preceeding or subsequent generations (e.g. Meuvret, 1965). Furthermore, in some European societies control of marital fertility before the secular decline is found in some rural as well as urban areas (e.g. Carlsson, 1966). One conclusion that can be drawn from

this information is that recourse to natality control in marriage was not something "new" in Europe or America at the time the secular decline began. Knowledge that fertility could be controlled co-existed with high illiteracy and a rural way of life. If most people did not intentionally try to limit family size, it cannot be because the knowledge of how to do it did not exist (Hawthorne, 1970: 36). Many of these researchers opt for an explanation centering on the role of adjustment to new conditions sparking increased motivation to seek, acquire, and use knowledge the society had long possessed.

Compare this explanation to the one below, which is representative of the technologist emphasis on lack of knowledge and the downgrading of the role of motivation. In finding that spouses do not evidence much discussion of birth control and family size in Jamaica, Stycos and Back (1964: 26) contend that while this "might reflect weak motivations toward small families, it might just as easily reflect ignorance of contraception, for what point is there in discussing a problem which has no remedy?" The point I make based on anthropological and historical research is that all societies do know there is some remedy, and if individuals in those societies do not, then this lack of knowledge is primarily explained by weak motivation. It is indeed curious for two scholars such as Stycos and Back, who have long struggled to correct mistaken notions concerning lower class attitudes, to suggest that the majority of Jamaicans could in fact view fertility control as a serious problem and yet be unable to discover a remedy, while pre-literate and pre-industrial men could! Surely, within the circle of friends and acquaintances of every Jamaican are people who can offer advice on how to avoid getting pregnant, or if pregnant, how to avoid a full term pregnancy. All one need do is ask, the knowledge is there. The problem to be investigated is why do so many wait so long before they ask?

Where Do We Go From Here?

This discussion has raised the possibility that there may be as much evidence in KAP surveys to support the contention that motivation is minimal as there is to support the conclusion that it is widespread. Actually, the only clear conclusion that can be drawn from this review of family planning research is that something is amiss with KAP methodology. I can strongly endorse at least the final sentence of the most recent Population Council update on the state of KAP research (Mauldin, et al., 1970: 37): "It is clear that much more methodological work is required." I suggest that future efforts be concentrated on the measurement of motivation because without being reasonably sure that we have adequately

measured it (that is, measured motivation independently of behavior), then the technologist assertion that "better" contraception will encourage more couples to begin to control fertility must remain an untestable hypothesis. To implement public policy, to invest large amounts of money and personnel in family planning programs, to convey optimism for their success on the perhaps unwarranted assumption that most couples are "ready for it," may be good politics, but it is poor administration (if you believe your own rhetoric), and deplorable science.

However, there are signs of "revisionist" tendencies in the technologist camp. For example, Carl Taylor (1968), long active in the Indian family planning program, has put forth a five stage plan for a "practical" population policy. He frankly states that the initial response to family planning programs, composed primarily of high parity women, many of whom were already doing something to control fertility, misled program advocates to believe that the "war" on fertility was won (e.g., Bogue, 1967b). Although he clings to the major technologist thesis that "better" methods can help turn the tide of battle, he strongly emphasizes the need to take measures to boost motivational levels. While the actions he suggests can be criticized on many grounds, the point made here is that the realities of combat may serve to alert rear-lines theorists that the issue of motivation must be re-evaluated.

I can suggest two approaches that might be beneficial in re-examining the motivation issue. The first is simply to take another look, as I have done above, at KAP data. At first blush it may seem incredible that some 30 years and 400 KAP surveys after Indianapolis that anything new can be learned from them. But if the putative indicators of motivation (e.g. family size preference questions) are really meaningful measures of interest, then correlating them with use or non-use of birth control seems a reasonable way of validating them. In other words, instead of treating both the attitudinal indicators and actual use or non-use of contraception as dependent variables, make the latter the independent variable and see if users of contraception or women who have had an abortion answer the attitudinal questions differently from the non-users. Of course, class and parity should be held constant in order to avoid spurious correlations.

I have seen two studies that have done this. One (Kar and Bhatia, 1969) separated Indian users and non-users, all of low status, and found no differences in their responses to traditional KAP indicators. However, there were significant differences in the way these two groups responded to questions forming a "striving" scale, the users demonstrating pre-occupation with getting ahead in life while the non-users were more concerned with present needs. A study made among poor white

and black women in North Carolina (Blake, et al., 1969) found that communication with spouse was the highest correlate with contraception use, though traditional KAP indicators were not part of the questionnaire.

Similar studies could be done using data already existing in Population Council and University files. Of course, if the users do distinguish themselves in answering these questions we would still be in the dark as to whether the attitude preceded the behavior or vice-versa. On the other hand, if the Kar and Bhatia findings are consistently reproduced then we have clear evidence that traditional KAP indicators are not very useful in developing countries. Another interesting test, following the lead of Hauser and Pradervand, would be to run the interviewers as the independent variable to see if certain interviewers produce consistently similar responses to KAP indicators of "motivation." Given their usual low-level of training, as well as the selection of interviewers from groups already committed to family planning (nurses, public health workers, middle class students, etc.), we might hypothesize that interviewers more often than not allow their own values to show up in the answers of the respondents.

The second approach toward re-evaluating the question of motivation involves recognizing that the traditional KAP instrument, though useful in the Modern Age of politics, is mired in the Stone Age of science. Simple poll type questions cannot do justice to such a complex subject as childbearing. Intensive, open-ended interviewing would enable us to obtain a better idea of the conflicting attitudes and values that simply are ignored by most KAP instruments. More can be learned from reading the intensive reports of Stycos (1955), Blake (1961), and Rainwater (1961; 1965) than from reading all 400 KAP studies. This would mean sacrificing large numbers of cases and speed of analysis for in depth treatment of a topic that desperately needs it. Also, I am encouraged that psychologists are finally being drawn into the field and hope, perhaps too optimistically, that their research tools can illuminate the issue. Psychologists claim to have developed means for measuring other kinds of motivation; perhaps they can do the same in the area of family planning motivation.

But most important of all, it is time that researchers in the field of family planning recognize that they are doing both the subjects of their research and themselves an injustice by allowing their strong commitment to the need for fertility control to dominate their collection and interpretation of data. Instead of research guiding policy, in this field a pre-determined policy has guided research. In one of his first papers after joining the Population Council, Berelson (1963: 168) stated quite explicitly that a "no" answer from research will never be acceptable, or even convincing, to the administrator of programs for family planning." In part, he explains,

because the methodological problems inherent in this kind of research will cast doubt on any results. Then he continues:

Beyond that, however, there is simply the social, political, and perhaps psychological need to do something about a problem of this magnitude and importance. So from the administrative side, it is unlikely that our studies -- however many they may be, however well done technically, however imaginative in design and ingenious in execution, however negative in conclusion -- will stop a responsible administrator from trying to bring down the birth rate.

This "facts be damned" philosophy seems to have crept into every corner of family planning research. In effect, Berelson told researchers not to waste time bringing to his or other program advocates attention negative findings. Is it so far a leap from merely "accentuating" the positive to completely eliminating the negative, either by employing questionable methodology or by consciously or unconsciously ignoring all negative evidence? A difficulty shared by all policy evaluation research is that all too often it has the latent function of merely endorsing the policy that, for whatever reason, has already been selected. Since so much family planning evaluation research is conducted by many of the individuals who recommended the program in the first place, might this normally latent function become blatantly manifest?

At a time when too many academics remain safely in their Ivory Tower, I am reluctant to fault those who have struggled over the years to have public officials accept their recommendations. On the other hand, perhaps the acceptance by governments of the technologist thesis resulted less from the strength of their arguments than on the strength of elitist views that a cheap, non-threatening way was needed to achieve development. While some members of the population "establishment" have been quite critical of the ecologists' simplification of the relationship between population size and pollution, they seem impervious to the charge that they have similarly distorted and simplified the relationship between economic development and population growth. However, they have told us that fertility decline, induced by a well-run program employing advanced contraceptive technology, can unquestionably precede most other sectors of development. Indeed, this is a bold theory for it is virtually the opposite of what prior evidence and theory support. It is even a bolder theory when one considers that, given the methodology they employ, they have insured that it cannot be tested. There is much in the family planning movement, and how the scientific community has responded to it, for a specialist in the sociology of knowledge to ponder.

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POSTSCRIPT

They justify this lack of candor on the grounds that egregious overstatement is necessary to arouse public interest... it is a sad day when we see professionally expert distortions of the truth peddled to the public under the highest scientific auspices, as if truth can be fostered best by untruth. When scientists become concerned with reform, as I think duty indeed requires, they will at their peril abandon the ardent respect for truth that lies at the basis of their professions.

(Frank Notestein (1971: 444) commenting on the ZPG movement).

LATIN AMERICAN ATTITUDES ON BIRTH CONTROL: A TYPOLOGY

AXEL I. MUNDIGO

Concerned demographers have devoted more attention to North American sources of support for birth control than to studying the reception of population programs in the Third World. Much of what is known about Third World receptivity to birth control comes from KAP surveys which almost exclusively study lower class populations (see Marino's paper in this issue). However, in order to make birth control available to lower class populations, support at high government levels or at least by physicians or other members of the elite is essential. According to Barclay, Enright and Reynolds (1970) the American power elite has much to gain and little to lose from supporting birth control programs abroad. A corollary of this thesis would be that Third World elites should welcome birth control aid because it helps secure their position by preserving the status quo.

This paper deals with Latin America, an area known for its rapid population growth rates and which has been receiving increasing amounts of United States Agency for International Development funds for birth control. While on a continental basis the sums are not spectacular, it is significant that the total aid for birth control has increased from about 2 million dollars for 1965-66 to almost 11 million dollars in 1970 (AID, 1970).

Much of what is known about the thinking of Latin

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American elites on birth control comes from public statements made by political leaders, intellectuals and other persons specially motivated to make a public pronouncement. Generally speaking, very little is known of the ways in which religious and political influences affect population attitudes among elites. Among United States scholars studying the climate of opinion towards birth control in Latin America, Stycos (1968, 1970, 1971) is the only one to have given sufficient attention to elites. Even among Latin Americans such efforts have been the exception rather than the rule: Uriarte (1968) in Peru, Lenero Otero (1968) in Mexico, and the Center for Social and Economic Development (around 1969) in Bolivia. There are also a few studies, more restricted in scope, often focusing on a particular profession or group. Among these, in Latin America, the following groups have been studied: Colombian physicians (Mendoza Hoyos and Mirkow Ospina, 1968), Colombian medical school professors (Mendoza Hoyos and Mirkow Ospina, 1968), Honduran physicians (Johnson, 1970), Colombian university professors (Sismondo, 1971), Honduran and Colombian university students (Landstreet and Mundigo, 1971), and parish priests in Colombia (Cohen, 1971; Burch and Shea, 1971).

Data

Using abundant qualitative materials derived from a survey of Honduran elites consisting of 300 government, business, industrial and professional leaders, this paper tries to locate the sources of negative and positive influences on birth control in order to outline a typology of opinions covering the entire range of attitudes towards this issue. The study was conducted in 1969-1970 and included also a survey of 400 university students at the Honduran National University. Contradicting the corollary suggested above the data reveal little enthusiasm toward birth control. Half of the total elites were in opposition to a national family planning program to lower birth rates and the opposition rose to nearly 70 percent among a selected sample of top decision-makers and political influentials. Contrary to expectations, student opposition was lower, 20 percent, but among them a half were undecided with regards to birth control.

Sources of Negative Influence

Three major channels of information relevant to the formation of negative opinions on population issues are the Roman Catholic Church, political parties (especially through the mass media), and universities. Political ideology influences party positions and platforms. It is also

interrelated with the Church's position on birth control. At universities, leftist ideology, for example, dictates the anti-imperialistic tone used by student leaders against population programs. In conservative circles the political right and the Roman Catholic Church join hands decrying the moral corruption and promiscuity they maintain any population program would bring to a society. The semantics of the arguments often confuse the issues. Most opposition to population control is phrased in terms of "birth control" with special emphasis on "control." Support, on the other hand, is termed "family planning" or "responsible parenthood" with emphasis on "freedom" to plan a family according to one's economic means.*

The Honduran elites were asked to identify the sources of influence and of knowledge they had on population matters. Among those who had been exposed to at least some influences, two sources predominated: the Roman Catholic Church's Christian Family Movement and newspapers and magazines. Among the students, the main source was the National Autonomous University of Honduras itself.

The Roman Catholic Church

The Roman Catholic Church is the best organized opponent of birth control in Latin America. The particular instrument of opposition in Honduras is the Church's Christian Family Movement under the leadership of a local priest. Christian courses ("Cursillos de Cristiandad") and retreats for special groups, such as business executives and professionals, are organized by the Movement to discuss population issues and reinforce belief in the Church's teaching on matters having to do with contraception and Christian family conduct.

