

TITLE

RURAL WOMEN'S ORGANISATION, TRAINING AND WORK IN
THE CONTEXT OF POVERTY AND CATASTROPHE :
A CASE STUDY OF DHAKULY VILLAGE IN BANGLADESH

BY

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Dedicated to my parents
Satya Prakash and Urmila Agarwal

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CHAPTER 1

POVERTY, BASIC NEEDS AND DEVELOPMENT

Chapter 1: Poverty, Basic Needs and Development

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Development and Basic Needs

" 'Development' means the process of moving away from 'under-development', of rising out of poverty "; thus wrote Gunnar Myrdal in 1968 in his classic book 'Asian Drama'. The hope from 'development' today, almost two decades later, is still very much the same. From the earliest days when development planning was attempted in many of the developing countries, raising the standard of living of the poorest section of the population to an acceptable level has been one of the major goals, explicitly stated as such in the development plans in some countries and implicit in others. However, over the three decades of experience, the perceptions of the strategies to be pursued in trying to achieve this goal have changed. (1)

The early development plans aimed at accelerating the rate of growth of real national income, focusing essentially on the process of capital accumulation and its allocation - in other words, the growth of GNP - was regarded as the main objective or index of development. The question of how the benefits of growth in national income were shared by different socio-economic groups in the society was not a major consideration in those early days, and the question was infrequently raised. One reason for this neglect was, of course, the belief that even the poorest will benefit from growth, that there will be an automatic 'trickle-down' of the benefits of economic growth to the poorest segments of the population; "they assumed, in other words, that increases

(1) See Minhas (1977) 'The Current Development Debate' IDS Sussex for a wider discussion of these issues.

in the rate of growth of such components of economic development as industrialisation, agricultural productivity, physical overhead capital, investment, and per capita GNP were closely associated with increases in the extent of political and economic participation" (2). T N Srinivasan suggests (3) that perhaps the main reason for this neglect of specific redistributive policies in development planning of the early stages, was that "in the framework of a mixed economy that excluded any revolutionary restructuring of production and exchange relations, excessive emphasis on redistribution at an early stage in the growth process was thought to retard growth and hence the long-run feasibility of sustaining any appreciable increase in the levels of living of the poor"; as indeed, Gunnar Myrdal also wrote a decade earlier (4), "it is commonly believed ... that substantial improvements in the levels of living must be postponed for some time in order to permit capital accumulation and even higher productivity and levels of living in the future."

The conviction that sustained and rapid growth is the desirable route toward a better life for the poor countries as well as the poor in these countries, was indeed shared by the major aid donors of that time. The view distinctly was that once the poor countries reached the stage of sustainable and sustained growth, that is, the "take-off" stage in the terminology of the times (see Rostow 1960), they would increasingly look like the mature economies of

(2) Adelman and Morris (1973) 'Economic Growth and Social Equity in Developing Countries' Stanford University Press.

(3) T N Srinivasan (1977) 'Development, Poverty and Basic Human Needs : Some Issues' World Bank Reprint Series no. 76.

(4) Gunnar Myrdal (1968) 'Asian Drama' Allen Lane, London..

the West. Furthermore, the late start of these countries would enable them to take advantage of modern technology and aid would shorten considerably for them the period needed to reach the take-offs as compared to the historical experience of the mature economies. Aid was viewed thus as helping this process of modernisation without revolutionary change. (5)

Since the mid-sixties however, development specialists have begun to realise that development plans did not work in the expected way. Perhaps Myrdal (1968) best stated the case against the uncritical use of traditional economic concepts and theories in poor nations when he observed that " Economic theorists, more than any other social scientists, have long been disposed to arrive at general propositions and then postulate them as valid for every time, place and culture. There is a tendency in contemporary economic theory to follow this path to the extreme.. ..when theories and concepts designed to fit the special conditions of the Western World - and thus containing the implicit assumptions about social reality by which this fitting was accomplished - are used in the study of underdeveloped countries, where they do not fit, the consequences are serious." (6)

Indeed, the consequences were serious. In 1978, exactly a decade after Myrdal wrote those words, Robert S McNamara was to write these words in the foreword to the World Development Report of the World Bank : "The past quarter century has been a period of

(5) For readings on the role of Aid, see among others, Hans Singer and Javed Ansari 'Rich and Poor Countries', George Allen and Unwin, London 1977 ; Robert L Rhodes (ed.) 'Imperialism and Underdevelopment', Monthly Review Press, 1970

(6) Gunnar Myrdal opt. cit. p 16-17

unprecedented change and progress in the developing world. And yet, despite this impressive record, some 800 million individuals continue to be trapped in what I have termed absolute poverty : a condition of life so characterised by malnutrition, illiteracy, disease, squalid surroundings, high infant mortality, and low life expectancy, as to be beneath any reasonable definition of human decency."

In fact, doubts had begun to be raised well before these words of Robert S McNamara, as to whether in fact the poor had benefitted from the growth in national income achieved in the 1950's. Prime Minister Jawaharlal Nehru of India was one of the earliest to voice doubts about the impact of such strategies on the poor. The Committee on Distribution of Income and Levels of Living was appointed by the Government of India in 1960 to inquire into the changes in levels of living during the First and Second Plans, to study the trends in distribution of income and wealth, and in particular to ascertain the extent to which the operation of the economic system has resulted in concentration of wealth and means of production. (7). One of the first papers, with an explicitly stated objective of providing a minimum level of living for the masses of poor people by the end of the Fifth Indian Five-Year Plan (1975-76), was produced in 1962 and the Fifth Plan incorporated a minimum needs programme. (7c). Furthermore, these doubts and reorientation of thinking was accompanied, by the middle and late 1960's, with a growing disenchantment with foreign aid.(8).

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- (7) a. Government of India, The Report of the Committee on Distribution of Income and Levels of Living : Part I Planning Commission, New Delhi, February 1964.
b. Government of India, A Technical Note on the Approach to the Fifth Five-Year Plan of India, 1974-79; Planning Commission, New Delhi, April 1973.
c. Government of India, Perspective of Development 1961-1976: Implications of Planning for a Minimum Level of Living, Planning Commission. New Delhi 1962.

