THE THREAT OF OVERPOPULATION IN ZAMBIA
A CRITIQUE

by

M. J. Kelly

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A visitor from another planet, flying from London to Lusaka, would see very little from the air to suggest that the world experienced any problem of overpopulation. True, when leaving London he would see a city of 6.75 million people living in close, but highly ordered and organised, proximity to each other. Flying over Europe the interplanetary visitor would see scattered towns and settlements, but as the flight proceeded over Africa these would become smaller and more dispersed. After the great barrenness of the Sahara, the visitor would be struck by the sparsity of human settlements - so few towns and cities, such great distances between the tell-tale lights of flickering fires, such vast expanses of wooded and virtually uninhabited areas. Coming down low over Zambia in preparation for landing in Lusaka, he would see with even greater clarity that here was a land that looked hsopitable and supportive and that confirmed the impression gained during the flight that the world as a whole was quite thinly populated, and that this was particularly true of Africa and of Zambia, as one of Africa's larger countries. The visitor would indeed be surprised to hear that there is international concern that the world has about as many people at present as it wants and that if population growth continues on its present path there will soon be more people than the world can support. Looking at Zambia, he might well reiterate the question asked a few years ago by university visitors from Japan: "where are all the people?"

The population of the world at present is approximately 5.6 billion. All of Africa accounts for approximately one-eighth of this, with 700 million. There are about 560 million people living in Africa south of the Sahara, and of these Zambia accounts for almost 9 million. Are resources adequate to support populations of this magnitude, and how adequate will they be in the future if populations continue to grow in the way they are doing today?

The World's Ability to Carry a Larger Population

First, let us look at broad figures for population density and land use. A few years ago it was estimated that "all the people in the world could be put into the state of Texas, forming one giant city with a population density less than that of many existing cities, and leaving the rest of the world empty" (Kasun, 1988, p. 37). If all the people in the world today were to be put into Zambia, the number per square kilometre would still be less than one-third the number per square kilometre already found in Macao in the Far East. The fact is that human beings occupy no more than 3% of the earth's ice-free land surface and use less than one-ninth for agricultural purposes (ibid. pp.206-7). While Africa contains about one-eighth of the world's population it has one-fifth of the land that could be brought under cultivation. In developing countries as a whole there are on average 180 persons per square kilometre of such land, in Africa south of the Sahara there are fewer than 70 and in Zambia fewer than 20 (World Bank, 1986, p.23).

In these terms it is clear that the world, Africa and Zambia contain vast underused territories that are rich in agricultural potential. Could this potential be translated into an increased production of the food needed for a larger population? The evidence is that not only could it be, but that this has actually been done. World food output per capita increased by one-third between 1950 and 1977 and since 1977 world food output has matched or surpassed population growth (Kasun, 1988, p.33). This is not to deny that there are distribution problems, getting the food to those who need it when they need it. But the fact is that the world's agricultural potential is more than adequate to feed an increasing population. Estimates vary as to how many people the world's agricultural system could eventually sustain, but it is thought that the number could be anywhere between seven and twenty times the present world population. Africa is said to be capable of feeding ten billion people, that is, almost twice the present world population and almost fourteen times the present population of the continent (ibid, p.35). An expert has summed up the situation in these words:

> "The world's food problem does not arise from any physical limitation on potential output or any danger of unduly stressing the environment. The limitations on abundance are to be found in the social and political structures of nations and in the economic relations among them. The unexploited global food resource is there .... The successful husbandry of that resource depends on the will and action of (people)." (Hopper, 1976).

Similar potential exists for the various inputs required by industry - metals, metal products, fibres, and energy (including coal and oil). There

is no likelihood that "the industrial system will grind to a halt for lack of supplies" (Kasun, 1988, p.41), even if it has to expand enormously in response to much larger populations. This industrial growth may aggravate already existing environmental problems, especially those of air and water pollution, ozone layer damage and waste disposal. But the environmental degradation that is undoubtedly taking place is not in itself due to population size or growth. The fault lies with the technology of production, with patterns of wasteful consumption characteristic mostly of the developed world, and with methods of waste disposal. Responsibility for keeping the environment clean and supportive of life today and for the future rests squarely with industry and with users and not directly with population control. What is needed is safety, discipline, control and sensitivity to environmental needs in all production and consumption processes. It would seem more reasonable and feasible to take action in this regard than to try to control population growth on the grounds that it contributes to the rape of the environment.

A Question of Words

Before turning to the central issue of population growth and its consequences, something must be said about the language used for this phenomenon. Much of it is already loaded. We hear of population explosion, the population bomb, population plague and population cancer; even the title of this presentation, "The Threat of Overpopulation in Zambia", is not neutral. Threat, bomb, explosion and similar terms all have a negative, doomsday connotation. They imply at once that population growth, in and of itself, is a dangerous and evil thing that has only bad effects, and hence it should be curbed. So we move all too easily from "population explosion" to "population control", almost with the implication that what we are looking for is a controlled explosion of the so-called population bomb. It would be better to avoid altogether these inflammatory, pejorative words and to speak more neutrally of population increase or population growth.

We also have the World Bank using language in a way that is open to biassed interpretations. In its 1986 policy study on Population Growth and Policies in Sub-Saharan Africa it defines contraception as the "conscious effort of couples to avoid conception through rhythm, withdrawal, abstinence, male or female sterilization, or use of contraceptives" (p.viii). It is doubtful whether anybody could object on personal, cultural, or moral grounds to contraception understood in this wide sense. But in the subsequent text and recommendations, the Bank says little about contraception and much about contraceptive technology, a narrower concept that is weighted towards

the use of pills, implantables and condoms. This subtle change of register could have the effect of lulling a reader who objects to the use of contraceptive devices into accepting programmes designed almost exclusively for their promotion.

