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Current topic

Poverty and human development in the Third World*

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A nation's policies with regard to children and families give a fairly direct reflection of its economic, social, and political structure. Economic, social, and political beliefs are translated into assumptions about the ideal relation of society to the family and the individual. The industrial, developed countries with their relatively high standard of living face an entirely different set of circumstances from those confronting underdeveloped countries where resources are often grossly unevenly distributed; where malnutrition is often endemic; childhood disease rife; and where survival is the first goal.

The bulk of the world's children are in the developing countries, and the largest number are in the low income countries. In the past 35 years the world's population has almost doubled, and that growth has been largely concentrated in the developing countries where it is now about 2% per year. In a substantial proportion of the world's low income countries the number of children in the year 2000 will be double what it was in 1975, and this despite an expected fall in the birth rate. Consequently, the age distribution of the population differs between the developed and underdeveloped countries (Table 1). On average just under 40% of the population of underdeveloped countries is below the age of 15 years.

Table 1 *Age structures in developed and developing countries*[19]

Country group	*Percentage age distribution (years)*					*Total fertility rate*
	0–4	*5–14*	*15–64*	*65+*	*All*	
Developed countries	7·6	15·5	65·6	11·3	100	1·9
Developing countries	13·4	25·6	57·0	4·0	100	4·2

The underdeveloped countries of the world are very heterogeneous. The problems with which they must cope are economic, political, demographic, climatic, and structural. Some are rich in natural resources, other have almost none. Some are in effect preliterate societies with a high degree of social organisation, whereas others are largely sunk into the 'culture of poverty'. There are some accounts of an anthropological kind of the circumtances of children in the Third World. Among the best known is the work of Oscar Lewis[1] who made important observations among Mexicans and Puerto Ricans. One feature of the 'culture of poverty', as he called it, is that it tends to perpetuate itself, for the most part people are unable to take advantage of opportunities that may occur. In these circumstances, the family does not cherish childhood as a prolonged and especially protected stage in the life cycle. The young have all too soon to do battle with their environment in order to maintain even a marginal position. It is hardly surprising that a child growing up in such a culture has strong feelings of fatalism, helplessness, dependency, and inferiority.

A central feature of science is developing methods of describing and measuring the variables that are of concern to us, and this is equally true of the life sciences, the social sciences, and the physical sciences. How do we measure the condition of children? Our principal means is by the use of social indicators. Social indicators are an attempt to develop tools for monitoring patterns of change in populations.[2] They provide us with information on the conditions of children's lives and on the health, education, and well being of children themselves. Some basic social indicators are shown in Table 2 in relation to the infant mortality rate. The construction of social indicators followed the success economists had with measures such as gross national

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Table 2 *Some basic indicators in relation to the infant mortality rate*[12]

	Very high infant mortality countries	*High infant mortality countries*	*Middle infant mortality countries*	*Low infant mortality countries*
Infant mortality rate (0–1 years)	140	90	40	11
Child death rate (1–4 years)	26	11	2	(.)
Life expectancy at birth	47	57	69	74
Percentage immunised at 1 year				
Tuberculosis	32	51	70	90
Diphtheria/pertussis/tetanus	17	35	56	85
Polio	10	37	67	92
Measles	17	34	52	70
Percentage infants of low birthweight	16	14	10	6·4
Crude birth rate	46	44	29	14
Gross national produce (US$)	320	870	1770	9110
Percentage with access to drinking water				
Urban	69	85	91	
Rural	20	21	50	
Percentage adults literate				
Men	42	68	90	96
Women	19	55	85	94
Percentage population urbanised	21	41	51	76

product, but at the same time they are also a protest against the dominance of economic values in official statistics and political/social decision making.

There are clear signs of improvement over the past 30 years. Infant mortality rates have decreased, life expectancy has increased, primary school enrolment has gone up (especially among girls), and adult literacy rates have improved. But although improvements are clearly discernible, there remain great problems—life and death problems—facing an enormous number of children around the world. The manifestations of poverty vary between countries and even different regions within a country, but four principal concerns emerge from the statistical information that has been collected. These relate to poor health, inadequate nutrition, high fertility, and little or no education.