The Twelfth World Conference of the Society for International Development, held in Ottawa in 1971, further emphasized that the focus in economic development had been on gross national products, and that the result had been increased poverty for most of the developing world. According to the report, there were two major false steps in such development. " The first step involves the focus on per capita income as the aggregate measure of wealth, worrying about how much is produced and how fast it is produced rather than what is produced and how it is distributed. The second mistake is to assume that income distribution policies can be divorced from growth policies. Once production is organized to exclude large numbers of people and support a technological elite, which is the pattern in most countries, it becomes impossible to redistribute income to those not participating. The pattern of consumption and distribution of goods is built into the pattern of production."

Adelman and Morris added further fuel to this fire in 1973 when they wrote: "Anyone concerned with the welfare of the world's underprivileged people must recognise that business can not continue as usual in the development community. Development policies that ought in principle to have made for a more equitable distribution of income have served merely as additional instruments for increasing the wealth and power of existing elites. Even more serious, new elites, many of whom owe their power to development programmes, have become adept at manipulating economic and political institutions to serve their private ends.. ..Without new institutions and policies specifically designed to

(8) See in particular, Michael Lipton 'Why Overseas Aid does not make the poor richer' The Times, 21 January 1977.

improve the lot of the poor, there is no realistic chance of social justice in the under-developed world of our time." (9)

This concern about the distributional aspects of growth was reflected further in appeals by the International Labour Office (ILO) and the World Bank in the 1970's, to make the creation of productive employment opportunities, rather than aggregate income growth, a primary objective of policy. The ILO initiated work on strategies with an explicit focus on employment (10), and the World Bank supported emphasis on redistribution with growth. "A fundamental redirection of development strategy" was called for consisting of a rural strategy that "focuses on increasing the productivity of the small farmer and the self-employed through better access to land, water, credit, markets and other facilities" and an urban strategy of "(restructuring) the modern sector to make it responsive to the opportunity cost of labour and capital...(and) policies designed to reach the self-employed and to make small-scale producers more efficient." (11)

This emphasis emerged due to the perceived 'imperfections' that stood in the way of an improved allocation of resources, with benefits to the poor. These 'imperfections' were largely to do with jobs/income-earning opportunities. In the towns, access to jobs in organized industry were restricted, so that the majority had to eke out a miserable existence by work of low productivity

(9) Adelman and Morris 1973, op. cit.

(10) ILO 1972, 'Employment, incomes and Equality-a strategy for increasing productive employment in Kenya'

ILO 1974, 'Sharing in Development - A programme of Employment, Equity and Growth for the Philippines'

(11) Chenery et al. 'Redistribution with Growth' 1974 (sponsored by the World Bank).

in the 'informal sector. In the countryside, where land ownership is highly concentrated, the landless labourers, the sharecroppers, the suppliers of direct services and those with only tiny plots of land were denied access to the resources that would have raised their productivity and income. Lack of access to productive assets, low wages and rapid population growth, it was believed, kept their earnings low. It was not growth as such, but the structure of ownership and power, and the policies pursued by the governments, which prevented the poor from benefitting from growth. Moreover, it was believed that unemployment and under-employment were only a small part of the problem. The trouble was not so much absence of work, as relatively unproductive and unremunerative work. Indeed, only those who had some other means of support could afford to be unemployed. (See ILO studies of 1972 and 1974 cited above).

However, the policies associated with 'redistribution' through promotion of equal opportunities in employment and education, accompanied with major government policies like land reform and credit, also seemed not to work. By the mid-seventies, a whole sea of literature had emerged dealing with problems of 'redistribution' (for example, Mark Blaug 1974, Thurow 1975, Bowles 1976, Fields 1980, Unesco/IIEP 'Education, Work and Employment' Vol.I&II,etc.). The apprehension that even the suggested shift in emphasis towards an equalising of opportunity through primarily employment and educational goals, may not be enough to tackle the problem of poverty within a reasonable time led the ILO to go a step further. The declaration of principles and programme of action adopted by the Tripartite World Conference on Employment organized by the ILO in 1976 proposed that strategies and national development plans

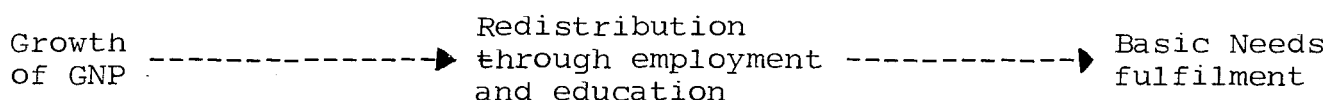
and policies should include explicitly, as a priority objective, along with the promotion of employment, the satisfaction of basic needs of each country's population. It further specified that basic needs should be understood to include certain minimum requirements of a family for private consumption, such as adequate food, shelter, and clothing as well as certain household equipment and furniture, as well as certain essential services, such as safe drinking water, sanitation, public transport, and health, educational and cultural facilities. "A basic needs oriented strategy", the conference emphasized, "implies the participation of the people in making the decisions which effect them through organization of their own choice."

The 'basic-needs' approach to development, very simply, stems directly from the view that 'the poor' will only benefit through strategies that aim at helping them directly rather than indirectly through growth, or employment, or education. The school of thinkers associated with what is popularly known as the conflict perspective (for example, A G Frank, Samuel Bowles, Gintis, Martin Carnoy, Paolo Friere, Ivan Illich, etc), were perhaps the major influence in bringing about this shift, though needless to say, the very evidence from the field did also support the case for disillusionment with existing strategies for 'redistribution' with benefits for the poor. It is of interest to note that the main ideas of the basic needs approach to the problem of the poor can be traced to the paper by the late Pitamber Pant of the Indian Planning Commission (12). The author explicitly posed the problem of poverty alleviation in terms of providing at least a minimum level

(12) Government of India 1962 - Perspective of Development 1961-1976; opt. cit. (reprinted in Srinivasan and Bardhan 1974 - 'Poverty and Income Distribution in India' Calcutta, India)

of living for the entire population. This minimum needs basket included essential items of consumption such as food, fuel and light, clothing, and shelter, as well as services such as health, sanitation, safe drinking water, and education to be provided through the government budget. The author recognized that some sections of the population might not benefit from development that creates productive employment opportunities because of the high dependency ratios in their households. These groups were to be provided their minimum level of living through income transfers.