The Church's teaching on contraception was re-affirmed on July 29, 1968, when Pope Paul VI issued the encyclical entitled Humanae Vitae. (For a discussion of the development of the Church's position as well as its position regarding the means and ends of birth control, see: Landstreet

* Alvaro Garcia-Pena in an article published in El Dia, Honduras, 12 September 1969, p. 3, reporting from Bogota comments on the total acceptance of "family planning" by the Central Unica de Trabajadores of Chile, the Central Workers Union, and its irrevocable opposition to "birth control."

and Mundigo, 1971). The following extract from Humanae Vitae illustrates the Church's position:

Likewise every act that intends to impede procreation must be repudiated, whether that act is intended as an end to be attained or as a means to be used, and whether it is done in anticipation of marital intercourse, or during it, or while it is having its natural consequences.

(Humanae Vitae No. 14)

Influential Church leaders in Latin America, such as Dom Helder Camara, Archbishop of Recife, in Brazil, while recognizing that demographic growth might hinder development problems, have made strong statements in defense of the Encyclical. Dom Helder (Joannes, 1970:267) uses an argument common among leftists to oppose birth control:

The Latin American, Asiatic, and African masses would very soon have been stuffed and drowned with birth control pills if Paul VI had not issued the encyclical Humanae Vitae. I will never forget the words of the American President Lyndon Johnson when he stated: 'Five dollars spent on birth control is far more profitable than a hundred dollars spent on development.' I am hence grateful to Paul VI for his encyclical, even if I realize that it may create problems for developing countries.

These arguments have a wide impact on public opinion as well as on the Latin American Church in general. The Honduran elite sample included one of the most important secular leaders of the Christian Family Movement in Honduras. A young professional in the government bureaucracy and a newspaper writer, claims to have written "upwards of 300 newspaper articles for the Honduran press." The following is his opinion on matters dealing with population:

Our population is scarce. Honduras ought to have by now at least 5,000,000 people. How can we develop this big land of ours without population?

I am opposed to birth control because it goes against moral and Catholic principles

and also against human nature. Instead of it we should concentrate in developing the family as a strong institution, especially creating a consciousness of the need to live by moral principles.

Birth control also threatens the integral development of this nation. The United States advocates the use of birth control because it fears a peaceful invasion of Latin Americans - too many would create problems for them! But from a Christian viewpoint we are entitled to develop our own opportunities. Here everything is yet to be done; but only when we double our population are we going to be able to do what is needed. A light will then be lit and it will show us the solutions!

(456)*

The influence of the Christian Family Movement reaches into all spheres of society and it has powerful spokesmen in strategic positions. One of Honduras' most important political leaders, ideologically to the right of the political spectrum, is also an important business leader and member of an old patrician family. He places his hopes for a larger Honduran population on the effectiveness of the Christian Family Movement:

Our population growth is not adequate nor efficient. Honduras needs more population because of its territorial size. To achieve an adequate growth of the population, it is indispensable to count on the influence of the Christian Family Movement. The Movement should also help to train our people, give advice for the betterment of their condition, and aim at giving men and women a new consciousness. Its purpose must be to outline the problems that make the integral development of this nation

* Randomly allocated interview numbers are preserved in the following sections to indicate primary source (survey interviews) materials. Numbers are omitted in the last section only.

difficult. If our population increases and the government takes care of its needs, giving first priority to education, our businesses will profit by enlarged internal markets, agriculture will develop and industry will inevitably grow. The outcome will be progress in the entire country. I have made these points public in political speeches, emphasizing that it is necessary to increase our population to achieve development.

(101)

A political party leader who argues that social reform can be attained through Church organizations represents the best example of the way in which political ideologies and religious influences mix. The Church, by advocating social reform (such as emphasis on education of the masses) is able to blend its anti-family planning position into the political ideologies of the right. Some Church leaders by decrying U.S. involvement in birth control activities in Latin America, reinforce leftist opposition which is largely based on ideological grounds.

Political Parties - The Mass Media

In addition to the Catholic Church, political parties and also universities, influence positions on birth control. Much of this information reaches the public through the mass media, particularly the press. The outcome is that birth control cannot any longer be discussed outside the context of its ideological implications.

On April 11, 1970, El Dia, Honduras' most influential newspaper, carried an editorial denouncing foreign pressure and support for birth control in Honduras. To frame its populationist position, El Dia appeals to moralistic, anti-hedonistic and other feelings:

FAMILY PLANNING

In Honduras the population grows by 3.4 percent annually and production by 5 or 6 percent which means that the situation is not as desperate as in other countries. However, eagerness to reduce fertility exists and receives complete financing from foreign sources.

Family planning has two purposes. On the one hand, it increases the awareness of responsible parents and spreads knowledge of contraceptive technology. This first aspect is totally acceptable....The other side of family planning is the use of contraceptives, which is being, unfortunately, promoted among our youth and is indeed reprehensible.

And no doubt the demand exists! First among that feminine sector that lives a carefree life and makes use of sexual relations to earn a living. Second, the woman whose social requirements are such that she must have relations but no outcome, or that she needs to avoid deforming her figure. Here family planning is no planning at all.

Honduras is underpopulated.... Other nations with equal or less territory feed 8,000,000 to 15,000,000 people, better than we do and have no need to add to their water the contraceptive pill!

Honduran newspapers are not themselves a source of ideological or doctrinal positions, but rather they are the medium through which these positions are made known. Ideally, newspapers ought to be impartial and carry both the message of the political left as well as of the right on any one issue.

El Dia, on June 10, 1970, carried a front-page article entitled "Population Growth and Economic Development in Honduras." The article is basically a long interview with Licenciado Miguel Angel Funez, university professor, member of the National Autonomous University's executive board and a well-known expert on social and economic problems. While his position is not identified as leftist, its language is unmistakably so. His analysis of the influence of population growth on economic development turns abruptly into an indictment of foreign intervention and of the aims of Neo-malthusianism in developing countries.

Underdeveloped countries are faced with a rapidly multiplying population that lives in small villages or is widely dispersed in hamlets beyond reach of communication. The low income level of these people is not enough to buy the minimum

food requirements for the kind of work they have to do / manual labor, agriculture/. They live in promiscuity, in unhealthy conditions and have no opportunity for education. These people are practically abandoned. Their problems are not new nor are they the outcome of chance.

In addition to the preventive controls proposed by Malthus, the Neo-Malthusians have invented the thesis of birth control. Its basic goal is the reduction of population growth.... This thesis has led leaders of international banks to impose conditions on loans given to underdeveloped countries requiring that they establish a population policy as prerequisite. Some among these leaders are interested in assuring the domination of western civilization, and others believe that it is not possible to improve living standards when production is below population growth.

Lic. Funez also discussed the theme of U.S. intervention and involvement in the family planning movement in Latin America:

The strange point is that those who propose population policies are not the underdeveloped countries, who should be the most concerned in solving the problem, but other countries, such as the United States. The United States backs organizations like the Planned Parenthood Federation which is largely financed by American monopolies. Large sums of money are spent training personnel, carrying out conferences and setting in motion propaganda campaigns in our continent.

The reporter carrying out the interview asked Funez: "What is the answer to the Neo-Malthusians?" Funez went on:

The answer is in the study of the capacity for production of our population and in the study of the background of the economic surpluses in the agricultural sector and their utilization by landholders and capitalists... It is not a problem of scarcity of resources but of their appropriation

by foreign enterprises.

I believe that once our resources are turned over to national producers and once they are able to acquire the knowledge to exploit them, the imbalance between production and population will cease to exist.

The interview ends with an explanation of the motives behind U.S. interest in population control:

The real reason why the United States worries about population growth in Latin America is that this increase can result in convulsions that would threaten the capitalist system. The U.S. risks large investments in our countries. In addition, it has advantageous commercial relations and it exercises political and cultural domination of these nations. Thus, we are able to understand why the U.S., with so much at stake, advocates a population policy aimed at reducing growth in Latin America. The consequences of overpopulation in Latin America will not be long in being felt by the United States. For the underdeveloped countries the picture is different: they need a larger labor force to take the greatest advantage of their natural resources and in so doing benefit their own people.

The argument against birth control, as presented by Funez, is being heard with increasing frequency in Latin America, especially among the political left. Leftists also recognize the qualitative problems brought about by a fast growing population which is largely marginal to the economic life of a nation. As one lawyer, a leftist leader, remarked:

We must change our social structure and plan intelligently in order to use our people's capacity for work and development. We under-employ our peasants and our laborers. Our masses do not have economic or consumer power and our per capita income testifies to our low level of economic development. In order to reduce the number of poor people and to avoid its own responsibility, the State gives

birth control pills. The United States' support here is larger than in more essential aid programs, such as would be help to develop our forests and agriculture. Without any social security, our peasants depend on their children to help them in case of need and support them later in life. We must end our political and economic dependency, distribute our wealth in a just way and improve the educational level of our people. These are our priorities!

Leftist political opposition is based largely on the belief that birth control is part of the imperialist scheme the United States has designed to destroy Latin America's potential for social change and revolution. Continuous U.S. involvement in domestic affairs, largely brought about by heavy investment in the area, is resented. To end this dependency revolution is often seen as the solution. The U.S. presence is interpreted as holding down the growth of forces that bring revolution about - the growth of under-nourished, under-educated and under-employed Latin American masses. This type of reasoning led one leftist respondent to declare:

I am opposed to birth control because it is a Neo-Malthusian policy rooted in the conditions necessary for imperialism.

(649)

Rightists are often also opposed to birth control, their arguments based on a combination of nationalistic and moral-religious principles. The rhetoric is directed toward the creation of a new future, a new nation, a stronger national character and a unity of purpose. The main difference between the leftist and rightist positions is that the right lacks well defined arguments for social change. The right's position can also include anti-imperialist arguments similar to those of the left but having a different emphasis, frequently reinforced with moral or religious elements. Imperialist motivation is explained in terms of cost-utility: it is cheaper to give out the pill than to feed more people or educate them:

Although our territory is big and our population small, the government with the cooperation of foreign elements, undoubtedly of U.S. origin, is starting a birth control program in our country. This is helped

by foreign enterprises.

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Rightists are often also opposed to birth control, their arguments based on a combination of nationalistic and moral-religious principles. The rhetoric is directed toward the creation of a new future, a new nation, a stronger national character and a unity of purpose. The main difference between the leftist and rightist positions is that the right lacks well defined arguments for social change. The right's position can also include anti-imperialist arguments similar to those of the left but having a different emphasis, frequently reinforced with moral or religious elements. Imperialist motivation is explained in terms of cost-utility: it is cheaper to give out the pill than to feed more people or educate them:

Although our territory is big and our population small, the government with the cooperation of foreign elements, undoubtedly of U.S. origin, is starting a birth control program in our country. This is helped

by certain organizations that assume their obligation is to feed the poor and consider a logical step is to keep the hungry of the world from being born, destroying them before birth by means of chemical procedures that are immoral.

Man is born with his own capacity to produce his food. It is up to the State to realize this capacity. The reproductive potential of a population is equivalent to its capacity for development since development is in direct relation to the size of a country's population. In supporting birth control, the government is also subsidizing immorality thus offending our national dignity.

(678)

An important professional and writer of newspaper articles presents the view from the center of the political spectrum. His argument rests on strong nationalist feelings and his opposition to birth control is based on the fear that it might impinge upon the national and continental dreams of power and prestige:

This country should adopt a population policy designed to increase our population size and to open new areas of the territory hitherto underpopulated or uninhabited. Family planning policies can only be adopted by governments faced with serious overpopulation problems but in our country there is no reason to believe that such a situation exists. Our government should devote its efforts to foster agricultural development first, then communications, education and also slowly industrialize the nation. For this we must increase, both in numbers and in quality. We must strive to create a national consciousness in the pursuit of these goals.

And with regards to the World Bank's declaration on population, he comments:

The Bank's position on population reflects an attempt against the dignity of less

developed nations. It stems from the fear being felt by the more developed nations that their prestige and power positions might be threatened if our countries grow too fast.

The University

While the basic influences shaping elite attitudes are also found at the National Autonomous University, the voice of the left predominates, and birth control is a favorite target. A by-product of birth control opposition among leftist students is the suspension of demographic interest and population studies from the academic curriculum. The only school of the University to undertake any research on population activity was the Department of Preventive Medicine at the School of Medicine. At the Center for General Studies (junior college), no courses on population have been listed nor has population been included in social science courses. A student leader revealed that the School of Medicine was pressured into stopping its population activities:

We have no overpopulation; the land area is sufficient for the present population or for a larger one... if the peasants are given land and technical assistance they can support their children satisfactorily. The nation needs more young people to put to work. Revolutionary movements are led by young people, and the youth of the future are a threat to the monopolistic interests... they could be the motor for the revolution, and the United States does not want youth to become a majority in the nation.

We have been able to convince a lot of the young doctors to stay away from family planning. We've convinced them that to carry out such a program is to act against the nation. We have been able to force the medical school to suspend all birth control activity. The Medical School will never allow a plan of North American penetration to be carried out in its name.