Population Growth and Its Causes

On the average the population of the world is increasing. It is growing at such a rate that if current growth patterns are maintained world population will double in about forty years, the population of Sub-Saharan Africa will double in about twenty-two years and that of Zambia in about twenty years. To focus on Zambia, the population in 1963 was 3.5 million; by 1980 this had grown to 5.7 million and by 1990 it was 7.8 million. The population today is probably about 8.9 million and it is expected to exceed 11 million by the end of the century. In 25 years time, when the children of those in school today are growing up, the population, at its present growth rate, will reach about 20 million.

What these figures mean is that in Zambia the population is growing at a very fast rate. In fact the Zambian growth rate is believed to be the sixth highest in the world, being surpassed only by the rates in Cote d'Ivoire, Kenya, Tanzania, Saudi Arabia and Oman (Economist, 1993). Not only is the population growing very rapidly in Zambia, but the rate at which it is growing is also increasing (or at least it was doing so until very recently when it began to slow down a little).

Why has there been this dramatic increase in population? What factors have influenced it? There are three ways in which the population of a country may grow. One is by the influx of outside people through in-migration. The second is through the birth of children; and the third is through people living longer - infants, children, adults : that is, through a decrease in the rate of mortality. Historically, the in-migration of peoples was very important for population growth in the region that was to become Zambia. But that was a long time ago. Although we experience some influx of refugees, international migration is not critically important today in determining the overall size of Zambia's population. Internal migration, on the other hand, is a very important factor in determining the distribution of that population, with considerable movement of peoples out of rural areas into towns and cities or out of one rural area into another.

The two facts, however, that have the greatest influence today on the total size of the country's overall population are births and deaths. Thanks

to developments in medical science and the fairly widespread extension of medical services throughout the country, the number of deaths for every thousand members of the population, that is, the death rate, has declined substantially. It is estimated that in 1965 twenty persons out of every thousand were likely to die; by 1983 this had fallen to sixteen and by 1990 to about thirteen (World Bank, 1986; Economist, 1993). Life expectancy at birth climbed from 43 years in 1969 to 51 years in 1980 and a possible 54 years in 1990 (Zambia Demographic & Health Survey, 1992 = ZDHS), though it is now down to 49 years.

On the other hand, the fertility rate, that is, the number of children a woman is likely to have within her child-bearing years if currently observed rates are maintained, has remained fairly constant between 7.0 and 7.2 (although there may have been a small decline in recent years). So with fairly constant fertility and people living longer it is obvious that the population must grow larger.

Very much, though by no means all, of the decline in mortality is due to declines in the death rates of infants and children. A new-born child today has a better chance of surviving beyond its first year than a similar child born thirty years ago. In 1969 the infant mortality situation was that 141 infants out of every thousand who were born alive were likely to die in the first year of life; by 1980 this had fallen to 97, although it was up to 107 for the period 1987-91 (ZDHS,1992). The effect of this is that the population grows larger from the bottom upwards - there are more young children below the age of five than there were a year ago; there are more school-aged children between the ages of seven and thirteen than there were a year ago; there are more young people below the age of fifteen than there were a year ago.

Before looking at the implications of these developments it is worth stressing that the rapid growth in population since independence is a sign of tremendous human progress which is due largely to technological advances, the spread of education, and the concern of men and women for the well-being of their fellows. Technology in the form of more effective drugs and medicines, more numerous and skilled health workers, more universally applied immunisations, more clinics and hospitals, and better sources of safe drinking water, has brought down the death rate and if other things remained equal would continue to bring it down. Education has also contributed - we have better educated mothers who are more self-assured and are better capable of interacting with the health care system, who know the importance of sanitation, cleanliness and personal hygiene, who are more aware of the nutritional needs of their children and who will strive more purposefully

to promote their children's well-being. Indeed it is ironic that technology and education which together have promoted an increase in population should now be coming centre stage in efforts to control the growth of what they helped to originate.

Implications of Zambia's Fast-Growing Population Size

One major effect of the way Zambia's population has been growing is that it is a very young population which is actually getting younger. There is a very low percentage of elderly people - only 2.6% are over the age of 65, compared for example with over 15% in the Nordic countries (ZDHS, 1992; Economist, 1993). But there is a very high percentage under the age of 15. In fact, with about 49% of its population under the age of 15, Zambia has the fifth youngest population in the world, being surpassed in this only by Kenya, Uganda, Yemen and Botswana (Economist, 1993). Because the population is so young the number of women of child-bearing age will grow steadily larger as ever larger cohorts of girls reach physical maturity. As these girls become mothers - in stable family unions, we hope - they too will know an average of 6 to 7 live births, if today's fertility rates are maintained. Half of those born will be girls who in a few short years will themselves become mothers; and after the lapse of a few years, the daughters of these daughters will arrive at child-bearing age and give birth to more female children (and also, of course, to a roughly equal number of males). Thus it comes about that with declining or even steady mortality rates the population grows inexorably if the fertility rate is maintained at its present level. Although this is a simplification, it would not be wrong to say that the essence of the population issue in Zambia, and in countries experiencing similar rates of population growth, is the size of this fertility rate and how it could be reduced. What the United Nations and the World Bank would like to see is this fertility rate being brought down eventually from its current 7.0 or so to 2.2, which is called the replacement level - if the fertility rate were 2.2 each mother would be replaced by just one daughter (and not three or four, as at present) and hence there would be zero growth.