Health

In Birmingham in 1906, the infant mortality rate was 200 per 1000, higher than in all but about three countries of the world today. In 1906 the main causes of infant death in Birmingham were much the same as in the Third World today—malnutrition, diarrhoeal diseases, whooping cough, and respiratory infections. By 1946 the rate in Birmingham was 46. The precipitate decline from 200 to 46 per 1000 was achieved very largely by rising living standards (food, housing, sanitation, clean water, education, and increased income) supported by maternal and child care services and by medical advances. In most developing countries the changes have followed a different pattern. The major impact has been made by medical and biological technology—by insecticides, antibiotics and immunisation. Rising living standards have played a supporting role rather than acting as a prime mover.

In general terms, the determinants of health are known. Income gives access to goods and services; climate is often an important factor as is the availability of public sanitation. Given that the socioeconomic correlates of childhood mortality in developing countries are known, the problem is one of moving from correlations to an understanding of the causal matrix. For example, maternal education correlates with reduced infant mortality but it is also associated with other socioeconomic variables such as income. From an examination of factors associated with infant mortality in rural Peru, Young *et al*[3] identified three classes of factors; the physical ecology, intervention programmes, and the social structure. All of them correlated with infant mortality, but when all the other relevant variables were controlled for only the educational level of women significantly predicted reduced infant and child mortality. The observation does not mean that other factors, such as intervention programmes, may be safely ignored or that they are unimportant, but what it does do is focus our attention on the immediate context of the child. Many factors contribute to the causes of ill heath and they can be attacked in various ways.

Let me take a specific example. Water is an essential commodity we take for granted in Britain, but it is well to remember that without water there can be no life. Large numbers of people living in rural areas, and some city slums, in the developing countries do not have access to a regular supply of clean water. Women and children devote a good deal of time and energy to fetching water; water which is often contaminated. Not all disease is life

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threatening, some debilitates but rarely kills. One of the widespread diseases of the Third World transmitted by water is schistosomiasis. The World Health Organisation estimated in 1965 that between 180 and 200 million people were infected, and the number has probably increased as irrigation programmes have been implemented. Infection rates are usually highest in children because of the pattern of water contact that they have. Infection is known to affect their activity level and their involvement in play—they are debilitated by the disease.[4] It seems likely that mental function may also be affected but no satisfactory investigation has so far been made, and the evidence relating to this important question is equivocal.

Malnutrition

The effects of disease are compounded by malnutrition. For the most part malnutrition is invisible. The sickening consequences of famine that we have grown used to seeing on our television screens account for less than 2% of the cases of malnutrition. In 1981, it was estimated that 40 000 children died each day from malnutrition, and for every death many more children cling to a debilitated life in hunger. A simple answer to malnutrition is to provide food, but it is more complicated than that and we need to understand better both the causes and consequences of malnutrition.

Malnutrition reduces resistance to infection, and infection often precipitates malnutrition—and so the two reinforce each other. Where the sequences of malnutrition and disease are rapid, death results; where they are slowed down, the children endure serious developmental disadvantage. The consequences of mild to moderate malnutrition are difficult to investigate because of the confounding of biological and social factors. Gradually, evidence is accumulating that shows the effects on mental and behavioural development.[5] Malnutrition has consequences on an infant's level of activity, exploratory behaviour, and social interaction. Apathy reduces the child's physical and social transactions with the environment. Other consequences may be mediated by adults. A child may fail to evoke from the mother adequate stimulation, sensitive caring, or the necessary encouragement for development. Better nourished infants are seen by parents as more demanding, and greater activity on the part of the child increases parental pleasure.[6] Malnutrition therefore has more than one route of action. Severe malnutrition may have a primarily physiological route whereas less severe cases may have their effect largely via the child's reduced contact with his physical and social world. Specific nutritional deficits also have effects. For example, iodine deficiency, which is common in many of the underdeveloped countries, especially those in mountainous regions of the world, is known to have consequences on the behavioural development of children.[7 8]

Any investigation of behavioural mediation on the dynamics of nutritional deficit requires careful attention to the pattern of caretaking because we need to understand the contextual mechanisms of early development. Super *et al*,[9] in a carefully designed intervention experiment among poor families in the barrios of Bogota, have shown that nutritional supplements and a maternal training programme have effects, separately and in concert, on the behavioural development of infants. These findings do not fit easily with some of our earlier ideas but they are intuitively plausible, and so we must look to our theories and models of development.