(705)

The student leader was not engaging in futile speculations. A professor at the Medical School gave the following descrip-

tion of the university situation:

The left believes that increasing poverty and misery is the only way to get the people to participate violently in a leftist revolution, and population growth is doing just that. We have had to totally cease any demographic work at the university. For example, the head of the Department of Preventive Medicine has been under pressure not only to stop any teaching activities at the University, but outside the University as well. The topic is dead at the University. It cannot be discussed.

(803)

The reasons for student opposition to birth control generally follows a Marxist line:

Birth control is a U.S. government policy not of the North American people, which forms part of the larger objectives of the domination pursued by imperialism. Birth control delays the process of liberation of peasants and workers from the conditions to which they are now subjugated. It helps to maintain conformity which postpones the uprising of the masses in a popular revolution. Those who accept birth control though well motivated, are wrong. We must inform them that they are making an error, that they are doing something that goes against their best interests. We must tell the workers and peasants that the problems of the nation are not caused by their large numbers, but by capitalist groups who exploit them.

Among the students at the University, we must try to create a consciousness of the problems facing this country: political, economic and social. There is little doubt that many students will continue their careers as professionals following the example of their parents and ignoring our reality. Many students are members of the wealthy upper classes and only recently have students of families with scarce resources been able to pursue university studies. The bourgeois classes are totally devoted to the defense of U.S.

interests in our country - they have no autonomy. They are the bankers, the landholders, and the industrialists who control our political life, adopting policies that serve only their own interests....

(705)

Birth control opposition was manifest at the time of the survey on which this study is based. One of the reasons for obtaining interviews with only 44 percent of the students between first and fifth year (excluding pre-medical) in the School of Medicine was the Dean's fear that an "unpleasant situation" might develop as a result of administering the questionnaire to the students. The cause of this fear was the Second National Seminar on Population Dynamics, Reproductive Physiology and Maternal-Child Health, sponsored by the Medical School, the Ministry of Health and the Honduran Family Planning Association. The seminar was directed at physicians and surgeons and was conducted mainly by Honduran physicians.

Before the close of the Seminar, the "Revolutionary Front 23rd of June," had issued a manifesto protesting the Medical School's sponsorship of the Seminar. This caused the School's Dean to be "absent" from the closing meeting at which he was to be the featured speaker. Except for a paragraph that is directed against the "submissive cowardly attitude" of the professors in the Department of Preventive Medicine, the manifesto is reproduced in its entirety below:

The Revolutionary Front 23rd of June, a genuine defender of the interests of the Honduran people and representing a large segment of the student body of the School of Medicine, wants to voice its protest against the irresponsible actions of the Department of Preventive Medicine in: participating in the extension of family planning campaigns being sponsored by the Family Planning Association; in organizing and chairing a Seminar on population dynamics and family planning that was aimed at our recent medical graduates now working in departments all over the country; and, without the Faculty Council's approval, using the name of the University and thus overriding its authority.

We believe this to have been a premeditated "oversight" in response to vested interests

and to a policy, directed not by the Department of Preventive Medicine, but by the Family Planning Association, which forms part of a general policy of population control that is being imposed on us by our neighbor to the North!

It is our opinion that it is not by avoiding more children that we will solve our problems; it is not they who are responsible for the immense class contradictions in our society. We ask the pro-family planning Neo-Malthusians whether forcing their policies will stop the flow of our wealth to foreign hands?, or whether the means of production are going to leave the privileged hands that now hold them?... or whether we will have more schools, more hospitals, in short, that we would change our dependency status, that is, cease being a colony?

We exhort the board of directors of the Association of Medical Students to use its own representation in the executive board of the Medical School to make our protest clear to the authorities!

The Revolutionary Front 23rd of June

Organized student opposition to birth control, while not successful in influencing the majority of the students, has been instrumental in making it an issue linked to U.S. policy for the area. In addition to succeeding in eradicating token demographic studies and research from the Department of Preventive Medicine at the Medical School, student opposition has thrust birth control among the "hot" political issues of the moment.

Students not only oppose United States involvement in birth control, but also oppose any restriction regarding population growth, whatever the source:

I would like World Bank policies towards our countries to be different. By this I mean that they be free of restrictions such as those being added (a population policy) as preconditions for development loans.

Because of such policies, the United States is experiencing the worst reversals in its

history: Vietnam, Cuba, Peru, Bolivia... Latin America today is like a bear hibernating; but when she awakes from her long sleep, the consequences will be terrible!

(392)

Birth Control Support

As with opposition, support for birth control is also encountered along the entire political spectrum, being strongest among centrists. The center's support for birth control is based on concerns with health, education and family well-being, or in general with the gains to be derived from a smaller family often expressed as "responsible parenthood." The right might argue that birth control is a necessary measure to accelerate economic development and improve the conditions of the people while the left's faint support is mostly expressed in terms of family welfare. The main difference between the supporters and the opponents of birth control is that the latter have religious and ideological foundations for their position while the supporters rely more on humanitarian or other less well-defined reasons. Support for family planning, while stronger between the extremes, is not closely identified with any one group in the political or religious spectrum. This is not to say that political ideology and religiosity (as well as religion) lack influence in determining support for birth control.

In Honduras, as in other Latin American countries, the group that stands out as the single most vocal supporter of birth control is the Family Planning Association, which is associated with the International Planned Parenthood Federation. The Honduran association was started in 1961. The prime mover was Dr. Ofelia Mendoza, the International Planned Parenthood Federation/Western Hemisphere's Technical Director. The first board of directors in Honduras was made up mostly of physicians. The first president was Dr. Adan Cuevas, then Dean of the School of Medicine. Dr. Cuevas, however, did not remain long in his position. Soon after joining the Christian Family Movement, he abandoned his interest in birth control. Dr. Joaquin Nunez succeeded Dr. Cuevas and has been one of the most active researchers in reproductive physiology and the effectiveness of birth control methods in Honduras. He was instrumental in establishing the first family planning clinic at the San Felipe Hospital in Tegucigalpa. Opened in 1963 under the sponsorship of the Family Planning Association, the clinic is still in operation. A slow beginning (it took two years to get started) was due mainly to the opposition of the Honduran Secretary of Labor.

The Family Planning Association, mostly under medical

leadership, has continued to grow, its active members numbering close to 150 in 1970. In 1965, it was able to convince the government of the need to make family planning services available through the National Health Program of the Ministry of Health. The Health Minister supported the idea and helped to make it a reality. In 1970, the Maternal-Child Health Care Program had 14 family planning clinics, and in 1969 served about 42,000 patients in its pre-natal, post-natal, children under five years of age and family planning clinics. The program is supported by the Honduran government and the United States Agency for International Development (AID). In 1969, the Honduran government contributed \$75,000 to the operating budget and US-AID contributed \$130,000 (Programa de Salud Materno Infantil, 1970:14). The family planning budget represents 4 percent of the total budget for health, \$5,000,000 for the year 1969.

The following opinions represent a comprehensive range of arguments expressed in support for birth control. (These answers are from probes following the question regarding support or opposition to a national family planning program to reduce Honduras' population growth rates). The first two respondents, business leaders, present the view prevalent among the right which sees birth control as a means to foster economic development:

Family planning helps our economic development because our present population is enough for the present industrial and business needs. Family planning would also reduce the population surplus who consume a great deal of resources, are unable to earn a living and are destined for unemployment since there are not enough jobs available for all.

(113)

Family planning helps our economic development because it permits people to have those children that they can feed and educate. Thus our population grows healthier and has a better disposition and preparation for work.

(153)

Among ultra-conservatives, a class-based bias is built into their arguments for birth control. They see the growth of lower classes as "excessive" which might create a threat to the status quo. As an industrial leader put it:

Family planning is a help to our economic

development since it curtails the excessive growth of the lower classes that have no preparation or ability for much. It would permit the country to concentrate its energies on high priority plans for the future. By reducing the amount of dependent people, we could spend more on schools, medicines and hospitals, and our resources would go into those areas where they really foster economic development.

(114)

Arguments from the center showed concern with family welfare and family structure and displayed interest in problems of everyday life among the Honduran poor. Two government officials, one a ranking cabinet member, expressed opinions reflecting the centrist position:

Family planning is a good thing for Honduras because it would help to channel government efforts to the family thus providing better health services and education. Along with it, efforts should be made to improve family life in all its aspects.

(452)

A birth control program must also attend to the structure of the family. Only 20 percent of our families can be called stable. Many women have children with men who never become their husbands or heads of the family. Under such conditions, the concept of household does not exist. The result is juvenile delinquency, prostitution, and child labor. Even worse, in certain types of employment, children are exploited working from sunrise to sunset while receiving no education. In addition, their daily contact with adult life distorts their orientation.

(447)

Among entrepreneurs of right and center political orientation, support for birth control often reflected labor problems, especially unemployment and lack of skills among workers which are aggravated by a large family:

Our demographic growth is among the highest

in Central America. Ninety percent of our population never go beyond primary school. There are no jobs for the unskilled and plenty for the skilled, except that we have no candidates to fill those positions. To be objective, a family planning program is needed to help these conditions. I have seen in my plant workers who have from 10 to 16 children and are unable to feed them. The result is that half of these children die while young and the State is still unable to subsidize those who survive. It is better to give these people contraceptives till the day arrives when we are prepared to afford a rapid rate of demographic growth. Our leaders are not really interested in this problem, but it concerns a good number of Honduran families.

(304)

Another centrist argument is based on the need to increase the social mobility of the lower classes so they can meet their rising aspirations and enter the mainstream of Honduran social and economic life. A government leader advances this view:

Family planning can create a conscience among our people about the need to adapt family size to one's own income. As a first step, this permits feeding the children properly. We must eradicate the prejudices, fanaticism and opposition that surround this matter by bringing it to the schools. The value of children who are malnourished and uneducated is nil. Our standard of living is low and it won't improve by adding numbers to our population with the only consequence being that the ranks of the unemployed and underemployed will continue to increase. Instead, all efforts should go to improve the level of living of the family. Alberdi, the Argentinian, once said "to govern is to populate," but that has no application here. "To govern is to give health and education." That should be our primary goal.

(460)

A Typology of Population Opinions

Political, religious and student leaders' opinions on birth control, whether favorable or unfavorable, have been quoted extensively to illustrate the complexity of the issue and the way it is perceived by a Latin American elite. Leftists oppose birth control as an imperialist maneuver backed by the United States with the purpose of maintaining the status quo. Leftists also argue that rapid population increase contributes to the necessary conditions for revolution. Birth control would act as a deterrent to this outcome. The political right's desire for power and prestige is expressed in nationalist arguments in opposing birth control. Another source of rightist opposition is the doctrinal position maintained by the Roman Catholic Church and widely publicized by encyclicals and papal statements. The political center is where most support for birth control can be expected, although it is also influenced by pro-populationists who equate the prestige of the country with a large population.

In order to give a better perspective of the spread and diversity of the elite's positions on population control, advocates and opponents have been arranged into a typology of elite opinions on birth control. Rather than ideal constructs or combinations of several opinions to emphasize one viewpoint, each type is illustrated largely by a single respondent whose view regarding birth control can be said to be typical of a general class of opinions. To lessen the probability of personal identification, the description sometimes includes characteristics of other persons who shared a similar opinion (identification numbers have also been removed).

The types that make up this typology are not organized along an interval scale in that there are breaks at certain points. The first six types favor birth control and are shown in decreasing order of support. Type seven represents a non-committed position. Lastly types eight through thirteen show increasing opposition to birth control. On the other hand, similar birth control attitudes bring together very different ideological positions, i.e., the "Rightwing Militarist" and those taking a Marxist position: both argue that rapid population growth is not a problem, oppose birth control, and want to see larger population increases (although the nature of their arguments is totally different):

I. The Abortion-motivated Birth Planner, M.D.

Characteristics: Medical doctor, educated abroad, young socially-minded and interested in reproductive physiology. The high incidence of illegal abortions in public hospitals has made him realize the importance

of family planning services. Fully committed and enthusiastic about increasing volume and quality of these services.

Opinion: "In our state of under-development, the masses are abandoned, families receive no help, or food, or even education for their children. The poor have ten children but desire only three or four. Often they resort to illegal abortions. Family planning is the type of help that goes directly to these people. They need it, and in turn it might help our economic development by making it easier for our poor to improve their lot."

II. The Social Welfare-oriented Politician

Characteristics: Career politician and diplomat. His argument is well rounded and appeals to business as well as government interests by pointing out State responsibility in social welfare and reform. Rightwing politically, he is not religious, but he does belong to a Masonic Order.

Opinion: "As in most of Latin America, population growth in our country bears no relation to productivity nor to our level of development. Population growth as rapid as ours must be effectively controlled. This is necessary to avoid hunger and malnutrition. The more the population increases, the higher the responsibility and cost for the State. The State must meet its obligations in education, health and housing. Family planning would contribute to improving the living standards of our poor. It would also contribute to closing the gap between population growth and productivity."