Other implications of the age structure of the Zambian population are important. One is that virtually nothing can be done to stop its rapid growth for the next ten or fifteen years or its steady growth for a long time after that. This is because the girls who will become mothers in the years ahead are already with us. They have already been born. And the younger these mothers-to-be are, the more of them there are. So there is an inbuilt momentum to population growth. The World Bank has estimated that

even if the total fertility rate were to drop immediately to the replacement level of an average of 2.2 births per woman, it would still take about a hundred years before Africa's population (and presumably that also of Zambia) would stop growing (World Bank, 1986). It is necessary therefore to bear in mind that the growth of Zambia's population cannot be stopped by any population control measure. But what can be altered is the rate at which this growth is occurring.

A second implication is that since 49% of the population is below the age of 15, the number in the working age range of 15 to 64 must be about the same or even a little less. This is the notion of dependency ratio - the number of dependents (those under 15 or over 64) for each person in the working age group. In most Asian and Latin American countries, for every ten persons in the working age group there are between five and eight dependents. But in Zambia for every ten working age persons there are ten or eleven dependents. This means that the working age group or the productive sector of the population has more dependents to support than its counterparts elsewhere. If the working age group is to provide for these dependents the standards of living that are found elsewhere, then they must be much more productive than working people elsewhere. But we are aware that one of the current economic problems in Zambia is that productivity is extremely low and is showing no signs of improving to the extent that the economy could provide even a moderately decent standard of living to every member of the population. Much less would it be able to do so if those of working age have to provide for an ever larger proportion of dependents, most of them young to very young.

Arising from this is the fact that with such a big proportion of young people a large share of national resources must be devoted to the special needs of the young, in particular to child health services and education. Because of this, these resources are not available for productive purposes, such as job creation, the improvement of communications or the development of infrastructure. So many young people also consume the time of parents, especially of mothers. This time might otherwise have been devoted to productive activities, to personal self-improvement, or to all-important restorative leisure.

Positive and Negative Aspects of Large Families

We turn now to asking whether a large population and rapid population growth are good or bad things or whether they are just neutral. The two issues of population size and population growth should be distinguished and looked at separately. It can help also before considering matters at a

national level to look briefly at the household or family level. After all it is within households or families for the greater part that population growth actually takes place.

In labour-intensive undertakings, such as subsistence farming and much that goes on in Zambia, there are distinct advantages to having a large family. Time and labour are the great assets of the majority of people and when production depends more heavily on labour than on capital inputs it makes sense to invest in labour through reproduction. Traditionally this has been one of the factors influencing the high fertility rate in Zambia and in other parts of Africa. There is a Chitonga proverb which says Bulemu bwa Nkuku Mapepe - its feathers clothe a chicken with respect, meaning, of course, that it is by having many children that a person attains status and honour (Sumbwa, 1993). The labour aspect was also a factor in maintaining polygyny so that a man might have wives and children in abundance to look after his crops. Traditionally, status and wealth depended greatly on family size because this dictated the amount of land that could be cultivated.

A further advantage of a large family in a society which has almost no state provision for social security in old age is as a form of insurance. Protection and support must come from family members, and since some of these might die prematurely it is more prudent to have many of them. Reflecting on this situation, some American researchers have recently pointed out that although high fertility might not be the best response in all circumstances, it can be the best and most reasonable response in situations that themselves are not the best, that is, where there are no institutional social structures that provide old age support for parents or insurance against risks to income, health and physical security (Lee & Miller, 1990).

A third advantage may come as a surprise, but there is strong evidence from recent work in Kenya that children from large families perform significantly better in school than those from small families. Performance improves with family size (Appleton, 1993). This is quite different from what happens in the developed world where children from large families do not perform as well as those from small families. But if the Kenyan findings contradict previously assumed wisdom they form only one more instance where what happens in the developed world cannot be held up as a model for the way things might be in a culture where family ties are closer and values are usually superior. Whatever the reasons, it appears that children from large families in Africa are brighter and more intellectually active than those from small families.

On the other hand, although a large family has its advantages, there are also drawbacks. The major ones relate to the actual size of the family and to the speed with which it attained its size. Clearly there is the problem of providing for the children. They put it neatly in the Western Province: Kwaleya kooto kono amatina - it is easy to have children, but the names - it is hard to provide for them all (Sumbwa, 1993). There can be no dispute with the World Bank when it says that "there is growing evidence that parents' investments of time and money in health and education per child fall as the number of children rises" (World Bank, 1986, p.30). National figures show that the average Zambian household spends only 4% of its monthly income on health and education expenses (Priority Survey, 1993). This is very little, given that the total cash expenditure is small. When spread over several children the actual expenditure per child on health and education must be close to being negligible. An even more worrisome finding from the Priority Survey is that the proportion of monthly expenditure going to food does not change with the size of household - rural families actually spend a smaller proportion on food as the size of the household gets larger, whereas in urban areas the same proportion is spent on food regardless of the size of the household. One explanation for the under-nourishment that has become such a common and saddening feature of Zambian families may lie in family size and in meagre resources being spread too thinly over too large a number of individuals.