One can thus see that there has been a marked shift in emphasis over the past three decades, over the perceptions of strategies that need to be pursued in trying to achieve the goal of development. (See also Kevin P Clements 'From Right to Left in Development Theory' Institute of Southeast Asian Studies, Occasional paper No 61, Singapore 1980). This shift looks something like this:



Commenting on this shift, Streeten and Burki (13) write: " The evolution, from growth as the principal performance criterion, via employment and redistribution, to basic needs is an evolution from abstract to concrete objectives, from a preoccupation with means to a renewed awareness of ends, and from a double negative (reducing unemployment) to a positive (meeting basic needs). The basic needs strategy builds upon the experience gained in the past and carries it a step further."

(13) Paul Streeten and Shahid Javed Burki: ' Basic Needs: Some Issues ', World Bank Report on World Development, Vol. 6, 1978.

To take experience yet a step further still, it is being increasingly observed and noted recently that perhaps even the basic needs approach to development is not succeeding in combating the extreme poverty in the developing world. In September 1980, the World Bank published a Poverty and Basic Needs series, in which they took some pains to demonstrate the extent of mass poverty and deprivation in the developing world, despite the efforts of various programmes aimed at meeting the basic needs of the poor (14). They pointed out initially that during the last two decades, developing countries had made some progress in meeting the basic needs of their populations : there was a slight increase in the average amount of food available per capita, from 208 Kg in 1961 to 218 Kg in 1976; the total number of children enrolled in schools increased from 142 million in 1960 to 315 million in 1975; there was some increase in the supply of water and sewerage and there was a slight increase in the stock of housing available to the poor. The study goes on to indicate how these improvements have had some effects on the quality of life of the poor : in all developing countries, there has been a 15 per cent improvement in life expectancy at birth - it increased from 47 years in 1960 to 54 years in 1977; the rate of adult literacy increased from 39 per cent to 51 per cent during the fifteen year period 1960-75.

Despite these improvements, however, an enormous gulf still exists between the poor and the non-poor. The study points out

(14) World Bank, September 1980, Poverty and Basic Needs Series, 'Meeting Basic Needs: an overview'.

that despite the improvements cited above, the life expectancy gap between the developed and the developing countries has narrowed only slightly : children born in the developed countries in 1977 could expect to live twenty-five years longer than those born in developing countries. Moreover, within the developing countries themselves, a significant gap persists between the poor and the middle-income countries in both life expectancy and the rate of literacy. It is commonly accepted that education, access to basic health facilities, nutrition, the availability of water supply and sanitation facilities, and adequate shelter all contribute to improvements in life expectancy. The study indicates however, that despite improvements in the access to these goods and services, the situation in the developing countries remains disquieting. The number of people in developing countries who receive less than the minimum required amount of food energy as determined by the Food and Agriculture Organisation of the United Nations increased from 368 million in the period 1969-71 to 424 million in the period 1974-76. The greatest number of the undernourished live in the poor countries of South Asia and sub-Saharan Africa, and a significant proportion of them are children below the age of fifteen years. There are about 850 million people in developing countries who have little or no access to school. Of these illiterates, 250 million are children and another 400 million are adult women. The rate of infant mortality in the developing countries is estimated to be 100 per thousand of the population, whereas it is only 25 in developed countries. The gap in female life expectancy at birth is significantly wider than that of the males. Only a fifth of the population of the developing countries has access to adequate

water supplies. In many poor countries women spend as much as half their work time collecting water for consumption within households. Nearly two-fifths of the population of the developing countries remain without shelter.

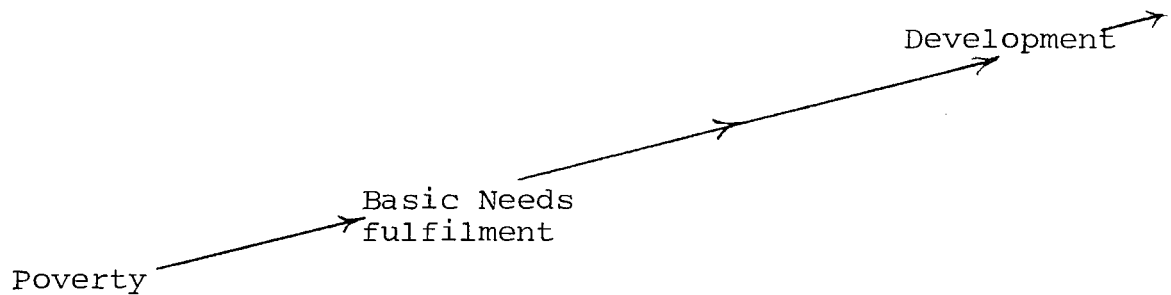
Accompanied with such evidence (which not only vividly suggests the especially disadvantaged status of women and children, but also indicates the magnitude of the problem of poverty and minimum basic needs fulfilment faced by the developing countries), leading developmentalists are beginning recently to emphasize the further, and indeed a critical need for an understanding of poverty in order to accomplish the fulfilment of basic needs ideal. For example, in 1980 also, William Paul McGreevey wrote : " The ultimate success or failure of development policy depends on the progress of the poor in attaining enough food, good health and longevity, satisfying and remunerative work, and the chance for personal growth through education." (15). In this sense, poverty and basic needs are intricately linked, as indeed is pointed out by Streeten and Burki (16) when they say that " the aim of a basic needs strategy is, then, to increase and redistribute production so as to eradicate deprivation that arises from lack of basic goods and services." On the subject of deprivation, Amartya Sen writes, " Poverty is, of course, a matter of deprivation." (17).