III. The Internationally-minded Entrepreneur

Characteristics: A liberal of patrician origin, heads a large concern with multi-national connections. He is socially at the top and is well-known and respected. He has held important positions in government and has travelled to many parts of the world representing his country. He is somewhat religious, and in his arguments for birth control, "planning" is emphasized. He is also concerned with population "quality."

Opinion: "Family planning must be incorporated into our life and habits. It must not emphasize "control" but "planning." Family planning programs are urgently needed, especially among the poorer sectors of our

society. The man who is unable to maintain his family and provide food for his children ought to be punished by law. We must force men to be responsible for their own acts. It is the quality of our population which will help solve our problems. Numbers alone are not helping us now nor will they help us in the future!"

IV. The Foreign-trained Bureaucrat

Characteristics: A conservative of upper class origin, educated in a U.S. college. He is somewhat religious, belongs to the best clubs, and his position as a government economist is politically important.

Opinion: "Our population is young. Over half of our people are below 15 years of age. This makes it impossible to raise productivity to close the gap with runaway population growth. Family planning is needed but it should be restricted to families that have more than two children."

V. The Non-religious Centrist Student

Characteristics: Middle class, young, studies economics. He is ambitious and aspires to a political career, and to active involvement in government.

Opinion: "Many underdeveloped countries, especially those of Latin America, are also Catholic. Church opposition to birth control contributes to increasing poverty levels among the lower classes. It is the poor who always abide by Church doctrine and it is the poor who most need contraceptives. This country is very poor and more population only makes it poorer."

VI. The Non-committed, Middle of the Road Politician

Characteristics: Middle-class origin, now in a politically unstable but important position, he is a nationalist at heart. He is politically at the center and somewhat religious. His support of birth control, like his argument, is not unqualified.

Opinion: "Family planning is good, but within certain limitations. I do not consider the pill the solution to everything. The important point is that each family should be able to make their own decisions with respect to the number of children they want. In this country, the rapid population increase is hindering our potential

for development but, on the other hand, our youth with good training and education is our best resource. We need a formula that will give us the best solution to all these problems."

VII. The Concerned Professional

Characteristics: European education, upper class, agricultural and industrial wealth, a liberal professional, he is politically at the center and somewhat religious. He sees birth control as a welfare measure for those who already have many children.

Opinion: "A birth control program should be selective, not general. It should concentrate its efforts among those who already have a large number of children and who cannot give them adequate food or education. Rural families face a particularly difficult situation: income is low, nutrition deficient and education not available. The head of household often must carry a weight he is unable to bear."

VIII. The Moralistic Anti-hedonist Devout

Characteristics: Very religious, right of political spectrum. Of rural origin, he has not had foreign exposure. He is somewhat older than the average here (which is 40-45 years). (With this type the opposition to birth control begins, growing stronger as it moves closer to type XIII).

Opinion: "Birth control is not only unnecessary but harmful. It violates the principles of nature and goes against the Catholic Christian code of this nation. Birth control, in addition to endangering the health of the woman, encourages immoral behavior, especially among the young."

IX. The Rightwing Militarist

Characteristics: Rightwing official, believes that numbers equal power. He uses nationalist and partly religious arguments to back his position.

Opinion: "We need more citizens to defend our sovereignty, increase our national power and preserve our integrity. Birth control has no place here. It is sinful since it attempts to kill human beings in the womb. This so called 'humanitarian' labor must be stopped."

X. The Pro-natalist Nationalist

Characteristics: Press, radio and television figure. He has spoken on the subject of population, equates population with development. Appeals to constitutional law and basic rights to back his position.

Opinion: "Our country has a potential to have ten million people. Population must increase simultaneously with a betterment of health and work conditions. I am opposed to birth control. Birth control programs violate our constitution which exhorts the right to motherhood of Honduran women and provides a stimulus for large families. Birth control violates our moral norms and goes against our penal code. Our statistics denounce the smallness of our population while our large territory remains uninhabited. People are the most valuable element in a nation's development."

XI. The Anti-Malthusian Intellectual

Characteristics: French educated, leans towards the left and is an atheist. He is devoted to the arts and to reading. A mathematician by training, he enjoys philosophy and intellectual discussion. He has strong anti-United States feelings and resents U.S. involvement in the political and economic life of Latin America.

Opinion: "One of the development parameters in our favor is the absence of a population problem. For the capitalists it is easier to give the pill than to invest intelligently, for example, in the improvement of human resources. They prefer outright exploitation of natural resources. Through radio and television the U.S. bombards us with propaganda that explains the alienation felt by our urban sectors. Neo-Malthusianism is a U.S. device to maintain the status quo in Latin America. A situation now favorable to the U.S. will no longer be so once Latin America triples its present population. The increase will end the exploitation of natural resources while increasing the internal demand of goods. This, of course, is not something they [the U.S.] can expect to favor."

XII. The Marxist Activist Student

Characteristics: Middle class background, studies medicine. He is fully involved in leftist politics.

Opinion: "Birth control is another of the many Yankee penetrations into our country. Let us live how we want and worry about the problems in your own country, not ours. We want to be independent, politically as well as economically. Do not make more Vietnams in Latin America. To the revolution, always!"

XIII. The Leftwing Politician

Characteristics: Little education, lower class background. He has fought his way up but is frustrated under a rightwing government. Argument is structured around a deeply felt class conflict.

Opinion: "The population problem is not the specter of hunger looming over our country. What we need is a radical change in the economic structure of the country instead of giving out birth control devices. Birth control reflects the desperate attitude of the dominant classes in the United States trying to avoid a revolutionary outbreak in Latin America. Birth control is an attempt against our development and the population problem is a fictitious one. In Latin America the lack of development is due only to the presence of U.S. imperialism. Their penetration is evident even in our school system where norms whose purpose is to enslave us are being implemented. Progressive educational views are suppressed in order to turn the real orientation of the popular masses away from their goal of liberation from imperialist domination. In every respect imperialist policies run contrary to our progress and development."

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CONCERNED DEMOGRAPHERS IN TORONTO

What ever happened to that Concerned Demography group? That is the question being asked whenever demographers meet. Although the late appearance of Concerned Demography this year may have given the appearance of an early demise of the fledgling activists, the movement is still alive. At the coming PAA meetings in Toronto there will be two lively sessions sponsored by Concerned Demographers.

Most important will be the Concerned Demographers Business Meeting on Wednesday evening, April 12, 1972. The main focus of discussion will be the publication of the Concerned Demography Quarterly for 1972-73. In light of the failures of the publication this year, should an alternative format be designed? Instead of having four different issue editors at four different locations, should we have a single editor for all four issues? What should be our link with the PAA? Should we maintain our present independent status or consider applying to the PAA to have Concerned Demography become the American Sociologist of the PAA?

Another set of issues relevant to the continued existence of the Concerned Demographers caucus within the PAA should also be discussed. Are we a group simply "concerned" with the profession of demography and broader social issues, or is there a particular political viewpoint which is widely shared? With the increasing politization of population issues, it is impossible to avoid being thought of as just another activist group promoting ZPG. Since this is probably not the case (at least as evidenced by comments of previous meetings), what can or should be done to clarify the obvious confusion about the intent of a Concerned Demographers' caucus? The issue of democratization of our group will undoubtedly be a perennial one which needs to be faced honestly. Do we need by-laws and elections to avoid continued dominance of the Wisconsin group? This meeting will only be successful if we have a large turnout for this meeting. There are no age, sex, racial, or status distinctions in the Concerned Demographers' Business Meeting. So take an early flight to Toronto and give up an evening on the town to attend this most important meeting.

On Thursday evening (8:30-10:00 p.m.), a regular session on the PAA program, "Critical Issues in Demography," will be sponsored by Concerned Demographers. This program was originally set up by Frank Lorimer, the youngest concerned demographer. Frank will be unable to attend the PAA meetings this year because of a recent illness, but his spirit will be with us and insure a lively session. The program for this session will be:

CRITICAL ISSUES IN DEMOGRAPHY

- (a) Life Values Appropriate to Fertility at or below the Replacement Level.
--Janet Salaff, University of Toronto
- (b) Relations Between Social Structure and Demographic Transition.
--Harry M. Raulet, Michigan State University
- (c) The Ethics of Population Distribution.
--Robert Murray, Howard University

Demographers and other students of population phenomena often seek to couch their findings in a theoretical framework that will help to interpret their results and guide future research efforts. For many in the population studies field human ecology has served this purpose as the leading theoretical umbrella.

It is the thesis of this paper that human ecology and Marxism share a similar approach to the study of society, and that both theoretical orientations would be the richer if scholars of each discipline examined the similarities and differences between them. Almost alone among the approaches to sociological theory, human ecology and Marxism provide a frame of reference that focuses upon macro-level phenomena. Both emphasize the importance of general social forces rather than the unique attributes of individuals as fundamental to the understanding of society. However, human ecology, along with most of American social science, has ignored the contribution of Marx. Indeed, it would be an interesting sociology of knowledge question to ask why the intellectual development of human ecology is almost devoid of any reference to Marx. However, the purpose of this paper will only be to compare the basic foundations and perspectives of human ecology and Marxism.

Although the theoretical focus of human ecology has broadened substantially during the last fifty years, the general perspective can be traced back to the Chicago school led by Park and Burgess in the 1920's. The earliest academic origins draw quite explicitly upon the theories of plant and animal ecology.

Among the many ideas of the early ecologists, the notions of competition and interdependence were particularly important. In every community, individuals and institutions compete for resources and accessibility to resources. Although this concept was explicitly borrowed from plant ecology, it is closely related to the notion of competition

in classical laissez faire economics. However, competition does not lead to chaos, because of the fundamental interdependence of all parts of the human community. This concept was often expressed as the "web of life." The idea of interdependence is an intellectual cousin of the contemporary functional notion of the social system.

The early ecologists saw the interaction of these fundamental processes, competition and interdependence, resulting in human relationships that formed the biotic or sub-social level of society. This level of society was seen as independent of the conscious planning of men, particularly the influence of culture and values.

The early ecological thought at the Chicago school stimulated a rich tradition of empirical research. Urban spatial patterns were perhaps the focal concern, but race relations, the influence of the metropolis, and many other topics were studied from the ecological point of view. Out of the many rich concepts that the early ecologists developed to describe and analyze social reality, the notion of dominance is rather important to our later comparison with the Marxian perspective.

Dominance is a characteristic of a group, and institution or a city. Dominance flows from the functional importance and economic position in a social structure. Thus, the Central Business District was dominant to the rest of the city, and the metropolis was dominant to the surrounding hinterland. These places were dominant in the sense that spatial distribution and social organization of the surrounding area was dependent upon the dominant institutions in these places.

There has been a great deal of criticism of the classical ecological theory. One group of critics has denied the universality of specific urban spatial patterns, particularly the Burgess Hypothesis of city growth. Other critics have attacked the theoretical bases of human ecology, particularly the omission of values and culture. They

STAFF BOX

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criticized ecologists for being biological determinists, and ignoring the fact that man was a social animal. While some of these critics have used cultural variables to advantage in ad hoc explanations, they did not seem to come to grips with the fundamental thesis of classical human ecology, that universal social processes largely determine spatial and social structure of human communities. Nevertheless, the obituary was often read for human ecology during the 1930's and 1940's.

During the 1950's, human ecology theorists revised the classical outlook in a number of ways. Hawley (1950) sought to deemphasize the importance of competition and spatial structure as the central focus of human ecologists. He also dismissed the distinction between conscious and nonconscious or biotic and social aspects of life. He saw the central problem for ecology as the adaptation of a human population to its environment. Hawley thought the ecological process could be best understood by investigation of community structure or social organization rather than the spatial patterns in a community. Several articles appeared in the late fifties (Duncan, 1959; Duncan and Schnore, 1959; Gibbs and Martin, 1959) that continued in Hawley's direction. Gibbs and Martin suggested that sustenance organization should be the primary focus of human ecology. Duncan saw the ecological perspective best represented by reference to the ecological complex of population, organization, environment and technology. Population includes such characteristics of a human community as its size, geographical distribution and composition. Environment includes the physical setting and resources that create problems as well as advantages for the maintenance of human life. Technology refers to the material culture or state of the arts that allows man to manipulate the environment for his own ends. Although all the ecological variables influence one another, it most often is the case that organization is the dependent variable. Organization refers to the wide range of social arrangements that allows the population to solve problems they face as a collectivity. The ecological complex is not conceived as a deterministic set of relationships about the human community, but rather as a frame of reference that is most useful in macro-sociological inquiry. It might be said that contemporary human ecology has moved away from being a theory and more towards a perspective with the recent debate focusing upon which variables ecologists can legitimately investigate.