There is also the question of the rate at which the family has grown. Apart from the fostering-in of children, an occurrence unfortunately too common today because of the AIDS orphans, a family normally grows in size through the birth of children. If the interval between these births is too small it can be harmful for the well-being of all concerned. It is bad for the mother because she has not had time to recover physically from the previous birth and to build up her physical reserves. A mother's chances of illness or death during pregnancy and childbirth are high and they become still higher if the time that elapses between two pregnancies is short (they also become higher if the mother has already had four births, if she is in her teens or if she is over 35). Too small an interval between births is also bad for the already born child which has to be weaned too early and which may not receive from the mother the care, attention and regular physical contact that it needs during the first years of life. In fact, "the risk of death for young children is increased by about 50% if the space between births is less than two years" (Ministry of Health, 1993, p.4). Even if the child does not die, the too early break that the early pregnancy brings in the mother-child relationship can contribute to poor growth of the child, mentally, socially and physically. The child in

the womb is also at risk because the mother has become pregnant again too soon. Because she has not had the time to recover fully from the earlier pregnancy and childbirth, "there is a higher chance that her new baby will be born too early and light in weight"(ibid.,p.4). Fifteen percent of the babies born in Zambia are in this high risk category because they are born after an interval of less than 24 months (ZDHS, 1992).

Clearly, therefore, large families have their advantages and disadvantages. Some of these disadvantages at the family level are related more to the spacing and timing of births than to actual family size. Many of them would be greatly reduced if there was always a sufficiently long interval between births, preferably a minimum of 24 months.

Positive and Negative Aspects of a Large Population

We turn now to ask whether at the national level a large population and rapid population growth are good, bad or neutral. Just as there are distinct advantages to having a large family, so also it can be to a country's advantage to have a large population, provided it has the resources to sustain that population. The greatest asset of any country is its people. Its land, its minerals, its mines, its agricultural or industrial production, its financial services, its infrastructure: none of these can compare in importance with the people of the country. Without its people it cannot develop its natural and other resources and it is for the sake of its people that all development takes place. Many would say that such development would proceed more certainly if there were more people in a a sparsely populated country like Zambia which has extensive under-utilised land and water resources. One reason, for example, why the rural areas are so underdeveloped may well be because there are so few people and these are thinly spread over vast areas. Zambia is the 37th largest country in the world, but it is among the 25 countries with the lowest density of population (Economist, 1993). This wide dispersal of people makes it prohibitively expensive to extend schools, clinics, roads, transport, electricity, telecommunications, agricultural services and marketing facilities to serve the rural people. The per capita costs would go down a great deal if these rural areas, or significant parts of them, carried larger populations. This was part of the thinking behind the village re-grouping schemes in Tanzania and our half-hearted moves in this direction during the 1970s.

The argument is also brought forward that one of the problems in increasing production in Zambia is that the domestic market is not large enough for what might be produced. The number of potential buyers of a product may be judged to be too small to give a worthwhile return on the

necessary investments.It is hard to know whether this reasoning underlies some of the emphasis being placed on production for export, but it is certainly part of the rationale for the establishment of organisations like the PTA in Southern Africa, the EC in Europe, and NAFTA in North America, since these arrangements greatly expand the market for domestically produced goods. Likewise, the argument goes, if Zambia had a larger population there would be a larger and more viable market for its products. In addition, even so cautious a body as the World Bank acknowledges that the very needs of an increased number of people could stimulate investment, production and technological change (World Bank, 1986).

Population Growth and Human Development

Arguments like these suggest that there is no necessary conflict between population size and aspects of economic development. But the more fundamental question that is of concern is whether population growth affects overall human development. Here it will be useful to look first at what human development means and then to examine the narrower concept of economic development. In a recent powerfully worded report, the UNDP has stressed that,properly understood, development is more about expanding opportunities for people to fulfil their capabilities than about the creation and accumulation of wealth (UNDP, 1994). Development extends to all fields, economic, social, cultural and political. It goes beyond economic production and consumption to include such things as "the sustenance of cultural traditions and identities, the quality and ease of interpersonal and intergroup communication and action, the inculcation and growth of active and critical citizenship, the possibility for recreation and creative uses of leisure time, and the achievement and preservation of good health" (Chinapah, Lofstedt & Weiler, 1989, p.21).

In an attempt to measure the level of human development, understood in this comprehensive sense, the UNDP has constructed a numerical index that brings together three basic components of human development: health welfare, educational status, and economic standing. The human development index (or HDI) does this by combining into one measure information on life expectancy, average years of schooling, literacy rates and the per capita purchasing power. We can note to our disappointment that in terms of this HDI Zambia is classified among countries with low human development and ranks 138th out of the 173 countries for which all the necessary information is available. But what concerns us here is a comparison of HDI levels with population growth rates. The data in the Table show that there is indeed a relationship - overall, developing

Population Growth Rate and Human Development Index in Developing Countries

Number of Countries	Population Growth Rate, 1960-1992,%	Human Development Index (Median)
6	less than 0.9	44
9	1.0 to 1.49	89
12	1.5 to 1.99	80
31	2.0 to 2.49	128
34	2.5 to 2.99	121
34	3.0 or more	110

(Derived from UNDP, 1994, Table 23)

countries which have the lowest rates of population growth have the highest levels of human development. But the relationship is not straightforward. Countries such as Zambia, with the highest annual rates of population growth of 3.0 or above, rank better in terms of human development than those with lower growth rates of between 2.0 and 2.99.