(15) William Paul McGreevey, ' Third World Poverty', Lexington Books, 1980. (my emphasis)

(16) Streeten and Burki, 1978, opt.cit.

(17) Amartya Sen, 1981, ' Poverty and Famines- An Essay on Entitlement and Deprivation ', Clarendon Press, Oxford.

In the light of such an awareness, and for the purposes of this thesis, it is felt that a section should be devoted to Poverty and basic needs. But before moving on to that, I would like to specify that the goal of 'development' in this thesis is seen very much as a continuum which looks something like this:



My emphasis, therefore, throughout the analysis contained in this thesis, shall be on Poverty and Basic Needs fulfilment within the more general goal of Development. In other words, my concern mainly is with poverty, and its alleviation, and with the movement towards the fulfilment of basic needs ; (and more specifically still, with the status and role of women within this objective, in the context of rural Bangladesh). In this sense, both poverty alleviation and the fulfilment of basic needs are seen to be essential prerequisites to any development in the developing world.

Poverty and Basic Needs

Both relative and absolute deprivation are essential ingredients of the common understanding of poverty. If people are dying of hunger in a famine situation, it is legitimate to see it as a case of acute poverty - in other words, the absolute deprivation of the people is obvious, even without probing into the relative picture. On the other hand, even if no one goes hungry, but some are terribly deprived compared to others and see their relative deprivation as acute, then it is legitimate to diagnose poverty, even though the criteria here are entirely relative rather than absolute.

Both the extent of absolute and relative poverty, or to put it another way, both the extent of poverty and inequality, is staggering when one looks at the data for the world. Paukert (1973) (18) has recently compiled data on absolute poverty and relative inequality in a large number of countries (see tables 1.1 & 1.2). On the same issue of relative inequality between nations, Andre Gunder Frank has written (19) : " Thirty developed countries, having less than 30 per cent of the world's current population and foreseeably only 20 per cent of the world's population in the year 2000, now account for approximately 90 per cent of the world's income, financial resources, and steel production, and 95 per cent of the world's scientific and technological production. Eight of the countries alone have 80 per

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- (18) F Paukert, 1973, ' Income Distribution at Different Levels of Development: A Survey of Evidence ', International Labour Review, Aug-Sept pp97-125; (as cited in Fields 1980).
- (19) Andre Gunder Frank, ' Millenium': Journal of International Studies, Vol 7 No 2, 1978, p 153 ; (as cited in Clements 1980)

Table 1.1 : Poor majority populations in several developing countries

Country/date	Total population (millions)	% of population receiving less than \$150 per capita	"Poor majority" population (millions)
Near East and South Asia			
India (1964-5)	537.0	91	488.7
Pakistan (including Bangladesh) (1966-7)	111.8	72	80.5
Egypt (1964-5)	33.3	50	16.6
Turkey (1963)	35.2	45	15.9
Sri Lanka (1963)	12.5	68	8.5
Tunisia (1970)	4.9	52	2.5
Regional subtotal	734.7	83	612.7
East Asia			
Thailand (1962)	34.7	65	22.6
Korea, South (1970)	32.0	45	14.4
Philippines (1971)	37.1	32	11.9
Vietnam, South (1964)	17.9	44	7.9
Regional subtotal	121.7	47	56.8
Africa			
Sudan (1963)	15.2	81	12.3
Tanzania (1967)	13.2	91	12.0
Kenya (1968-9)	10.8	86	9.3
Madagascar (1960)	6.5	88	5.7
Malawi (1969)	4.5	96	4.3
Chad (1958)	3.2	96	3.1
Senegal (1960)	3.8	69	2.6
Dahomey (1959)	2.5	94	2.3
Ivory Coast (1970)	4.2	45	1.9
Sierra Leone (1968-9)	2.5	70	1.8
Zambia (1959)	4.2	20	0.8
Botswana (1971-2)	0.6	84	0.5
Gabon (1968)	0.5	22	0.1
Regional subtotal	71.7	79	56.7
Latin America			
Brazil (1970)	93.6	45	42.1
Colombia (1970)	21.1	42	8.9
Peru (1970-1)	13.6	35	4.8
Ecuador (1970)	6.1	70	4.3
Dominican Republic (1969)	4.3	38	1.6
Chile (1968)	9.8	16	1.6
El Salvador (1969)	3.5	43	1.5
Honduras (1967-8)	2.6	58	1.5
Guatemala (1966)	5.2	22	1.1
Uruguay (1967)	2.9	23	0.7
Jamaica (1958)	2.0	27	0.5
Costa Rica (1971)	1.7	14	0.2
Panama (1969)	1.5	16	0.2
Guyana (1955-6)	0.8	28	0.2
Regional subtotal	168.7	41	69.2
All regions (37 countries)	1096.8	72.5	795.4

Table 1.1 : Note

Countries included are the thirty-seven AID-assisted countries for which income-distribution data are reported in Shail Jain, "Size Distribution of Income: Compilation of Data," International Bank for Reconstruction and Development, Bank Staff Working Paper No. 190, November 1974. Twenty-seven AID-assisted countries are not included for lack of income-distribution data. These are Afghanistan, Bolivia, Burundi, Cameroon, Central African Republic, Ethiopia, Gambia, Ghana, Guinea, Haiti, Indonesia, Khmer Republic, Laos, Lesotho, Liberia, Mali, Morocco, Nepal, Nicaragua, Niger, Paraguay, Rwanda, Swaziland, Togo, Upper Volta, Yemen Arab Republic, and Zaire. But the total 1970 population of these countries was only 242 million, compared to 1,097 million for the countries included in the table. The method and sources for the table are as follows. Population and GDP data are for 1970 (converted to 1969 prices in all cases), except for Pakistan, Sierra Leone, Tanzania, Thailand, India, Senegal, Sudan, South Vietnam, Egypt, and Zambia (1969 data); Botswana (1968 data); Chad (1963 data); and Dahomey (1967 data). Dates for the income-distribution data are shown in parentheses next to the country name. Income-distribution data in the IBRD source just cited were presented in the form of income shares accruing to twenty equal subgroups of the population. To calculate the percentage of the population receiving an annual per capita GDP below \$150, the income share of a subgroup was multiplied by the total GDP figure for that country. This product was then divided by the number of individuals in that subgroup or the total population divided by 20. GDP and population refer to the most recent year for which data are available. With \$150 as a guide, the closest 5% interval was located and, assuming equal distribution within this interval, the approximate percentage determined. The order in which countries are presented within regions was determined by the magnitude and the poor majority of the population (col. 3).