The Marxian perspective shares many similar features with both classical and contemporary human ecology. The most basic element of a Marxian view is that of a materialistic perspective (Willhelm, 1962, characterizes human ecology as materialistic in orientation). In other words, economic factors and relationships tend to be the dominant social force in a society. Marx saw society as composed of two levels, the substructure and the superstructure. The substructure included economic factors while the superstructure referred to political, legal and ideological aspects of society. The division is quite similar to the early ecological conception of biotic and social levels of society. The economic substructure also bears a close resemblance to the contemporary concept of sustenance organization. It is important to note that Marx was not a pure economic determinist as many of his critics maintain. He believed economic forces will exercise dominant influence in the long run, but there may be reciprocal relationships in the short run among the various spheres of society. In his analysis of the events of his day, Marx always treated these relationships empirically, and often traced the influence of political events upon the economic.

For our purposes here the most important aspect of Marx's theory is his conception of the forces of production and relations of production. Although Marx is sometimes vague, it seems he considered both as aspects of the economic realm or the substructure. The forces of production include technology, producers or workers and "work relations." Work relations are the mode of interaction of man with nature and with one another. An important part of work relations would probably be the spatial structure of work patterns. Marx seemed to consider these forces of production as causally prior to relations of production. The relations of production constitute the formal-legal relations that govern access to and control over the production process and are referred to as the property relations.

Over the course of history the forces of production change, especially technology. In contemporary analysis, this is often seen as the increasing productivity of human labor. These changes auger for changes in the realm of property relations and political power. In Marxian language, the property relations are no longer compatible with the uninterrupted growth of the productive forces.

In order to relate these theoretical propositions with social reality, let us consider an example. In W. F. Cottrell's article (1951), "Death by Dieselization," he studies a small community which is confronted with a radical change in its basic economic institution and traces the effects throughout the social structure. Historically, the social structure of railroad communities is a product of long-continued processes of adaption to the technology of steam. The occupational structure, the stratification of power and prestige as well as the more informal aspects of social life were largely determined by the role of the railroad industry in the community. With a change in technology of the industry, the shift to diesels, the entire community became obsolete in terms of servicing the railroads. The implications of this for the social fabric of the community were striking. Not only were jobs lost by railroad workers, but the impact on local merchants and churches was also felt. The entire community became embittered against the industry decisions made upon the basis of profit and made a number of almost socialistic demands upon the railroad industry and government. It suffices to say that the technological bases, or forces of production as Marx called them, are quite crucial in determining social structure and social change.

Marx was primarily interested in explaining these processes and relationships on a societal level. He did not think that the property relations or social organization would be changed in a slow evolutionary manner. The main obstacle to a societal transformation would be that a certain segment of the society would be benefiting from the existing property relations, and their position would be threatened if there was a change in the structure. Such groups may be the landlords in a society where the property relations are feudal or the owners of industry in a society where the property relations are capitalistic.

With this perspective, Marx saw class conflict as the primary mechanism in the transformation of property relations or social organization. Class conflict is a political struggle between those who are not benefiting from the existing social structure with those who are benefiting from the existing structure and seek to perpetuate it.

Class conflict itself was not necessarily an automatic development when the forces of Production and the relations of production were incompatible. First the members of a class must understand their common interest in the existing social structure and then

become a political force that attempts to alter the existing relations of production. The process whereby a class becomes aware of its position may be a result of their common everyday experiences or it may come through the work of intellectuals who become political activists. It is not necessary to psychologize about class consciousness to develop Marx's theory.

Although class consciousness is usually measured as some sort of internal cognitive state in opinion polls, it could also be conceptualized as a structural characteristic of a group. In this way, class consciousness could be measured as the propensity of interest group formation depending upon the knowledge available to the group.

It should be noted that the question of whether social change is violent or not is immaterial to the crux of Marx's thesis. Nor did Marx maintain a single evolutionary path need apply to all societies. However, he did think that general processes were at work.

The similarities and parallels between human ecology and Marxism are numerous. The early ecologists' emphasis upon competition for resources is similar to the materialism of Marxian theory. The early ecological distinction between the biotic and social levels of society is similar in form to the Marxian concepts of substructure and superstructure. The Marxian emphasis upon technology as one of the forces of production which contributes to changes in the social structure is similar to the technological and social organization aspects of the ecological complex espoused by Duncan.

However, there are differences as well. An important area is the explanation of change. Ecology seems to perceive social change as a process of evolutionary adaptation of an entire human collectivity to its environment. If a problem arises that affects the functioning of a community or society, then the social organization will adapt to meet these changes. Whether or not conflict will arise is left as an open question. In varying circumstances, the societal adaptation may be a change in the birth rate, a new technological innovation, or a change in the occupational structure. This change is seen as an adaptation of the entire collectivity, although not every member is involved.

Marx sees the end product, a change in social organization, in a similar light, but views the process not as one of adaptation by the aggregate, but one of internal struggle between interest groups that stand to benefit or lose from the

changes. For industrial capitalist societies, Marx saw only two interest groups, the owners and the workers. While this may be an oversimplification on some issues, it does point to mechanisms of social change that human ecology does not. The ecological concept of dominance cannot be stretched to represent the same reasoning. Dominance was based on the functional or economic importance of an institution to the community, particularly those institutions that control the flow of sustenance. However, power can be exercised by institutions in areas unrelated to its functional importance or even after its functional importance has disappeared. It is also the case that the private benefit of a dominant institution may not represent the interests of the entire human community. However, the concept of dominance was originally used in explaining spatial structure, and not to explain class and power relationships. Marx goes beyond ecological reasoning by introducing the intervening variables of interest group formation and conflict to deal with the process of social change.

Let us look at a few elementary examples to see how some of these Marxian notions might be useful in looking at problems from the ecological perspective.

William Form's (1954) analysis of the importance of social structure in land use patterns is an excellent case. He suggests that the classical ecological conception of urban spatial structure being determined by free competition of individuals and institutions is an over-simplification. He noted that certain organizations such as real estate groups and governmental zoning agencies have an unusually strong influence due to their unique place in the social structure quite unrelated to their functional importance.

Although Form does not explicitly argue from a Marxian perspective, he criticizes the classical human ecologists for ignoring very powerful interest groups that often dominate land use patterns. It often seems that human ecology assumes that the magic hand of the market or the "web of life" will result in the most efficient and functional organization of urban space. If the present allocation of land in American cities is the product of social forces, these forces seem rather unrelated to the needs of the people who live in the cities.

Another societal phenomenon often studied by ecologists is that of the transportation system. The solutions to the transportation problem often seem to have exacerbated it. The building of more big city expressways has

led to even worse traffic problems than before. Although airports have problems providing for the safety and movement of present airplanes, the new jumbo jets are supposed to cause even more chaos.

The problem seems to be that those who control the use of scientific technology in our society, the large corporations and government regulatory agencies, work for economic benefit of private interests rather than the public interest. I suggest that more attention to the powerful interest groups that guide the formation of transportation policies would be a useful addition to ecological analysis.

Another issue of popular interest today is environmental pollution. Otis Dudley Duncan (1961) has outlined how air pollution might be analyzed from the use of the variables in the ecological complex. He suggests that pollution arises from certain technological factors such as industrial processes and automobile exhausts. The resulting pollution causes problems for the population and the environment. This in turn stimulates organizational responses such as concerned civic groups, research organizations and government regulatory agencies. Such organizations then attempt to regulate industry in order to utilize technology in such a way as to minimize pollution. Duncan suggests that there is political interplay between private organizations and branches of the government which has not been adequately investigated. The resolution of this problem, Duncan says, is an open question, although he suggests that the alternative to a harmonious solution might be a convulsion of the eco-system. I think that Marx's explicit focus upon political conflict as a usual consequence of technological change is helpful in the analysis of this topic.

While these examples have mainly dealt with the utility of incorporating Marxian ideas into ecological theory, I also recognize that human ecology could contribute substantially to Marxian theory.

To summarize, contemporary human ecology sees environmental, population, and technological pressures as generating changes in the organizational nature of human society. I think that Marxism is compatible with this perspective and gives further understanding to the dynamics of social change by explicit emphasis upon interest group formation and political conflict as important elements in the process.

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--Charles Hirschman
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THE SCRIPPS FOUNDATION LIVES!

In 1922 E. W. Scripps, newspaper tycoon and prominent philanthropist, read a book on Malthus by Warren S. Thompson. Scripps was profoundly impressed by the potential magnitude of the problems associated with population growth and the general lack of information on this subject. He contacted Thompson immediately concerning the possibility of organizing a full-time research foundation for the study of population problems, and at the same time he also contacted Miami University about providing a home for the foundation.

Thus, in 1922, Thompson began at Miami University the work of the Scripps Foundation for Research in Population Problems. It was a pioneering event, for this was the first foundation of its kind in the world. In 1923, Thompson recruited Pascal K. Whelpton to work with him, and they set up shop in the old reading room of what is now the Alumni Library at Miami University.

Thompson was director of Scripps until his retirement in 1953, and Whelpton then guided the efforts of Scripps until his death in April of 1964. Scholars who at one time or another in the past have been part of Scripps include Donald Bogue, Norman Ryder, Arthur Campbell, John Patterson, and Richard Tomasson.

Throughout its history, the foundation has compiled an impressive record. While the

number of people active in the work of the foundation rarely exceeded three or four at any time, in five decades the foundation has produced over 250 articles and over 50 books and monographs covering a wide range of subjects related to population. Research on the U.S. has generally predominated, but there has also been a traditional concern with international perspectives, especially in the work of Thompson and Cottrell.

The research interests of the foundation have remained relatively consistent over its history, although the emphasis has shifted from time to time as a result of changing interests of the staff. These interests can be roughly categorized as follows:

- 1) problems arising from the strain of population on resources,
- 2) the structure and development of the U.S. population,
- 3) urbanization,
- 4) demographic methods,
- 5) causes and consequences of population aging, and
- 6) fertility and family planning.

Apart from its scholarly achievements, the Scripps Foundation is also well known for its library holdings. Beginning with European censuses in the early 1700's, the 8,000-volume library has a fine collection of historical demographic data, and it

houses up-to-date material on world and U.S. population, urbanization, and gerontology.

The operations of the foundation are financed by a combination of endowment, university and grant support. Major research operations are financed by grants. For example, since 1966 the foundation has received over \$250,000 in grants from government sources. Endowment support provides for upkeep of the library and day-to-day administrative operations. Miami University provides support for the staff for small-scale research and during periods of study-development prior to outside funding.

At the time of P. K. Whelpton's death it was widely rumored that the Scripps Foundation would die with him, and for a time it appeared that it might. But the inertia provided by the library and facilities, the administrative staff, the endowment, and support from Miami University carried the Foundation through a period of reorganization from 1964 until 1966, when Fred Cottrell was named Director.

Under Whelpton, the Scripps Foundation was concerned almost exclusively with fertility. In the latter 1960's, however, it was apparent that fertility research was reaching a level of sophistication that put a small, out-of-the-way organization such as Scripps at a disadvantage in competition for research funds with larger, urban research centers with survey capabilities. In addition, there was simply less interest in fertility as the sole focus of Scripps Foundation research.

In concept, it seemed desirable to keep the Foundation small, as it had been in the past, and to carefully select problems for study that would allow Scripps to continue to make a limited but high-quality contri-

bution. The trick was to find areas of research that fit the interests of the staff and which could be financed through the Foundation's own resources or which could compete successfully with other organizations for outside research funds. This effort has been moderately successful. Since 1965, staff members of the Scripps Foundation have authored two books, four monographs, six research reports, and thirteen articles for major journals.

Recent Scripps Foundation research efforts have centered around (1) the relationships among technology, population, and the economy, (2) the demographic analysis of local areas, (3) the methodology of population estimates and projections, (4) the causes and consequences of population aging, and (5) adoption as a demographic variable. In the near future the Scripps Foundation's research interests will probably follow these same lines, with heavy emphasis on aging and adoption.

By modern standards, the Scripps Foundation for Research in Population Problems is certainly a small operation. It has one secretary, one statistician, three researchers, a research library, several calculators, and 2,000 square feet of office space. There is no training program, no massive grant, no administrative "infrastructure" -- none of the trappings normally associated with a busy research center. E. W. Scripps created the Scripps Foundation with the idea of bringing in a small number of capable people and leaving them alone to do important work and to take the time to do it well, and this concept still prevails.

--Robert C. Atchley, Assistant Director
Scripps Foundation for Research in
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FUNDING OF DEMOGRAPHIC RESEARCH -- SOME QUESTIONS

The present abundance of certain types of research projects in the field of demography -- especially family planning research -- suggests that we should examine the relationship between the kinds of research done and the sources of funding. In what ways, if any, do the kinds of funding available influence the kinds of research that is done? What are the inter-relationships between funding organizations, government organizations, and programs of research? Why is there such an overwhelming emphasis in demographic research on fertility control and family planning? Why are large corporate foundations so eager to sponsor

demographic research in fertility control and family planning?