Since the human development index provides no clearcut answer to the question whether rapid population growth might be a hindrance to integral human development, we could bring the question closer to home by asking whether in Zambia every child would have a better chance of education, every person would have better health care, every individual would have more adequate daily food, every girl would have life chances equal to those of a boy, every group would be able to sustain its cultural identity and traditions, every adult would be able to play an active role as a citizen, if population growth were slower, if there was less pressure from below, from the fast increasing number of young people and infants. It is almost impossible to say, one way or the other. Clearly, for such purposes as educational and health services and food security, the growing population would require an increase in resources. But as the UNDP document has wisely pointed out, additional wealth is not a prerequisite for all components of development, for instance, for actions to accord equality to women. Moreover, "it is not the level of income alone that matters - it is also the use that is made of this income" (UNDP, 1994, p.17). We must acknowledge that in Zambia the limited resources that are available are not used in the best way. They are used inefficiently and in education and other areas they are used in a way that favours a minority at the expense of the majority. This could mean that the growing numbers of children are scrambling for educational opportunities and other services that are in short supply, not so much because resources are not available as because they are

misallocated; not so much because of population growth, therefore, as because of inequities arising from human mismanagement.

Population Growth and Economic Development

Turning now to the narrower question of the relationship between population growth and economic development, one can ask whether rapid population growth slows down economic development and whether slower growth of the population would bring economic gains. The World Bank in its policy document on population growth in Sub-Saharan Africa opens its discussion of this issue by stating that "rapid population growth does not necessarily prevent per capita income from rising" (World Bank, 1986, p.21). It also notes that the challenge of population growth may actually inspire technological advances, such as the use of fertilisers or improved seed varieties. But the document raises a number of issues that have affected this relationship in Africa: one is the speed at which this population growth is occurring; a second is the initial condition of poverty, poor infrastructure and a weak human resource base that most African counties inherited when they became independent; a third is the colossal amount of new investment needed to bring additional land into economic use; and a fourth is the post-independence history of poor economic policies that often enshrined state capitalism and a de facto bias against the development of agriculture. Given these factors, the document concludes that population growth has interacted with other difficulties to 'short-circuit' economic growth.

Doubt about the rigorous connection between population growth and economic decline surfaced in a document that the U.S. government presented to the International Conference on Population in Mexico City in 1984:

> "The relationship between population growth and economic development is not necessarily a negative one. More people do not necessarily mean less growth. Indeed, in the economic history of many nations, population growth has been an essential element in economic progress" (cited in Anderson, 1990, p.80).

The document went on to assert that what hindered economic growth was bad policies and too much government control of economies. It further castigated governments for pursuing population control measures when they would have been better advised to concentrate on "sound economic policies that create the rise in living standards historically associated with declines in fertility" (cited in Kasun, 1988, p.169).

There are, however, powerful voices that disagree with this position. One analysis of the interaction between population growth and economic development that has been very influential in practice argues that high rates of population growth lead to slow increases in per capita income,

because such a large proportion of a country's resources has to be spent on creating additional infrastructure, such as schools, for the growing population, thereby reducing the capital available for productive undertakings. It is also argued that potential industrial and agricultural expansion will not be aufficient to absorb the increasing labour force, with the result that the ready availability of a large supply of workers will depress wages, making everybody worse off. These arguments were brought together in the 1984 World Development Report which stated that the evidence "points overwhelmingly to the conclusion that population growth at the rapid rates common in most of the developing world slows development" (cited in Caldwell, 1990, p.216). This is reaffirmed in the World Bank's 1986 policy statment which summarises its views as follows:

> "A rapidly growing population means more than a short-term sacrifice of per capita income growth. It can mean a loss of long-run potential for higher economic growth and rising living standards; higher maternal and child mortality and morbidity; further degradation of the natural environment where there is already population pressure; tighter constraints on extending education and basic health care beyond current rudimentary levels; and falling wages as the labour force grows more rapidly than complementary investments" (World Bank, 1986, p.3).

However, many specialists disagree with the World Bank, essentially because its arguments are based more on projections and assumptions than on actual demonstrations and observations. In other words, it is said that the World Bank produces no hard evidence from what is actually happening to show clearly that rapid population growth causes economic decline or stagnation. It is also said that the Bank fails to take account of people's ability to respond felxibly, constructively and creativly to meet whatever problems rapid population growth may bring.

A troublesome feature in this debate is that a powerful institution like the World Bank should use the economic argument to promote population control even though there is no unambiguous evidence that rapid population growth does in fact slow down economic progress. In a subtle way, the responsibility for economic problems is thereby shifted to the population area, and hence to the sexual activity of ordinary people instead of being left where it rightly belongs. The problems with Zambia's economy and the reasons for the low level of human development arise internally from the misuse and misallocation of resources, from mismanagement, from misguided policies, and from too much and inept government planning and control. Externally they arise from discriminatory and protectionist international trade structures, from inequable pricing arrangements, and from following the variable advice of international advisors who are unfamiliar with the social and cultural environment in which their proposals are to be implemented.

The problems do not lie with population as such or with the way that population is growing.

Some Issues Arising from Population Control Policies

Where does all this leave us, especially when faced with policies that seek to control population growth? Essentially such policies will be directed at the speedy reduction of fertility. The World Bank would like to see the fertility rate in Zambia decline from its present level of about 7.0 to 5.1 (and possibly even to 3.35) by the year 2005 which is just eleven years ahead (World Bank, 1986, Table S-1). Throughout this debate, are our people to be the grass that must suffer while the elephants in the United Nations, the World Bank, the United States and the professional institutes fight it out about the relationship between population growth and economic or human development?