Sources: AID (1975). The sources for the population and GDP figures were the U.N. Statistical Yearbook, 1969 and the U.N. Yearbook of National Accounts Statistics, 1971, V, III, respectively. GNP deflator indexes found in "Gross National Product", AID, F M SRD, May 1974, were used to convert all GDP figures to 1969 prices. (Exceptions: Botswana, Jamaica, Sri Lanka, Chad, Dahomey, and Guyana GNP deflators were taken from an approximate regional table of Africa or Latin America in the U.N. Statistical Yearbook, 1973.)

Table 1.2 : Size distribution of personal income before tax in fifty-six countries

Country & level of GDP per head	Percentile of Recipients					
	Below 20%	21%-40%	41%-60%	61%-80%	81%-95%	96%-100%
Under \$100						
Chad (1958)	8.0	11.6	15.4	22.0	20.0	23.0
Dahomey (1959)	8.0	10.0	12.0	20.0	18.0	32.0
Niger (1960)	7.8	11.6	15.6	23.0	19.0	23.0
Nigeria (1959)	7.0	7.0	9.0	16.1	22.5	38.4
Sudan (1969)	5.6	9.4	14.3	22.6	31.0	17.1
Tanzania (1964)	4.8	7.8	11.0	15.4	18.1	42.9
Burma (1958)	10.0	13.0	13.0	15.5	20.3	28.2
India (1956-7)	8.0	12.0	16.0	22.0	22.0	20.0
Madagascar (1960)	3.9	7.8	11.3	18.0	22.0	37.0
Group average	7.0	10.0	13.1	19.4	21.4	29.1
\$101-\$200						
Morocco (1965)	7.1	7.4	7.7	12.4	44.5	20.6
Senegal (1960)	3.0	7.0	10.0	16.0	28.0	36.0
Sierra Leone (1968)	3.8	6.3	9.1	16.7	30.3	33.8
Tunisia (1971)	5.0	5.7	10.0	14.4	42.6	22.4
Bolivia (1968)	3.5	8.0	12.0	15.5	25.3	35.7
Ceylon (Sri Lanka) (1963)	4.5	9.2	13.8	20.2	33.9	18.4
Pakistan (1963-4)	6.5	11.0	15.5	22.0	25.0	20.0
South Korea (1966)	9.0	14.0	18.0	23.0	23.5	12.5
Group average	5.3	8.6	12.0	17.5	31.6	24.9
\$201-\$300						
Malaya (1957-8)	6.5	11.2	15.7	22.6	26.2	17.8
Fiji (1968)	4.0	8.0	13.3	22.4	30.9	21.4
Ivory Coast (1959)	8.0	10.0	12.0	15.0	26.0	29.0
Zambia (1959)	6.3	9.6	11.1	15.9	19.6	37.5
Brazil (1960)	3.5	9.0	10.2	15.8	23.1	38.4
Ecuador (1968)	6.3	10.1	16.1	23.2	19.6	24.6
El Salvador (1965)	5.5	6.5	8.8	17.8	28.4	33.0
Peru (1961)	4.0	4.3	8.3	15.2	19.3	48.3
Iraq (1956)	2.0	6.0	8.0	16.0	34.0	34.0
Philippines (1961)	4.3	8.4	12.0	19.5	28.3	27.5
Colombia (1964)	2.2	4.7	9.0	16.1	27.7	40.4
Group average	4.8	8.0	11.3	18.1	25.7	32.0
\$301-\$500						
Gabon (1960)	2.0	6.0	7.0	14.0	24.0	47.0
Costa Rica (1969)	5.5	8.1	11.2	15.2	25.0	35.0
Jamaica (1958)	2.2	6.0	10.8	19.5	31.3	30.2
Surinam (1962)	10.7	11.6	14.7	20.6	27.0	15.4
Lebanon (1955-60)	3.0	4.2	15.8	16.0	27.0	34.0
Barbados (1951-2)	3.6	9.3	14.2	21.3	29.3	22.3
Chile (1968)	5.4	9.6	12.0	20.7	29.7	22.6
Mexico (1963)	3.5	6.6	11.1	19.3	30.7	28.8
Panama (1969)	4.9	9.4	13.8	15.2	22.2	34.5
Group average	4.5	7.9	12.3	18.0	27.4	30.0
\$501-\$1000						
Republic of South Africa (1965)	1.9	4.2	10.2	26.4	18.0	39.4
Argentina (1961)	7.0	10.4	13.2	17.9	22.2	29.3
Trinidad and Tobago (1957-8)	3.4	9.1	14.6	24.3	26.1	22.5
Venezuela (1962)	4.4	9.0	16.0	22.9	23.9	23.2
Greece (1957)	9.0	10.3	13.3	17.9	26.5	23.0
Japan (1962)	4.7	10.6	15.8	22.9	31.2	14.8
Group average	5.1	8.9	13.9	22.1	24.7	25.4

Table 1.2 (continued)