Perhaps the first thing one needs to do when raising questions such as these is to define demographic research. We do not intend to focus only on fertility research because demography encompasses more than that. Demographic research involves the study of population size, composition, and distribution, and the changes occurring therein.

Some of the people attending these meetings already are aware of the questions addressed by this paper, but don't consider them their

concern, partly because of their own vested interest. Who among us, for example, has not heard some prominent researchers say: "How can we anticipate information from the coming census so we may think of gimmicks to get grants?" or "How can we construct our approach so we will be assured of getting funds from some private foundation or public agency?"

This kind of concern has led to gimmickry that leaves gaping holes in scientific knowledge and overwhelming research on insignificant questions that benefit vested interests, such as the housing and construction industries, individual researchers, and agencies and institutions subsisting on grants.

Since our major questions concern family planning research, let us first consider what we feel to be a well-reasoned structural approach to the vital question of population growth.

Leo F. Schnore suggests that historically two general classes of variables seem to have been instrumental in bringing down the Western death rate: (1) critical technological innovations and (2) equally important certain organizational changes. Historically there was a long and gradual development of expanded areas of interdependence establishing exchange relations and permitting an area of shortages to obtain surpluses from other territories. Transportation improvements were vital in this process. Effective means of storage permitted transportation of surpluses through time. "The annihilation of space destroyed man's utter dependence upon the here and now." Schnore suggests that where transportation once played the critical role, medical science now has primacy. The fall of mortality in presently underdeveloped areas (which Berelson, in the summary chapter of Family Planning Programs, states is the real reason for the excessive population growth rates at present) has been a response to the introduction of nonindigenous technological elements. Schnore states that "the different rates of change seen in the usual sequence -- a mortality decline followed by falling fertility -- suggest that the successful introduction of a technological element will depend primarily upon organizational factors." Wherever an element can be introduced without seriously affecting the established routines that constitute the structure of daily activities within a population, it will have an immediate impact upon mortality without affecting fertility. "Any modern nation that employs the gadgetry of modern medicine as an instrument of policy

in backward areas -- thereby inducing rapid population growth -- must simultaneously give attention to the technology of production."

The 'ancien regime' cannot be expected voluntarily to accept the necessity of investing enormous sums in areas of investment that promise returns for their erstwhile inferiors in the distant future. Accustomed to quick and substantial returns on their investments the members of the hereditary elite cannot be expected to embrace a broad program built around the hope of small and modest gains -- for someone else. The payoff is a long way in the future, and the major benefits of schools and roads and hospitals will go to an ignorant and servile public for whom the elite tends to have only disdain. If these needed facilities are to be built, it appears that a radical break with tradition may be required, with the initiative in the hands of a revolutionary and strongly nationalistic government that is not subservient to the dictates of the traditional oligarchy. From our policy makers' standpoint, however, such changes seem to be deplored where they do occur, and we accept them with something less than enthusiasm. (p. 186)

Schnore suggests some implications of both the Indian and Chinese birth-control programs: "The governments of underdeveloped areas that have launched such programs seem to have fallen into the 'technological fallacy' which has long marked Western thinking in this area. They have adopted, in other words, a kind of blind faith in the gadgetry of contraception without fully appreciating the possibility that crucial organizational changes may be required before birth control techniques can have any really significant impact."

The history of fertility decline among French peasants and Irish peasants suggests that "the lack of contraceptive gadgets is no barrier to cutting fertility when the social situation otherwise encourages reduction of the birth rate," Schnore states. "More important, it is necessary to realize that widespread availability of chemical and mechanical means of preventing conception is no guarantee that fertility will automatically fall." Reproduction occurs in an organizational setting of some complexity, different cultural practices and varying structural arrangements impinge at many points. Is it possible, however, that the issue of family planning is being transformed from a real

issue to a smoke screen tactic to confuse the public and to detract from a focus on the basic problems of poverty, low economic growth rates, air and water pollution? Rather than confront the social structural causes of these problems, population growth problems in the framework of family planning seem to be used increasingly as neat escape valves.

Let us examine some of the famous "fertility studies" done in the United States and their respective funding agencies. Family Growth in Metropolitan America, published in 1955 and authored by Westoff, Potter, Sagi and Mishler, was funded by the Milbank Memorial Fund. A glance at their financial report indicates that most of the funds with which the Fund operates come from investments in some of the largest corporate interests in America (i.e., AT&T, Standard Oil, Shell Oil, DuPont, etc.). Another of the fertility studies, Family Planning, Sterility and Population Growth compiled by Freedman, Whelpton and Campbell in 1959, was funded by the Rockefeller Foundation with additional grants from the Population Council and the Scripps Foundation. John D. Rockefeller, III is founder and Chairman of the Board of Trustees for the Population Council. He is also presently advisor to Nixon on population problems. The Rockefeller Foundation also has the dubious honor of being one of the largest financial supporters of family planning programs abroad as well as one of the largest foreign investors. The study Fertility and Family Planning in the United States, done by Whelpton, Campbell and Patterson in 1960, was also sponsored by the Rockefeller Foundation with additional funds coming from the Population Council. Finally, The Third Child, published in 1963 and authored by Westoff, Potter and Sagi, was funded by The Milbank Memorial Fund, by the Carnegie Foundation, and by the Population Council.

Additional evidence of the preoccupation with family planning and fertility research in the United States can be obtained from observing the research articles found in the journal Demography since its inception. The primary concern of this journal has been family planning and fertility. Among the 282 articles, only twenty-one dealt with population distribution, urbanization or human ecology (twelve of these articles were published in the first two volumes, 1964-65). It is curious that as these population problems have increased in intensity, they have received less and less attention.

In a recent book, Family Planning Programs, edited by Bernard Berelson, it is apparent from the twenty-six articles that the authors

feel that family planning programs will lead to lower growth rates and to a better life. This assumes that the essential factor in poverty is the number of children a family has.

Berelson's book is a collection of articles on family planning and is aimed at a general audience. It originated from a series of talks in the Forum series of the Voice of America. It presents an optimistic view of foundation and government family planning programs both in the United States and in Third World countries. However, what bits of information we have about family planning programs makes us skeptical of their success in isolation from consideration of the economic and political structure of particular countries. Berelson states in his summary that "countries that favor family planning have at least started on the road to modernization: more popular education, higher per capita incomes, lowered mortality rates. Thus, family planning programs are making their major contribution to those countries that are already moving into the modern world." Later he suggests that "the idea that broad and pervasive social changes will be involved if family planning is to be widely accepted and birth rates reduced substantially seems to be true."

Consideration is nowhere given to whose benefit -- the people or corporate interests, both national and international -- family planning is urged upon populations without consideration for other aspects of their (the peoples') lives and life styles. Foundations and governmental agencies are eager to fund fertility and family planning programs but they seem equally -- and understandably -- eager to ignore consideration of structural variables.

There is no lack of evidence of the obsession with family planning as a solution to all social ills. Demography, Vol. 5, No. 2, 1963, is a discussion of problems of fertility control and family planning in the world. There is no instance in any of these articles dealing with the relationships between the distribution of resources and fertility or the possible relationships between the draining off of resources by the United States from Third World countries, the very slow progress of these countries in industrial development and decreased population growth. Has consideration anywhere in demographic research been given to what might happen if the billions of dollars spent for defense were available

for investment in human beings in terms of technical assistance and economic aid to developing nations as well as to the poor people in the so-called developed nations? Has consideration, empirical or otherwise, been given by demographers and social scientists generally to the effects of national and international corporations draining of natural and human resources from underdeveloped areas both in the U.S. and in the Third World countries and the relationships this may have to the economic development of these areas and perhaps consequently what effect this may have on population problems of these areas?

A glance through the summary of AID dollar obligations for Population Studies and Family Planning Programs, 1965-68 (Demography, Vol. No. 2, 1968) indicates a great concern with fertility control but very little, if any, concern for other aspects of population studies, such as changing composition of various populations, migration patterns, the impact of urbanization in various countries or concerns with differential mortality.

The questionable success of concentrated family planning programs in the United States and in other countries may indicate that we are asking the wrong questions or at least that we may not be asking enough questions about the "hows" of population control problems and about demographic processes generally. One of the reasons suggested for the focus on family planning is that it costs relatively little money and these programs really demand no change in social structural relationships either in the United States or abroad.

Some see the foundations which have been set up by large corporations as a policy of enlightened self-interest. Others, such as F. Lundberg in his book The Rich and the Super-Rich, view them somewhat differently. He states, "The company-sponsored foundations are tax exempt, nonprofit legal entities . . . with trustee boards consisting wholly or principally of corporate officers and directors. . . . Their programs are likely to be confined to communities in which they have offices, and to center upon philanthropic agencies that benefit the corporation, its employees, its stockholders, or its business relationships." Later he states, "Foundations in their Protean potentiality have also been found to provide good 'cover' for the activities of the CIA whose sensitive fingers are in many pies, long ears at many doors."

Dr. A. J. Coale said in a seminar on Human Fertility and Population Problems sponsored by the American Academy of Arts and Sciences

(with support from the Ford Foundation), "The quicker excessive fertility could be reduced the more effectively could a country modernize itself and raise living standards." However, in the course of the ensuing discussion, Dr. Coale admitted that the short-run prospects were worse in a country with a plantation economy subject to periods of stagnation than in a country consciously heading for industrialization.

A final note of evidence of the obsession we seem to have with family planning is reported in the Population Chronicle, Aug. 6 issue. At the President's direction, HEW will set up separate family planning services and ask OEO to strengthen its innovative programs and pilot projects in delivery of family planning to the needy. HEW secretary and OEO are to co-ordinate all domestic family planning activities.

Just as foundation funding leads to serious imbalances in demographic research, government grants, the public sector counterpart of foundation funding, are responsible for the field. The funding of individual projects by the government leads to problems quite similar to those raised by foundation grants. That is, a foreign policy designed to bolster economic imperialism leads not only to overt counterinsurgency research such as Project Camelot, but also to more subtle action-oriented projects such as the family planning programs of South Korea and Taiwan -- programs which are designed to stabilize relationships and muzzle discontent in extremely antidemocratic nations. However, the government plays its most crucial role in what we have defined as demographic research not by the funding of individual projects but rather as the country's largest data collection agency. Quick perusal of the field's major journal, Demography, makes it obvious that governmental data collection sources are essential to the research being done. The Census, Current Population Survey, Bureau of Labor Statistics, and National Health Information Survey are in good part responsible for population studies' position at the forefront of the quantitative revolution in the social sciences. However, the serious penalty which must be paid is that the availability of data, not the importance of the question, determines what research shall be done. The problem is that as long as government bureaucrats, who possess such technical competence that they are susceptible only to pressure from the top, can control the types of data collected, we will have huge gaps in our knowledge --

gaps which help secure the position of those in power. A distinguished member of the profession once admitted to a group, including the present authors, that the lack of income data on the censuses prior to 1950 was a conscious effort by the government to suppress information on the plight of its people -- especially black Americans. We would submit that this is still the case in the collection, compilation and analysis of much of the data. For instance, the census has asked questions of varied complexity and relevancy -- from the physical condition of one's house to whether or not one shares bathing facilities -- but they have never attempted to determine an individual's net worth. Surely this information would be superior for many important research questions. Likewise, much of the data collected is compiled in a fashion which protects the wealthy. Twenty-five thousand dollars annual income was the highest income cut-off point for data tabulated from the 1960 Census. This hardly allows for any analysis of the wealthy. On the other hand, several special reports were done on the poor and on nonwhites, groups which the government has an interest in controlling. These types of actions, whether committed consciously or unconsciously, bring much research dangerously close to being a government tool.

Today we have attempted to raise a few provocative questions in some of your minds and to remind others of you again of the awesome interweaving of private and public organizations and the possible effects this may have on the accumulation of "knowledge" about demographic processes. Robert S. Lynd, in Knowledge for What, suggests the provocative question about social science research in general. "Is the difficulty, as the social sciences maintain, that they do not have 'enough data'? Or do we have data on the wrong problems?" He later answers this query by stating that "the social sciences are parts of culture and it so happens they are carried forward predominantly by college and university professors, who in turn are hired by businessmen trustees." This problem must be resolved, even at the expense of data quality, if we are to have a social science which truly serves all the people.

--Norma Nager
Paul Schollaert
University of Wisconsin

ALICE'S ADVENTURES IN DEMOGRAPHYLAND -- TWO YEARS LATER

The Cat only grinned when it saw Alice. It looked good-natured, she thought; still it had very long claws and a great many teeth, so she felt it ought to be treated with respect.

"Cheshire-Puss," she began, rather timidly, as she did not at all know whether it would like the name
"Would you tell me, please, which way I ought to go from here?"

"That depends a good deal on where you want to get to," said the cat.

"I don't much care where --" said Alice.

"Then it doesn't matter which way you go," said the cat.

"-- so long as I get somewhere," Alice added as an explanation.

"Oh you're sure to do that," said the cat, "if you only walk long enough."

. . . "and I wish you wouldn't keep appearing and vanishing so suddenly: you make one quite giddy."