A few further questions and observations are in order. First, who is stressing the need for draconian population policies? Where is the pressure coming from and why is it coming? It is common knowledge that such policies are being pushed hard by both the World Bank and the United States (through its USAID programmes). Countries in receipt of aid from these sources are being put under heavy pressure to adopt a national population policy and action programme almost as a condition for the continued inflow of aid. The aid packages that are offered have built into them fairly aggressive measures for slowing the fertility rate through education, clinical services and contraceptive promotion. In the uncertainty about the relationship between population growth on the one hand and human and economic development on the other, it is not clear whether any hidden agenda lies at the root of these interventions. Certainly, some observers have expressed concern that there may be sinister motives at work, such as attempts to maintain the existing balance of world power and to prevent it slipping from the grasp of the wealthy north into the hands of a populous Asia and Africa. For instance, a group known as the Information Project for Africa recently stated that "population control is intended to achieve nothing less than the continued oppression of the developing world" (Inf.Project for Africa, 1994, p.1).

It is hard really to credit this. But it is easier to accept what Pope John Paul II stated in his letter of 19th March 1994 to Heads of State on the forthcoming Cairo Conference on Population and Development. Speaking about the draft of the final document for the Conference, the Pope wrote:

> "Reading this document .... leaves the troubling impression of something being imposed: namely a lifestyle typical of certain fringes within developed societies, societies which are materially rich and secularized. Are countries more sensitive to the values of nature, morality and religion going to accept such a vision of man and society without protest?" (Catholic International, July 1994, p.308).

Almost in similar vein, in 1992 the Secretary-General of the OAU reminded an International Conference on Development and Culture that Africa could "ill-afford to replace its own cultural values by some so-called world culture to whose elaboration Africa was not given opportunity to contribute" (Salim, 1992, p.7).

At the conclusion of the recent Synod for Africa, the Bishops expressed their concern that the cultures of Africa were in serious crisis and they referred sadly to the materialistic and economy-oriented model of society that has spread throughout the continent (Message of May 6th, 1994). One aspect of this crisis is the anti-natalist attitude that the developed north is endeavouring to foist on Africa. The documentation from the World Bank, USAID and some other agencies clearly bespeaks a cultural attitude that is quite at variance with that of Africa; it enshrines western cultural values which accord high value to having and doing, in contrast to the African cultures that place the highest premium on being and living. Africa does not share the anti-natalist stance of the developed countries. In fact, Africa is unique among the world's regions in being so strongly pro-natalist - a woman's deep fear of barrenness or of becoming childless through the death of all her children and the way a man links marriage stability with the procreation of children and their survival through childhood bear witness to this (Caldwell, 1990). This is also seen in the relatively small number of women who want to limit the number of births - less than one-in-five in Zambia (ZDHS, 1992). Indeed Africa is so strongly pro-natalist and the demand for fertility limitation is so small that international, and some local, agencies have to mount costly propaganda campaigns to overcome resistance to family planning services and to stimulate demand for contraceptive technology. To quote the OAU Secretary-General again, "a people does not fully commit itself to a development undertaking unless it corresponds to deeply felt needs" (Salim, 1992, p.2). The demand for fertility limitation is not deeply felt in Africa because such limitation conflicts with deeper needs. The persistence of high fertility in Africa appears to have a deeply religious base, linked to the cult of ancestors and further reinforced by systems of family economics (Caldwell, 1990). There is in Africa a positive attitude to life and to numerous offspring that echoes the thinking of the 127th Psalm:

> "Children are a gift from the Lord; they are a real blessing.
> The sons a man has when he is young are like arrows in a soldier's hand.
> Happy is the man who has many such arrows" (vv. 3-5).

The Bishops of Africa have proclaimed the same exuberance when, addressing young people, they declared: "Your great numerical strength is a sign of divine blessing on this Africa which loves life and freely communicates it to the future generations" (Message of May 6th, 1994, p.17). This affirmation of life and exultation in its proliferation is something that is distinctively African and it is something with which Africa will not readily part, no matter what the pressures and cajoling from the developed world.

It is also worth noting that policies embodying control of population growth imply government involvement in this arena. More and more this is being said or even required. This rings hollow in Zambia which is just emerging from a period of too much government, too much planning, too much control. Zambia is still trying to recover from the disasters of government's excessive involvement in the running and management of the economy and from the morale-destroying attitude that one could look to the government for everything. Yet at the same time Zambia is being urged to increase government involvement and planning in the very intimacy of conjugal life. If government could not properly manage the impersonal economy, there is surely very little reason to think that it could do better in managing and guiding the highly personal relations between a wife and her husband. For it to become involved here it would have to throw overboard or reverse practices, customs and attitudes that are sacred to Zambians and that are built into their everyday lives. It has also been well observed that there is a "strong belief that individuals and communities know more about the morality of fertility than do governments" (Caldwell, 1990, p.237) and hence that there tends to be strong resistance in Africa to any government intervention in this area. The Zambian government appears to be aware of this, and this may be one reason why it is lukewarm about introducing measures that would effectively control population growth. Putting it bluntly, it seems to realise that such measures would not be acceptable to the people and hence it takes no action or only action of a limited kind.

Strategies to Bring About Demographic Change

Notwithstanding all that has been said in this presentation, something has to be done to address the question of population growth in Zambia. The country's population is growing at an extraordinarily fast rate, a rate that is not good for either present or future generations. In a garden, if seeds germinate in a dark place they grow very quickly, but they will be weak and spindly and will quickly die. Growth that is too rapid is bad for them. Population growth that is too rapid can be bad for everybody. Most Zambian parents would like to have 5 or 6 or 7 healthy children, but

they could not cope with them if they all came along at once. Zambia would like to have a larger population, but it cannot cope with this if the increase comes along almost all at once, if the growth is too rapid. So something has got to be done to slow down the rate of growth, to check it gradually. The difficult question is: what should be done?