As I have said, an important feature of science is measurement. When a variable can be identified and measured it becomes possible to study the effects of experimental manipulations, therapeutic treatments, educational programmes, and so forth. An important step in combating malnutrition is its early detection and measurement, and a simple, reliable method is available. By systematically weighing infants and plotting weight changes on a growth chart it is possible to detect early signs of malnutrition.[10 11] An early warning alerts mothers to the need for action whether it be supplementary feeding or getting medical aid. The use of growth charts is one of the spearheads of what the United Nations International Children's Emergency Fund (UNICEF) has called the 'Children's Revolution'.[12] A very important function which the growth chart serves is as a means of educating mothers about their children, and perhaps most importantly of all, it shows them that they do have some control over events.

One of the most effective means of combating early malnutrition is to bring about a change in infant feeding practices. Winston Churchill once said, in one of those famous wartime broadcasts of his, 'There can be no finer investment for any community than putting milk into babies.' Would that he had said mothers' milk. The shift from breast to bottle feeding has been massive and disastrous. For example, in Recife, a large city in the poor north eastern region of Brazil, all babies were breastfed in 1940. By the 1970s the proportion had fallen to less than 10%. In 1975 a survey in Port Moresby, the capital of Papua New Guinea, found 35% of babies being artificially fed and two thirds of them were malnourished. A vigorous government campaign

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succeeded in reversing this trend and by 1979 the proportion of seriously undernourished infants fell significantly. In addition to nutritional advantages, breast feeding also leads to a reduction in infection among babies (mothers' milk offers some protection and the danger of food being made up with contaminated water is removed) and it has consequences on fertility.

Fertility and conditions for children

For some there is a moral issue in whether governments should seek to influence fertility as well as mortality. I believe it to be imperative that they should. Fertility and population growth contribute considerably to the problems of children in the Third World. More effective family planning is an urgent necessity; but what are the links between high mortality, impoverished living conditions, illiteracy, poor health, and the practice of having large families. Why do the poor have so many children? Children are of course an investment—biologically, socially, and economically. In many countries, as in Europe not so long ago, children contribute in cash or kind to the family income. For some families having more children makes good economic sense, and to the very poor the economic costs of children are relatively small. This is in marked contrast to the position in the developed countries, where children are a major cost to parents both in time and money. In many countries, especially in Asia, parents are reliant on their children to take care of them in old age. For an individual family, rather than a society therefore, more children means greater security, and the need for support in old age outweighs the immediate costs. A further factor is the family structure in some societies. The age of marriage and the woman's position in the family and in the wider society mean that for some the way to a satisfactory adulthood and relatively secure old age is to have many sons.

We know that high fertility is associated with high infant mortality, and although the evidence is limited, it is widely believed that infant mortality itself contributes to high fertility. Expressed in crude form the 'child survival hypothesis' is simply that parents feel the need to have more children in order to ensure that a few survive. How improved infant survival actually serves to reduce fertility is probably quite complicated. Broadly speaking there seem to be two routes, one physiological the other psychological. Early and frequent child bearing contributes substantially to the illness and death of infants, children, and mothers in developing countries. Maternal age, birth order, and birth spacing all have effects on infant mortality.[13] Mortality is higher among babies born to young (less than 20) and old (over 40) mothers, it rises steadily as the number of children increases, and it falls steadily as the interval between births increases (Figure). Breast feeding is also linked to fertility since the likelihood of a woman conceiving while lactating is reduced by the secretion of prolactin.[14] Breast feeding a baby therefore serves to delay the arrival of the next, and in so doing improves the chances of survival for both.