"All right," said the cat; and this time it vanished quite slowly, beginning with the end of the tail, and ending with the grin, which remained some time after the rest of it had gone.

Prospects looked bright for the Women's Caucus last April after two of the three resolutions formulated two years ago and presented at the business meeting were passed by the membership of the PAA. With respect to the resolution concerning the under-representation of women and minority group members in the upper echelons of population-related fields, it took PAA President Amos Hawley only six months to appoint the Study Committee on Discrimination Against Women and Minority Groups, chaired by Jeanne C. Biggar and members Margaret Bright, Abbott Ferris, Mary Grace Kovar, Harriet Presse and Leroy Stone. However, no financial provisions were made for funding the activities of the committee, and the membership of the committee has been allowed to shrink by one-third without replacement. In spite of these odds, a research proposal and some preliminary findings will be presented at this year's meeting by Ms. Biggar. We are eagerly waiting to see what positive action has been taken by the PAA with respect to the other resolution passed on removing all legal and financial constraints to fertility control.

--Martha Little
University of Wisconsin

(With apologies and thanks to Lewis Carroll's Alice's Adventures in Wonderland and Ruth Dixon's

POPULATION CRISIS SERIOUS BUT BEWARE OF ALARMISTS

Population growth is clearly among the most serious problems facing mankind. The facts are startling in their certainty. Under the most optimistic of assumptions, we must reconcile ourselves to a world in which there will be well over twice the current number of inhabitants--and this within most of our lifetimes. The crisis we face is whether, beyond this doubling, we can halt population growth in time to prevent our numbers from rendering human existence either intolerable or impossible.

Reasoned concern for the problem is not aided by alarmist cries of imminent doom (as, for example, the recent MIT study for the Club of Rome, which apparently was based on rather simplistic assumptions about technological possibilities.) On the other hand, it is obvious that present, or even substantially reduced, growth rates cannot continue into the very distant future without the numbers of human beings exceeding the support capacity of the earth under any technological regime.

No consideration of this problem can proceed without recognizing the drastic differences between the industrialized and developing countries in this matter. The obvious difference in levels of growth is most important, but is often confused in rhetoric over zero population growth (ZPG).

While nothing is inevitable, there is good reason to expect that fertility in developed countries will hover around the level required for ZPG. This achievement will be delayed because of the large numbers of young women resulting from the postwar "baby boom," but we can reasonably expect the U.S. population to cease growing shortly after the turn of the century at a level 25 percent to 50 percent higher than our present population.

Some role in this may well be played by increasing nonfamilial opportunities for women, but we may anticipate lower fertility even independent of further developments along that line. We have considerable evidence that much of the recent excess of fertility over that required for ZPG has been "unwanted" fertility--the result of contraceptive failure. In a study with C. F. Westoff (executive director of the Commission on Population Growth and the American Future), we found that one-fifth of all births in the U.S. between 1960 and 1965 were reported by the mothers to have been the result of unwanted pregnancies. We concluded that the elimination of unwanted fertility would bring average family size very close

to levels consistent with ZPG.

There is occurring in the U.S. nothing short of a revolution in contraceptive practices. In the 1970 National Fertility Study we are finding dramatic shifts to use of the pill, intrauterine devices (IUD), and contraceptive sterilization, at the same time that access to legal abortion is increasing. Even if the desired size of family were to remain constant, the decrease in contraceptive failures resulting from these trends should have a profound impact on fertility levels. However, evidence suggests also that improved fertility control results not only in a reduction in accidental fertility, but also in a decline in the number of births "wanted."

Consequently, I see alarmist demands for ZPG in developed countries such as the U.S. as a tragically misplaced emphasis in the struggle against world population growth. The availability to all women of the best means of fertility control is clearly desirable in human terms and should be vigorously promoted on that basis. But it is ill advised to link the extension of fertility control too closely to our environmental and urban problems.

Increases in pollution and various social problems have far exceeded our modest population growth rate. Of course, the processes are not independent, but population growth is simply not the major cause of these other problems and they must be attacked directly rather than indirectly through population growth. To focus on population growth in the battle against pollution and other urban ills is a diversion from the more painful costs of a realignment of our priorities.

But as the Population Commission has recently pointed out, there are no compelling reasons why we should continue to grow and, other things being equal, the sooner we achieve ZPG the better. That's not to say that we should do so at any cost. The imposition of government controls on decisions about family size (if feasible) seems to me far less desirable than even an extra one hundred million citizens.

All that having been said, however, recent declines in the U.S. birth rate and expectations of ZPG for the U.S. should bring little comfort. That growth rates and their social costs are concentrated in the developing areas does not suggest that it is "their" problem. This planet is too small to permit such notions.

Long before ultimate overpopulation of the earth occurs, we have both humanitarian and self-interest reasons to care about the drastic consequences of rapid population growth for economic and social progress in

the developing nations. Many localized catastrophes with worldwide repercussions seem inevitable if rapid doubling continues for long. Perhaps some are already inevitable.

The dynamic in all of this is that death rates have fallen precipitously in the developing areas while birth rates have remained high. Dramatic declines in mortality were made possible by the transfer to developing areas of modern techniques of mortality control without substantial changes in the social fabric of these societies. Fertility control is not so easily transferred independent of social and economic changes.

Great strides are being made in the development and extension of family planning programs, and any evaluation of this effort must keep in mind the very recent origin of most programs. In a recent summary of the status of family planning programs, Bernard Berelson, the president of the Population Council, notes:

"In 1960 only three developing countries had antinatalist population policies (all on paper), only one government was offering assistance, and no international assistance organization was working on family planning. In 1970 nearly 25 countries on all three developing continents, with 67 percent of the total population of the developing world, had policies and programs; and another 15 or so, with 12 percent of the population, provided support in the absence of an explicitly formulated policy."

The complexities of design and implementation of these programs under varying economic, political and cultural circumstances make it amazing that they have worked as well as they have in so short a time. Measurable effects on birth rates have been noted for several of the countries involved though the declines are slight in terms of what is required for ZPG.

One major critique of family planning programs is that even if they could be effectively implemented so that no unwanted children were born, fertility would still be too high. Large families continue to be desired in these societies because the social and economic conditions which favor smaller families have not yet been achieved. The population crisis cannot be divorced from problems of economic development in general, not only because population growth impedes development, but because, ultimately, control of population growth may require such development.

Many feel that because of the exponential nature of the growth process, we cannot

possibly wait for the social and economic changes that might produce ZPG through the voluntary use of family planning. This position is seldom developed beyond the assertions that both the role of women and the nature of the family must be altered in these societies, and that childbearing must fall under some sort of legal regulation.

In the context of existing political and social realities, such changes would require the coercive imposition of a totalitarian world order. I am not sure whether or not those who call for early ZPG at all costs feel it is worth this cost. Perhaps such assertions are simply a form of tension release in the face of such a complex and frustrating crisis, or perhaps they are overstatements calculated to mobilize concern with the population issue. In any event, I find the implications disturbing.

We should consider carefully what costs we are willing to pay in order to achieve early ZPG. It is tragically unwise to court the loss of basic freedoms for the sake of preserving future generations from a destiny that is by no means sure. Population growth is not the sole problem threatening the survival of mankind. It is not clear we can make it with our existing world population, nor is it clear that technological and agricultural breakthroughs won't make life in the 21st century equally desirable to the earth's inhabitants, even if their number is quadruple the present world population.

All this is not to suggest we should sit back and let events unfold of their own dynamics. Such a course would invite almost certain disaster. While we should be cautious of talk of "ZPG at all costs," we must make far more than our present investment toward the halting of the population growth. I believe we have only begun to achieve the fertility reductions that are feasible through an extension of the voluntaristic approach to family planning.

While we must agree that a simple extension of current programs will not do the job, it is also perhaps erroneous to expect that developing areas will have to repeat the social and economic experience of the West before voluntary declines in fertility occur. Close historical examination of the Western experience reveals that there was no monolithic pattern of change. Fertility declined for varying reasons in different areas, with declines in rural areas often preceding those in urban areas.

Fertility declines will occur in developing areas in the context of an industrialized world and a markedly different contraceptive

technology. The pill, IUD, and sterilization, by separating contraception from coitus, require much lower motivation for fertility control than that associated with Western declines through coitus interruptus. But these methods still require high or sustained motivation and family planning programs focusing on these methods have encountered substantial problems in motivating use.

It is at this point that I think massive investments of resources stand the greatest chance of payoff. In the absence of basic social and economic changes, attempts to generate increased motivation for contraception have not been particularly successful, though it is clear from numerous studies that some motivation already exists. The task is to develop methods of fertility control that are consistent with existing motivational levels.

I have no question but that a concentrated research effort could produce methods requiring lower motivation; ultimately, methods that would shift the decision process from one requiring a sustained desire to prevent births to one

in which a couple would have to make a conscious decision for pregnancy. Such a development would reduce fertility even without changes in the desired number of children.

But there is good reason to expect feedback effects from the increased fertility control; on the one hand through a decrease in desired family size and on the other hand through its beneficial consequences for social and economic development.

In sum, the situation is not one warranting either much optimism or extreme pessimism. The encouraging thing is that we have made strides in the right direction. What is discouraging is that we are constrained by the nature of the problem from any immediate and dramatic victories, and that we are not doing enough of what is presently economically and politically feasible.

--Larry L. Bumpass
University of Wisconsin

(This was originally published as Great Decisions VIII -- Our Crowded World: What Solutions to Population Problems? in the Editorial Section of The Milwaukee Journal, Sunday, March 19, 1972.)

The publishers of Concerned Demography have decided to attack inflation at home. Subscriptions will remain at \$2.00 for individuals, be they faculty, students, bureaucrats, rich, or poor. Institutional subscriptions (libraries and the like) will rise to \$3.00. (If you have already subscribed for the coming year, it has been recorded for the regular issues.) There will never be another bargain like this again, so mail this stub today to:

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Suburban Land Conversion in the United States: An Economic and Governmental Process, by Marion Clawson. Resources for the Future, Inc. Baltimore: The Johns Hopkins Press, 1971. 406 pp. \$12.50

After the extensive publicity given to jeremiadic projections of seemingly inevitable population growth and formation of urban "behavioral sinks" in megalopolitan America, nicknamed "Boswash" or "Chipitts," one is relieved to read the results of a careful analysis of the problem of land use. Specifically, Clawson concludes that sufficient land is available for urban expansion, even within the built-up megalopolitan northeast corridor.

But this result is not what makes Suburban Land Conversion a valuable book; the strength of this book lies in its focus on the process of land use change on the urban fringe and the implications of these changes for the future spatial distribution of the population, especially in terms of its socio-economic and racial characteristics. Clawson is concerned with succession in the classical ecological sense; but his analysis is not limited to information available in decennial censuses about the characteristics of the population residing in a given area at different points in time; rather, it describes the dynamics--the forces and actors--that directly and indirectly affect the spatial distribution, growth, and stratification of population in fringe areas of metropolitan communities.

Although Clawson makes no effort to test ecological theory, his models, representing the complex interactions among owners, developers, and elected and appointed public officials as land passes through stages of development, are a distillation of considerable theoretical and empirical research.

The book is organized into three broad areas: (1) forces, processes, and actors; (2) a detailed examination of these elements in three SMSA's of the Northeastern Urban Complex (Wilmington, Delaware; Springfield, Massachusetts; and Washington, D.C.); and (3) a consideration of future suburban development with unchanging or alternative policies applied to land conversion.

It is in the first section of the book that Clawson reviews the history of urbanization in the U.S., discusses the definitional problems (central city versus suburbs, and types of land use), and sketches diverse impacts of the city on the rural countryside. At this point Clawson begins a comprehensive discussion of

decision-makers in urban expansion. The impact of the federal government, through national economic growth, tax laws, FHA, VA, highway construction, and federal employment, on growth is examined. Also, the role of states and local governments in providing public control and public direction to land converters--the developers, builders, and home buyers--is considered. Finally, Clawson summarizes the suburban land market, public services in suburban areas, and the effects of externalities on land values.

Suburban Land Conversion is a political book, moreover, not for its analysis of governmental roles in suburbanization, but for its explicit facing of the question of "who benefits." I wouldn't label it the Coleman Report of Housing, but it is in that stream of practical, policy-oriented research.

In general, Clawson concludes that the process of suburbanization has been beneficial to the U.S. by providing a lot of good housing and neighborhood development without massive errors, such as occurred in urban renewal programs. However, the conversion process has not produced adequate housing for a full half of the population and it has exacerbated the spatial stratification of the metropolitan community. Clawson argues that the costs of land development have contributed to this inequity; furthermore, the costs are an indirect result of public actions, both the affirmative actions, such as tax laws that favor speculation rather than renewal, and the nondirective and ineffectual actions that are a result of multiple and fragmented governmental units.