It is my firm belief that an all-out direct frontal assault on fertility will not provide the answer. This would not be acceptable on cultural and ethical grounds. Neither would it be feasible on practical grounds. There are, however, several feasible measures that accord well with cultural and ethical values. These measures are highly desirable in their own right since they promote human and family development. Taken individually they can help to lower fertility levels over time. Taken collectively their impact on fertility levels can be strong and enduring.

(a) Traditional Practices

One is to encourage the continuation or resumption by parents of new-born children of traditional post-birth (post-partum) practices, namely an extended period of frequent breast-feeding and a prolonged period of sexual abstinence. Fortunately, breast-feeding practices in Zambia are good with almost all children being breast-fed for at least one year and more than half being breast-fed for up to 19 months (ZDHS, 1992). Breast-feeding gives a mother some protection against pregnancy for six months after giving birth and for some mothers the protection may last for twelve months or even longer. The most important factor in deciding how long it will be before the mother's periods return and she becomes susceptible again to pregnancy is how often the baby sucks at the mother's breast (Ministry of Health, 1993). Since breast-feeding is a practice that brings enormous health gains to a child, the practice of frequent breast-feeding should be vigorously encouraged, both for the child's sake and for its role in helping to space out pregnancies.

Post-birth sexual abstinence is also a traditional method aimed at spacing births so as to improve the survival chances of the child and its mother. In certain parts of Africa this could last as long as three years, but it is believed that the duration of this practice is tending to become shorter. The 1992 survey shows that in Zambia today this practice can last for as few as two months, although more than 12% are still abstaining eighteen months after birth (ZDHS, 1992). The norm, however, is much lower than this, with about half the mothers resuming sexual relations in four to five months after giving birth. Since this is a practice with deep traditional roots, its maintenance and extension could be strongly

advocated, recognising, of course, that both partners, husband as well as wife, have a role to play here. Family life education directed to married couples could, therefore, promote the more widespread adoption of this traditional method of regulating the spacing between births.

(b) Child Mortality

There is universal agreement that high infant and child mortality rates contribute very strongly to high fertility rates. What this suggests is that lowering the child mortality rate would serve also to lower the fertility rate. Even the World Bank has conceded that in a region in Kenya which has experienced a significant drop in fertility, diverting the majority of the expenditure to lowering child mortality would probably have been more cost-effective in reducing fertility than spending the majority of it directly on family-planning (World Development Report, 1984; in Caldwell, 1990, p.216).

Lowering child mortality is a very necessary strategy for Zambia. The rates here are unacceptably high. In the five-year period 1977-81, the mortality rate for children under five years of age was 152; for 1982-86 this climbed to 162, and for 1987-91 it rose steeply to 191. This means that nearly one in five children in Zambia die before their fifth birthday - more than one in ten in the first year of life and in addition almost one in ten between the ages of one and five (ZDHS, 1992). This increase in child mortality appears to be due to a combination of deteriorating economic conditions, measures arising from the structural adjustment programme (such as user charges at clinics), a general worsening in the nutritional status of mothers, and the increased incidence of HIV/AIDS. These early deaths are a profound tragedy for the parents who undergo unspeakable emotional and psychological trauma that reinforces the mother's sense of inadequacy and incompetence. The parents also lose economically in that the investment which a pregnancy, birth and subsequent child-rearing represent all goes for nothing. The distress, disruptions, time and expenses of the child's funeral are no more than the culmination of a long period of deep anxiety about the survival chances of this child and of expenses readily undertaken in the hope of improving those chances. From the fertility perspective, given that children are wanted not only for themselves but as providers of family labour and as a form of social insurance for sickness and old age, the pervasive fear that the child might die while still an infant or quite young leads almost inevitably to a need for more frequent births.

It is to dealing with this problem that national energies, attention and resources should be directed. This scandal of high and increasing

child mortality clearly desrves that everything possible be done to reduce its incidence. An all-out national campaign, sustained over a decade or more and generously funded from national and international sources, is needed in order to improve a child's survival chances. And since persistently high fertility is so strongly linked to child mortality, a campaign or crusade to improve the survival chances of children would have the added advantage of bringing about some fertility decline, but without the disadvantage of tackling the fertility issue directly and insensitively.

(c) Girls' Education

A third line of approach is to extend and improve educational provision for girls. The 1992 survey found that Zambian women who had had no education could expect on average to give birth to 7.1 children, those who had had only primary education to 6.8, and those with secondary or higher education to 4.9 (ZDHS, 1992). These figures reveal a striking relationship between fertility and education: more educated mothers tend to have fewer children. This finding showed up in the 1980 census and has been found in numerous investigations in other parts of the world. "Fertility decline is strongly accelerated by female education" (Caldwell, 1990, p.245). Education, and female education in particular, has this impressive role in bringing about fertility decline "because it cuts deeply into the fabric of lineage, community, and household organization and fosters individual autonomy in reordering priorities and in making choices" (Lesthaeghe, 1990, p.256). Clearly there are excellent humanitarian and equity reasons for investing heavily in the education of girls, and such education is an integral component of overall human development. The fact that the education of girls may be one of the surest ways of bringing about fertility decline is an added justification for such investment.