We know little of psychological factors associated with the child survival hypothesis, but there is evidence indicating that the ideal number of births is judged to be larger by parents who have lost a child. Similarly couples who have lost children tend to adopt the use of contraceptives later, and the expressed approval of couples for contraception declines with the rise of child deaths in the family.[15] Much remains to be discovered about how couples decide on the size of their family, and what factors are important in reaching decisions about fertility. What we can say is that increased survival rates contribute to an increased motivation to limit family size.

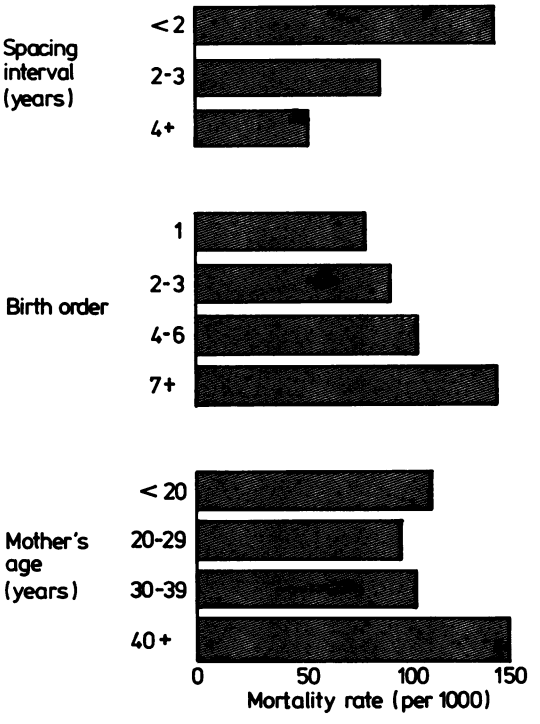

Figure *Infant mortality per 1000 live births in Peru in relation to spacing interval between births, birth order, and maternal age.*[19 20]

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Education of women

There are grounds for believing that there are some common features among people afflicted with poverty irrespective of the culture in which they live. There is a feeling of powerlessness, of being locked into circumstances over which one can exert no influence. Feeling that one has no control over one's destiny is only a short step from despair, and the consequences which that has upon the care and development of children can be catastrophic. We know from research in America and Europe over the past 20 years that various forms of intervention can lead to changes in the pattern and style of coping both of children and families. Mothers are central, we have to work with them not compensate for them.

From the investigations that have been undertaken we can confidently assert that educating mothers is good for children. Hobcraft *et al*[16] analysed five socioeconomic correlates of infant and child mortality in 28 developing countries and found levels of maternal education strongly associated with mortality during a child's first 5 years. The mother's level of education affects her access to information that will influence her decisions on medical care for herself and her children, on whether she knows of the advantages of breast feeding, on how to wean and feed her child, and so on. The relation shown in Table 3 is thus hardly surprising.

Educating women has other consequences. It tends to delay the age of marriage, which in turn reduces fertility. In general, education increases employment prospects, and in some circumstances the employment of women outside the home is associated with lowered fertility. Education and literacy act like a passport by giving access to great resources, and one sure way to improve the lot of children in the Third World is to educate women.

Table 3 *Maternal education and infant mortality. Deaths of children under 2 years (per 1000) as function of mother's education*[12]

Country		*Years of schooling*				
		None	*1–3*	*4–6*	*7–9*	*10+*
Paraguay	1972	104	80	61	45	27
Costa Rica	1973	125	98	70	51	33
Columbia	1973	126	95	63	42	32
Chile	1970	131	108	92	66	46
Dominican Rep.	1975	172	130	106	81	54
Ecuador	1974	176	134	101	61	46
El Salvador	1971	158	142	111	58	30
Bolivia	1975	245	209	176	110	

Children in the recession

The world is experiencing the worst recession in 50 years. For the most part, governments and other agencies have been preoccupied with narrowly economic issues—inflation, interest rates, trade deficits, and the like. But what has the recession done to children?