Country and level of GDP per head	Below 20%	21%-40%	41%-60%	61%-80%	81%-95%	96%-100%
\$1001-\$2000						
Israel (1957)	6.8	13.4	18.6	21.8	28.2	11.2
United Kingdom (1964)	5.1	10.2	16.6	23.9	25.0	19.0
Netherlands (1962)	4.0	10.0	16.0	21.6	24.8	23.6
Federal Republic of Germany (1964)	5.3	10.1	13.7	18.0	19.2	33.7
France (1962)	1.9	7.6	14.0	22.8	28.7	25.0
Finland (1962)	2.4	8.7	15.4	24.2	28.3	21.0
Italy (19489	6.1	10.5	14.6	20.4	24.3	24.1
Puerto Rico (1963)	4.5	9.2	14.2	21.5	28.6	22.0
Norway (1963)	4.5	12.1	18.5	24.4	25.1	15.4
Australia (1966-7)	6.6	13.4	17.8	23.4	24.4	14.4
Group average	4.7	10.5	15.9	22.2	25.7	20.9
\$2001 and above						
Denmark (1963)	5.0	10.8	18.8	24.2	26.3	16.9
Sweden (1963)	4.4	9.6	17.4	24.6	26.4	17.6
United States (1969)	5.6	12.3	17.6	23.4	26.3	14.8
Group average	5.0	10.9	17.9	24.1	26.3	16.4

Source: Paukert (1973: tab. 6). (as cited in Fields 1980 p 2-7).

cent of the world's non-militarymanufactured exports :. West Germany 21 per cent, United States 17 per cent, Japan 14 per cent, the United Kingdom, France and Italy each about 8 per cent and Canada 4 per cent. Moreover, the 30 per cent of the world's population living in these 30 developed countries (both capital and socialist) produce 60 per cent of the world's agricultural output and consume over 60 per cent of the world's food measured in the wheat consumption equivalent, or 40 per cent of the world's dietary energy."

Gary S Fields (1980) has outlined the fundamental concepts and differences of various approaches to absolute poverty and relative inequality (20). In summary, he has outlined four classes of measures :-

1. Relative inequality approach
2. Absolute income approach
3. Absolute poverty approach
4. Relative poverty approach

It is perhaps useful and interesting to go over these four distinct approaches to poverty and relative inequality, as they do bring to the forefront some of the stark differences between the various ways of looking at the problem. Each approach has its own particular use and interest, and of course, they are all of importance to any student of poverty and inequality. However, as the emphasis in this thesis is more particularly on absolute poverty, the ' absolute poverty approach ' is found to be of more immediate interest here. I have therefore elaborated on that approach, while leaving the others fairly brief.

(20) Gary S Fields, 1980, ' Poverty, Inequality and Development', Cambridge University Press, pp 13-32.

1. The relative inequality approach is adopted in most studies of income distribution in developing countries. Professor Kuznets (1955, 1963, 1966) was perhaps the pioneer of this approach, and some of the most recent contributions are those of Adelman and Morris (1973), Chenery et al (1974) and Ahluwalia (1976). Sometimes, in research on relative inequality, the Lorenz curve itself is taken as the criterion for inequality comparisons. The closer the Lorenz curve is to the forty-five degree line, the more equal the distribution of income is said to be.

All relative inequality measures in current use are based on the Lorenz curve in two senses : (a) They use the income distribution data depicted by the Lorenz curve to construct an index of income inequality, and (b) Like the Lorenz curve, they are mean independent, that is, if everyone's income changes by some constant percentage, relative inequality is unchanged. The Gini coefficient bears the closest relationship to the Lorenz curve, being the ratio of the area between the Lorenz curve and the forty-five degree line to the total area of the triangle. Next most closely related to the Lorenz curve is the family of fractile measures, such as the income share of the poorest 40 per cent or richest 5 per cent. Fractile shares can be read directly from the Lorenz curve, but they use only part of the information in it.

2. The absolute income approach makes two basic welfare judgements : a) that more income is preferred to less, and
 b) that a dollar of income accruing to a poor person adds more to social welfare than a dollar accruing to a richer person.

A well known example of the absolute income approach is the work of Atkinson (1970), who suggests that we conceive of social

welfare in the economy as the sum of the values placed on each individual's (or family's) income. Hence the function takes the form:

$$W = U(Y_1) + U(Y_2) + \dots U(Y_n)$$

where W is social welfare and U is the utility of an individual or family. The form of this function means that each family's utility is a function only of its own income, more income increases utility but at a decreasing rate, all families are treated alike in social welfare judgements, and total social welfare is the sum of each family's well-being. (For details, see Atkinson 1970, ' On the Measurement of Inequality', Journal of Economic Theory 2: 244-63).

Another example of the absolute income approach is the work of Ahluwalia and Chenery (1974). Their proposal is to divide society into socio-economic groups according to assets, income levels, and so on, and to measure the income growth of each. Certain poverty groups - such as small farmers, landless labourers, and the urban unemployed - may be defined. In practice though, the population is divided into quintile groups. The overall rate of growth of welfare is given by :

$$G = W_1 g_1 + W_2 g_2 + W_3 g_3 + W_4 g_4 + W_5 g_5$$

where g_i is the income growth of the i th quintile, ordered from lowest to highest, and w_i is the welfare weight assigned to the growth of group i 's income. (For details see Chenery et al 1974, opt. cit.).

3. The absolute poverty approach differs from the absolute income approach in so far as it concentrates on changes in economic well-being of the poor to the neglect of the rest of the income distribution. This approach is of particular relevance to this thesis, due to its obvious link with the basic-needs issue.

For a full understanding of 'the poor', according to this approach, one must first define 'poverty' in absolute terms. In his famous study of poverty in York, Seebom Rowntree (1970) defines families as being in 'primary poverty' if their "total earnings are insufficient to obtain the minimum necessities for the maintenance of merely physical efficiency." (21). It is not surprising that biological considerations related to the requirements of survival or work efficiency have often been used in defining the 'poverty line'. Starvation, clearly, is the most telling aspect of poverty.