There is also one other well-established fact about girls' education and that is that it contributes strongly to reducing child mortality. The ZDHS has shown that the child of a mother who has had only primary education has a 12% better chance of surviving to its fifth year than the child of a mother with no education, while the child of a mother with secondary or higher education has a 50% better chance.

Promoting girls' education, therefore, should have very high priority for its direct role in fertility reduction, for its equally direct role in reducing child mortality (and thereby indirectly reducing fertility), and for its important role in improving the status of women. Some population experts would say that "investment in female education is still

the best bet in most cultural contexts and economic situations" (Lesthaeghe, 1990, p.258). There is also the very strong statement from a former Vice-President of the World Bank that "investment in the education of girls may well be the highest return investment available in the developing world" (Summers, 1992, p.1).

These are very strong expressions indeed of the need to devote more resources to girls' education. In this regard, there is room in Zambia for much improvement. Although there are about as many girls as boys in Grade 1, by the time one comes to Grade 6 or 7 there are only 80 girls for every 100 boys; in Grade 9 there are only 2 girls for every 3 boys and in Grade 12 there is one girl for every two boys. The picture at university level is even more dismal, with female students outnumbered by males by four to one. These gender differences appear to be worse in some parts of the country, particularly in the poorer areas such as the North-Western Province. Apart from participation in school, there is also the very troubling fact that on average the performance of girls in virtually every public primary and secondary school examination subject is not as good as that of boys, and the equally troubling fact that in a variety of subtle ways the education system reinforces the negative self-image that girls bring to school from society. Without actually intending to do so, the education system may actually demean girls, according them a second class status. This is ruefully acknowledged by the Ministry of Education which admits that much remains to be done to change the content, methodology and philosophical underpinning of education in Zambia if it is to serve the real human needs of girls and women. This requires commitment and understanding. It also requires funding. But such commitment, understanding and funding would bring a whole range of benefits, including healthier children when girls of school-age eventually become mothers and lower levels of fertility.

(d) Household Economies

One final way of indirectly but effectively addressing the fertility issue is one that is very appropriate in this International Year of the Family. It is to strengthen the family bond, and more specifically to promote the assumption by husbands and fathers of greater financial responsibility for family and child costs. There appears to be little exact information on the extent to which husbands actually shoulder these costs, but it is well known that in a significant number of households it is the mother who must bear most of the day-to-day costs. It is she who must generate the greater part of the resources needed to feed and clothe the children and sometimes even to pay for their health and education expenses.

Children can also look to relatives outside the nuclear family for support, thereby further reducing the financial demands on the biological father. This system of household economics has a twofold fertility effect: "men can make reproductive decisions with little extra economic burden in raising the children and with a resulting near certainty of support in old age .... (while) women become increasingly dependent on their children, and few feel safe without a considerable number" (Caldwell, 1990, p.231). What this is saying is that if men had to bear more of the lifetime costs of the children that they father, they would want fewer children; if husbands gave more financial support to their wives for all family needs, the wives would feel less need to have more children. This calls, of course, for more responsible parenthood, from a financial no less than from a sexual perspective.

Such a transformation in the way household economies are managed will not come about quickly, though its advent will be hastened by the way mass education changes and diffuses norms and values. The economic crisis we are experiencing might also promote such a transformation - there are already reports from parts of Africa that declines in income have made people more sensitive to the economic costs of children, with a resulting drop in family size preferences (Cochrane, 1990). The growing incidence of HIV/AIDS might also speed up such a change, when all household resources have to be pooled in efforts to cope with the disruptions which this epidemic brings to family existence. The potential for such a change in household economics to lead to smaller families would be strengthened if it took place in a society which was working hard in other ways to enhance the status of women economically and politically, especially by strengthening their access to land, credit, and family possessions in the event of widowhood.

Conclusion

What I am proposing, therefore, is that the strategies for dealing with the extremely rapid population growth in Zambia should not be addressed in the first instance directly and primarily to the reduction of fertility. Instead, more enduring and more effective outcomes would be assured by direct attention, through well-designed information and promotional campaigns, energetic financing and wholehearted commitment, to four areas:

(a) the continuation and possible extension of traditional post-birth practices - an extended period of frequent breast-feeding and a prolonged period of sexual abstinence;

(b) the speedy, sharp and enduring reduction of infant and child mortality;

(c) the extension and improvement of education for girls; and

(d) the transformation of family economies so that the husband and father assumes more wholehearted financial responsibility for the family and its children.

I have said nothing in the foregoing about natural family planning methods and the activities of FLMZ. This is not because these are not valued, but because dealing with them might have brought us too far afield, into the whole realm of purposeful family planning. But clearly FLMZ's activities would be supportive of and would be supported by the four strategies outlined above. Indeed, the extension and use of traditional birth practices needs the outreach of a body such as FLMZ if it is to be effective.

Neither have I said anything directly about HIV/AIDS. This is the great unknown which might stand all projections on their head. The most recent estimate of HIV/AIDS prevalence in Zambia is that between one and one-and-a-half million persons are HIV-positive. Since most of these will be over 14 years of age, it is possible that almost one in three of all adults are HIV-positive. If this estimate is correct, and if a major proportion of these persons develop full-blown AIDS, then the issue for Zambia in a few years time might not be population growth but population decline. AIDS could change everything so that we would no longer be dealing with a so-called population explosion, but with a population implosion or collapse. It is a sobering note on which to end.

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The Threat of Overpopulation in Zambia A Critique

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