This spatial segregation of high from low status families, Clawson fears, will continue, so he enumerates improvements, such as planning boards with both the public and private sectors represented, new zoning laws, more research and better data, and control of the pricing of public services by the public sector. Within the land market, adequate information and tax laws are the weak links that should be corrected. And reorganization of local governmental units would eliminate the fragmented and diffuse efforts of the public sector.

But since the fundamental question of housing the poor remains, he also advocates federally sponsored initiatives such as income redistribution, urban renewal, and

programs to stimulate migration of low status families to the suburbs, and increased social integration in the suburbs.

Overall, I found this book a useful summary of numerous case studies, especially the detailed analysis of the three SMSA's, and a valuable organization of the process of land development that drew together many otherwise narrowly focused research articles. Hampering this research, however, are the twin problems of data and definitions. There is little information available about who is profiting as land values appreciate and property passes through the stages of development from farmer to home owner. Also, the concept of suburb remains one of the most ill-defined, ad hoc concepts in sociological, geographical, or popular literature. The central city-suburb dichotomy has misled previous researchers and the grain of one's analysis is crucial (Clawson is aware of this); but careful operationalization of the concept would provide an extremely useful basis for researchers to organize data in a consistent and replicable fashion. We still do not have a careful operationalization of the concept of suburbs.

--James J. Zuiches

Michigan State University

The Geographic Mobility of Labor, by John B. Lansing and Eva Mueller. Ann Arbor: Institute for Social Research, 1967. 417 pp.

Migration researchers, whether economists, sociologists, or demographers, have generally concentrated their interests in explaining migration differentials in terms of economic determinants as they affect either areal concentrations of migration activity or individual propensities to move. The economists, as exemplified by the work of Everett Lee, Simon Kuznets, or Richard Easterlin, have exhibited greater facility in the incorporation of such determinants into workable theoretical models. This seems especially true of research done at least partly under the influence of the concept of human capital. The general idea was that migration, like education, was a form of investment in human beings. This, in turn, raised new questions about the social costs and benefits of changes in the location of individuals. Lansing and Mueller's work, being one of the first major studies of migration since the "human capital" revolution in economics, differed from previous studies in several ways: (1) This was the first study of mobility in a longitudinal context which

concentrated on the labor force as a whole; (2) It differed from the Census Bureau work in that it incorporated information on motives for movement in such terms as attitudes about the community, nearness of relatives, and other purely social characteristics usually considered too "hot" for either the Census or C.P.S. Surveys;

(3) Its emphasis was on intensive analysis of the mobility of individuals with frequent resort to multivariate techniques. The data were from a two-wave national sample survey administered by the Survey Research Center at the University of Michigan. Interviews and reinterviews were spaced one year apart with special samples taken of areas defined by the government as poverty redevelopment areas. Information was obtained on:

Education; Financial Status (including availability of reserve funds); Automobile Ownership; Ties to Local Community (place of birth, presence of relatives, membership in community organizations, home ownership, children in school, wife employed); Outside Contacts (travel, relatives or friends in other communities); Vested Interests in Job or Community (job seniority, pension fund rights, collection of unemployment or welfare); and Motivational and Attitudinal variables related to the desire to move.

Migration was defined as a change in residence between federally delineated labor market areas over various time intervals. No further refinements, such as variations in the distance moved, were used except in consideration of the cost and financing of the move. Multivariate techniques were employed principally to control for the effects of age, education, and occasionally income on mobility.

Logically, one starting point in analysis of the research and its findings ought to be with the particular choice of problems for study and the researchers' orientations toward the issues at hand. The paradigm of return to investment in human capital, whether it be in the form of education, or migration, has been adequately developed in economics to provide the authors with the necessary tools for critical analysis of their subject. Lansing and Mueller, however, choose to de-emphasize the use of this approach. This is odd in that the advantages of this avenue of explanation are relatively well recognized vis a vis the more traditional variables of migration research. In its place the authors draw upon multiple regression as an analytic

technique and make minimal references to any theoretical construct at all. While this relative dearth of theory is unfortunate and impedes their efforts to explain the relationships of these more traditional variables to migration behavior, it soon becomes clear that in the context of their entire research undertaking the human capital concept would be more of an impediment than a benefit. In consideration of the importance given by the authors to certain variables which were original in this research effort, we can then understand that exploratory analysis was their principal goal, and they were forced to sacrifice rigorous theoretical interpretations.

We must, however, keep in mind that most migratory theory is only partially complete. Strictly sociological or demographic theories--theories of how community, family, and the larger society affect migratory behavior--are negligible. In this respect, the exploratory research which constitutes such a large part of this volume is still vitally necessary. Here Lansing and Mueller excel. Their choice of variables is substantively appropriate and methodologically sound. These variables cover a range of topics that have demanded systematic analysis in a multivariate context, yet their construction and measurement exhibit few of the methodological errors that could potentially mar such an analytic framework.

Demographers have long suspected that ties to the local community, outside contacts in other communities, and family structure in terms of location of relatives all have greater importance in determining migratory behavior than straightforward economic theories had previously allowed for. Lansing and Mueller confirm this. While again they refrain from employing any theoretical orientation in the explanation of their findings, they did demonstrate that in a multivariate context these social and familial variables remain significant. Certainly the importance of the findings could be increased by placing them in the framework provided by research in associated fields (sociology, demography, or even geography). It is regrettable, therefore, that The Geographical Mobility of Labor is not more fully integrated into the findings of others, especially sociologists or demographers.

One further aspect of the volume deserves mention. Lansing and Mueller go to some length to note the significance of their findings for policy formulation. The authors note that welfare, unemployment compensation, vested pension or insurance rights, and other forms

of aid are not a deterrent to movement. This has important implications for public policy. Those believing that economic factors were the principal ones in the decision to move often argued that most forms of aid reduced response to differential levels of wages and employment, thereby contributing to permanent instability in the socially optimal movement of people. Lansing and Mueller demonstrate that these fears are largely unfounded.

Furthermore, as regards the process and decision to move, the authors make important recommendations regarding policy which they feel ought to be designed to optimize population redistribution (the form of this optimization remains unclear). The fact that such a great number of people base moving decisions on poor information leads the authors to suggest that a large scale job information system established through state employment services would be worthwhile. This seems a fine idea, but it is confounded by several problems. First, people rarely refer themselves to any public agency prior to or after their move. Second, the largest number of migrants are short distance blue-collar workers for whom a large-scale job information is unnecessary. Such a nation-wide network as has been recently adopted is excellent for highly trained personnel. These people, however, have been shown by the authors to have considered more sites, and with greater information about each site, without the information system. Perhaps a more realistic proposal would be a statewide, or labor market area-wide location system that not only finds openings, but trains, places, and aids in adjusting the migrant to his prospective community. Possibly it is because this latter proposal makes greater demands upon public services, while the former makes its demands upon the state of technology in our society that we have the program functioning in its present technology-intensive manner. It seems we have found it simpler to enter a name and social security number into a computer satellite than to locate employment for a man with few skills and integrate him into a community that regards him not only as an outsider but also as a potential welfare burden sometime in the future. This problem, of course, ought not to be related to Lansing and Mueller, who have proceeded in the best scientific tradition and steered far clear of any issue that appeared outside the field circumscribed by strictest objectivity. The question, however, ought to remain an issue

(however unobjective its formulation) for every researcher, regardless of discipline, when they confront the problem of a socially optimal distribution or movement of people.

--Carl Fredrickson
University of Wisconsin

Population in Industrialization, by
Michael Drake (ed.). London: Methuen
& Co., Ltd., 1969. 200 pp. \$3.00 (paper)

The objective of this book, implied in its title and explicated in its introduction and first essay, is to provide a general discussion of the interrelationships between population growth and changes in the social and economic structure of society. In actuality, however, the book is a collection of essays which debate a single issue of economic history. That is, they are concerned with the question of whether an increase in fertility rather than a decrease in mortality can be established as the major determinant of the upturn of population growth in late 18th and early 19th century England. Stated more generally, this book seeks to evaluate one of the major propositions of the theory of the demographic transition.

On the positive side the book deals with an important issue which is deserving of attention. The essays are well chosen, generally high in quality, and presented in chronological order indicating the development of the debate.

Essays by Connell (1950), Krause (1961), and Wrigley (1966) contend that fertility was the major determinant of rising population in Britain during the early part of the industrial revolution. These essays suggest that fertility was flexible during the pre-industrial period and subject to voluntary limitation. Delayed marriage and coitus interruptus within marriage seem to have been the major controls. In addition, these essays cast doubt upon the statement that mortality was declining during the period. They conclude that constraints on the formation of families were relaxed during industrialization and fertility rose above its previous level. As a consequence, the rate of population growth surged upward.

On the other side of the argument, essays by McKeowan and Brown (1955), Hollingsworth (1957), and Razzell (1965) suggest that declining mortality was the basic determinant of population growth in England during the mid-18th century. Fertility is rejected as the causal factor in population growth because of the belief that birth rates of the times were high and unrestrained. As a consequence, only negligible increases were

thought to be possible.

Although a variety of determinants of the decline in mortality have been put forward, the vast majority are rejected upon closer examination. Environmental conditions, nutrition, and inoculation against small pox seem to have retained a degree of credibility.

In addition to their substantive discussions, these essays demonstrate a number of methodological innovations for the historical demographer. Particularly ingenious are Connell's evaluation of vital registrations, Hollingsworth's use of genealogies of British ducal families, and Wrigley's technique of family reconstruction. Wrigley's technique is particularly interesting in that any series of births, deaths, and marriages can be exploited to provide a detailed picture of the vital events of a community.

My criticism of this book is that it leads one to expect much that it does not provide. As it stands, the book is exceedingly narrow in its conception, debating but a single issue. It is not that this issue is not important or that the essays are not of high quality, but rather that the single debate does not provide sufficient substance for a discussion of population in industrialization. A more comprehensive analysis is necessary to understand the relationships between population and socioeconomic change.

Of the "promises" which are not delivered in this book, I suggest three as being of relatively great importance. These issues listed below will be discussed in turn.

- 1) A critique of the theory of the demographic transition (p. 3).
- 2) A discussion of implications for the currently underdeveloped world of studies in historical demography (p. 1).
- 3) A discussion of some general relationships between changes in the social and economic organization of English society during the mid-18th century and changes in the rate of population growth during the period (p. 3 and essay by Coale and Hoover).

A valid criticism of the theory of the demographic transition is not included among the essays of this collection. It should be noted that only certain aspects of the theory are evaluated. These aspects pertain to the early stages of the transition or, to be more explicit, to the initial increase in the rate of population growth. Are we to assume that subsequent propositions are left unchanged when initial relationships are cast in doubt?

No analysis is put forward to explain the dynamics of population growth after the initial surge. Important questions such as "Why does fertility eventually decline?" "What factors determine the time lag between the decline in mortality and the decline in fertility?" or "What determines the distance between the fertility and mortality curves at any stage in the transition?" are neglected.

A related criticism is that implications for the currently underdeveloped world of the theory of the demographic transition or of studies in historical demography are given only cursory attention. This is especially confusing since the "theoretical" section of this book is drawn from Coale and Hoover's study of population and economic development in India. Krause's superficial essay seems to have been included as an afterthought and adds little in the way of fresh thought on the subject.

Drake states that "the pressing nature of population problems of the currently underdeveloped world . . . has imparted an unusual degree of urgency to the study of the historical record of these problems." One is forced to ask why. What can be learned in this book that is applicable to the contemporary situation? Or more importantly, what is not applicable? A rigorous discussion of the differences between 18th century England and currently underdeveloped countries is badly needed in this collection.

Last, and perhaps most important, we are lead to expect that this book will provide a comprehensive examination of the inter-relationships between population change and change in the structure of society. This expectation is advertised in the ambiguous title and developed in the essay by Coale and Hoover, an essay which Drake suggests contains "theory" for the subsequent analyses (see p. 3).

In actuality, however, the primary concern seems to be with changes in vital rates quite separately from the social, industrial, commercial, and agrarian conditions which might be related to these changes. It should be re-emphasized that the process of industrialization is manifest throughout every institution of society, and that population should be analyzed with respect to these manifest changes. An "ecological" perspective relating population, organization, environment, and technology is a possible approach.

Historians have suggested a variety of factors which could have direct effects on vital events and on the rate of population growth. Frequently mentioned are agrarian changes: enclosure of open fields, reclamation of waste land, new crops, production

for market--especially of livestock; industrial changes: decline of cottage industry, development of factories, child labor, weakening of guild and apprentice system; changes in social institutions: new patterns of social stratification, speenhamland system of welfare, and especially changes in the family. We need a full explanation of marriage patterns and family types in order to analyze the relationships between population and society. An essay such as Hajnal's "European Marriage Patterns in Perspective" would have been a useful addition to this collection.

One final point should be made. A more useful analysis would have investigated changes in the composition and distribution as well as changes in the size of population. These changes are interpenetrating and a sorting out of their mutual dependencies would add much to our understanding of population in industrialization.

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NOTICE

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Thank you for your patience.

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