Referring to this view of absolute poverty, Ahluwalia and Chenery (1974) comment that the primary concern here is with " absolute standards of living in terms of calorie intake and nutrition levels, clothing, sanitation, health, education, and so on." (22) For this we need a measurement of poverty which reflects deficiencies in these essential requirements. To the extent to which these deficiencies are reflected in income levels, such a measure can be approximated by comparing absolute levels of income or consumption of different sections of the population with ' minimum levels ' somehow defined ; in Sen's words, 'the poor'

(21) Seebom Rowntree 1901, ' Poverty - A Study of Town Life ', London : Macmillian ; (as cited in A K Sen 1981, ' Poverty and Famines ' OUP.)

(22) Ahluwalia and Chenery 1974, ' Redistribution with Growth ' OUP, Ch.2.

are those people whose consumption standards fall short of the defined norms, or whose incomes lie below the poverty line. (23)

The incidence of poverty in developing countries defined in absolute nutritional terms has powerful appeal for dramatizing the need for policy action in both domestic and international spheres. Estimates of this type have been attempted for some countries using 'poverty lines' for each country to measure population below these levels. See, for example, Dandekar and Rath (1971), Fishlow (1972), Anand (1977), Alamgir (1976), Bhatta (1974), Osmani (1978), Fields and Fei (1978), and so on. These studies use available survey data and apply minimum levels defined in terms of income or consumption, based on minimum nutritional requirements. International agencies have also utilized this approach by estimating poverty lines for the development world based on income figures that correspond with ability to purchase an internationally defined bundle of 'minimum needs', which has largely to do with 'minimum nutritional requirements', or 'minimum consumption needs'. The United States Agency for International Development, for example, makes use of the figure of US \$ 150 per capita in less-developed countries (see AID, 1975); the World Bank uses \$ 50 or \$ 75 (see Ahluwalia, 1974); the Food and Agriculture Organization of the United Nations uses the figure of \$ 75 (see FAO 1973); the Asian Development Bank uses the figure of approximately \$ 80 (see ADB 1983); and so on. (24)

(23) Amartya Sen 1981 opt.cit.

(24) These figures correspond to prices of specified years and need to be adjusted for inflation to get the corresponding figure for 1985.

Ahluwalia and Chenery (1974) have derived estimates of population below the poverty line in 1969 by combining income share data with total income estimates obtained from the national accounts. For each country they have estimated the population living below two arbitrary 'poverty lines' of annual per capita incomes of US \$ 50 and US \$ 75 (in 1971 prices). The estimates are given in Table 1.3. (25). Such estimates are obviously extremely crude from a statistical point of view, as Ahluwalia and Chenery are quick to point out. They also suffer from conceptual problems involved in defining a minimum real income level to be applied across all countries. To be socially meaningful, minimum levels can not be defined according to some absolute biological standards but must necessarily vary with the general level of economic, social, and political development. Even a biological standard does not lead to the same level of minimum real income. Variations in climate are a well-known factor affecting minimum requirements of both food and housing for the same level of welfare. These and other limitations of the 'poverty line', along with some of its attractions, are further discussed in greater depth a little later on in this section. Despite the limitations however, it is instructive to consider the resulting estimates of incidence of absolute poverty presented in table 1.3.

(25) Ahluwalia and Chenery et al (1974) opt.cit. p 12.

The population below any poverty line can be read off the Lorenz curve at the point where the slope of the curve equals the ratio of the poverty income level to per capita income. The relative income concept for these calculations is personal income but data on personal income are not available in most countries. They have therefore arbitrarily taken 85 per cent of GNP per capita at factor cost (1971 US dollar) as a measure of personal income.

Table 1.3 : Estimates of Population below Poverty Line in 1969

Country	1969 GNP Per Capita	1969 Population (millions)	Population below \$50		Population below \$75	
			Millions	% of Total Population	Millions	% of Total Population
LATIN AMERICA						
Ecuador	264	5.9	2.2	37.0	3.5	58.5
Honduras	265	2.5	0.7	28.0	1.0	38.0
El Salvador	295	3.4	0.5	13.5	0.6	18.4
Dominican Republic	323	4.2	0.5	11.0	0.7	15.9
Colombia	347	20.6	3.2	15.4	5.6	27.0
Brazil	347	90.8	12.7	14.0	18.2	20.0
Jamaica	640	2.0	0.2	10.0	0.3	15.4
Guyana	390	0.7	0.1	9.0	0.1	15.1
Peru	480	13.1	2.5	18.9	3.3	25.5
Costa Rica	512	1.7	-	2.3	0.1	8.5
Mexico	645	48.9	3.8	7.8	8.7	17.8
Uruguay	649	2.9	0.1	2.5	0.2	5.5
Panama	692	1.4	0.1	3.5	0.2	11.0
Chile	751	9.6	-	-	-	-
Venezuela	974	10.0	-	-	-	-
Argentina	1054	24.0	-	-	-	-
Puerto Rico	1600	2.8	-	-	-	-
TOTAL	545	244.5	26.6	10.8	42.5	17.4
ASIA						
Burma	72	27.0	14.5	53.6	19.2	71.0
Sri Lanka	95	12.2	4.0	33.0	7.8	63.5
India	100	537.0	239.0	44.5	359.3	66.9
Pakistan (E and W)	100	111.8	36.3	32.5	64.7	57.9
Thailand	173	34.7	9.3	26.8	15.4	44.3
Korea	224	31.0	1.7	5.5	5.3	17.0
Philippines	233	37.2	4.8	13.0	11.2	30.0
Turkey	290	34.5	4.1	12.0	8.2	23.7
Iraq	316	9.4	2.3	24.0	3.1	33.3
Taiwan	317	13.8	1.5	10.7	2.0	14.3
Malaysia	323	10.6	1.2	11.0	1.6	15.5
Iran	350	27.9	2.3	8.5	4.2	15.0
Lebanon	570	2.9	-	1.0	0.1	5.0
TOTAL	132	889.7	321.0	36.1	502.1	56.4
AFRICA						
Chad	75	3.5	1.5	43.1	2.7	77.5
Dahomey	90	2.6	1.1	41.6	2.3	90.1
Tanzania	92	12.8	7.4	57.9	9.3	72.9
Niger	94	3.9	1.3	33.0	2.3	59.9
Madagascar	119	6.7	3.6	53.8	4.7	69.6
Uganda	128	8.3	1.8	21.3	4.1	49.8
Sierra Leone	165	2.5	1.1	43.5	1.5	61.5
Senegal	229	3.8	0.9	22.3	1.3	35.3
Ivory Coast	237	4.8	0.3	7.0	1.4	28.5
Tunisia	241	4.9	1.1	22.5	1.6	32.1
Rhodesia	274	5.1	0.9	17.4	1.9	37.4
Zambia	340	4.2	0.3	6.3	0.3	7.5
Gabon	547	0.5	0.1	15.7	0.1	23.0
South Africa	729	20.2	2.4	12.0	3.1	15.5
TOTAL	303	83.8	23.8	28.4	36.6	43.6
GRAND TOTAL	228	1218.0	371.4	30.5	583.2	47.9