Over the past 40 years child welfare has improved greatly in developed and developing countries alike but there are still great differences. The effects of recession depend among other things on the position from which people start. Because of its economic and human resources one family may be well buffered against the effects of recession. Another may be so poor that it is hardly touched by the changes—too poor you might say to have access to the world crisis. Different regions and social groups are affected differently and countries have responded in various ways to the crisis. Some have cut back on social services, others have accelerated their development, yet others have concentrated their resources into particular areas of social welfare. The countries of Africa seem to have suffered the most severe setbacks, while South East Asian countries have withstood the worst effects with only minor dislocations. A series of case studies commissioned by UNICEF[17] has examined the effects of recession on children from countries in South America, Africa, Asia, North America, and Europe. The picture that emerges is limited by the availability of reliable and useful data. Also it is important to appreciate that there is widespread lack of information about the condition of children in the poorest countries.

To speak of child welfare implies that there is general agreement on what it is, on its main determinants, and on the indicators appropriate to assess its level. Cornia[18] has outlined a scheme of the production of child welfare that illustrates the route by which international economic events contribute to changes in the situation of children. Three classes of variables exert a direct effect. First the family and community: these determine a child's physical, social, cultural and psychological environment, and I have already stressed the importance of maternal education. The second is household income, whether in cash or in kind. Income gives access to food, clothing, housing, and in some countries education and health services. A sudden sharp decline will have predictable effects. The third source of influence is government expenditure on social services (including health and education). These services are usually paid for by taxes. If revenues fall so expenditure must be adjusted, cuts become inevitable, and as we know from the British

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experience, painful decisions on priorities must be taken. The three sets of variables influencing the welfare of children are not equivalent but they are linked and they will interact to compound their effects.

The recession has slowed down and threatens even to reverse the improvements in economic and social conditions which have been taking place over 30 years. In Zambia there has been a decline in height for age (a measure of long term growth), and the number of child health clinics has been reduced. In Costa Rica, between 1981 and 1982, the number of children treated for malnutrition just about doubled. In Brazil there has been an increase in the number of low birthweight babies, and an increase in the number of children given up by their parents was also recorded. In the plantation sector in Sri Lanka between 1979 and 1982 there is clear evidence of an upward trend in the infant mortality rate. It is up also in the states of Michigan and Alabama (1981–82), where unemployment has been rising and incomes falling.

Behavioural indicators are also showing warning signs. Delinquency among the young has risen sharply in Italy, and in some sectors of the youth of the USA suicide and homicide rates are up. Overall infant mortality rates and other social indicators have continued to improve, though at a reduced rate. The picture is not encouraging, however, and if the process of slowing down is not halted and reversed there is every likelihood that the deterioration will be reflected in the cruellest of statistics—a real increase in the infant mortality rate.

Conclusions

What stands out from the variety of issues, problems, and data that I have touched upon is that to understand and influence the welfare of children we must take an ecological perspective. A view from medicine, education, economics, psychology, or biology is necessarily a partial perspective. We need a model of the child and his development that takes proper account of the richness and diversity of contributing factors. The welfare of children and an understanding of the conditions that affect their development is not the preserve of any one discipline.

A clear lesson that emerges from an examination of the effects of poverty on children is that the best way of combating these is to provide the children and their families with the means to influence and control their own destiny. It is the individuals themselves who will right matters if we help them to do so. Fatalism and despair, apathy and lethargy are what we must help to drive out by using science rather than resorting to mere political exhortation.

You may consider the picture I have sketched out so fearfully complicated that any prospect of solution is remote. That would be an understandable reaction for we are certainly not dealing with a single problem that has a single means of solution. Paradoxically, I take some comfort in the complexity because it permits a multiplicity of ways whereby we can enter the matrix that determines child welfare. Were it the case that we could improve the lot of children only by spending huge sums of money then in the latter half of the 1980s I should feel pessimistic. But we can improve matters by any number of actions, some of which as UNICEF has shown are relatively cheap. I fancy William Blake's edict is a good guide, 'He who would do good to another, must do it in minute particulars, General Good is the plea of the scoundrel hypocrite and flatterer.' We must use our skills to their utmost in analysing problems and determining ways to bring about improvements.

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