The countries included in the table account for about 60 per cent of the total population of the developing countries including China. About a third of this population falls below the poverty line defined by US \$ 50 per capita and about half falls below US \$ 75 per capita. Much of this is clearly due to the low levels of per capita income of many countries rather than to highly skewed income distribution patterns. India, Pakistan, Bangladesh and Sri Lanka with 55 per cent of the total population together account for about 75 per cent of the population living below US \$ 50. These countries are all characterized by low to moderate inequality. More interestingly, the table shows that a high per capita income does not ensure that there is no 'absolute poverty' problem. Differences in the patterns of income distribution between countries mean that the poverty problem may be equally serious in countries with very different per capita income levels. Both Ecuador and Sri Lanka have about a third of the population below US \$ 50 poverty line even though Ecuador's per capita income is three times as high. Similarly, Peru and the Philippines both have a quarter of the population below the poverty line, although the per capita income of Peru is twice that of Philippines.

These estimates provide some indication of the scale of absolute poverty in underdeveloped countries and its relationship to per capita GNP and the distribution of income. Much of the poverty problem is a direct reflection of low levels of per capita income, but skewed distributions patterns are also important. Observed differences in the degree of inequality are such as to offset per capita incomes which are two or three times higher. It follows that development strategies which succeed in raising the level of per capita income may not have much impact on the poverty problem

if they are accompanied by deterioration in relative income shares.

Even after we have defined the concept of poverty and identified broadly who the poor are, and specified that the concept of poverty is concerned with the conditions of the poor, much remains to be done. Not only do we have to identify the characteristics of the poor, an exercise that is crucial to any understanding of both the poor and the means by which to help them, but we do also have the problem of aggregation over the group of the poor, and this involves moving from the description of the poor to some overall measure of 'poverty' as such. It is important to add here however, that in fact the problem of description and that of measurement are not distinct at all and it must be remembered that in order to 'measure' the poor, one is in effect describing them. It is the degree and the complexity of the description that is reflected in the measurement index used. This point will become more clear as we move on to examine the most commonly used measurement indices for identifying the extent or degree of poverty. The nature of poverty on the other hand is better tackled by looking at poverty profiles. Both of these ways of examining the degree and nature of poverty shall be looked into in greater depth later in the chapter. (I have not examined in any detail the issue relating to the measurement of development, but for those who are interested, see Nancy Baster, ed. ' Measuring Development: The Role and Adequacy of Development Indicators ', Frank Cass & Co. Ltd., London, 1972).

For now, we must turn briefly to examine some of the limitations of the 'poverty line' based on generally accepted 'nutritional norms'. Sen has called it the 'biological approach' (see Sen 1981) and has presented various arguments that point out the several problems with its use (see Sen 1980, 1981). Webb has also mapped out remarkably well the conceptual and practical difficulties associated with the " minimum dietary needs " measure of absolute poverty (26).

First, there are significant variations related to physical features, climatic conditions and work habits. (See for example, Townsend 1974, Sukhatme 1977 & 1978, Srinivasan 1977 & 1979). To be socially meaningful, minimum levels can not be defined according to some absolute biological standards, but must necessarily vary with the demographic and social characteristics of different communities, as well as with different constitutions, habits, and cultures of its people. The cogency of nutritional norms has been questioned because of the interpersonal variability of nutritional requirements and the existence of ' adaptive mechanisms ' operating over time (27).

Second, the translation of minimum ' nutritional ' requirements into minimum ' food ' requirements depends on the choice of commodities. This reflects on the problem of ' tastes ' (see Osmani 1978). In other words, even though it may be more

(26) Richard Webb 1976 ' On the Statistical Mapping of Urban Poverty and Employment ', World Bank Staff Working Paper no. 227, p 12-16.

(27) See particularly Sukhatme 1977 and 1978 ; and Srinivasan 1979.

cost-effective to choose a minimum diet for meeting specified nutritional requirements from food items sold at specified costs, the reality of the situation is that people's food habits are not, in fact, determined by such a cost maximization exercise. The actual incomes at which specified nutritional requirements are met will depend greatly on the consumption habits and tastes of the people in question; minimum cost diets are likely to contain unaccustomed or virtually unacceptable foods.

Third, for non-food items such minimum requirements are not easy to specify, and the problem is usually solved by assuming that a specified proportion of total income will be spent on food. With this assumption, the minimum food costs can be used to derive minimum income requirements. But the proportion spent on food varies not merely with habits and culture, but also with relative prices and availability of goods and services. Sen (1981) has gone to some length to point out that it is often a problem of declining entitlements as prices of food rise, that leads to starvation.

It is clear to see that the uncritical use of the ' biological approach ' or ' nutritional approach ' (as so called by Sen 1980, 1981), does deserve criticism. However, in making this criticism it is possible to overlook a simple point, which is that malnutrition can provide a basis for a standard of poverty, without poverty being identified as the extent of malnourishment. Sen emphasizes on this line, that the level of income at which an average person will be able to meet his nutritional requirements has a claim to being considered as an appropriate poverty line even when it is

explicitly recognized that nutritional requirements vary inter-personally around that average. In other words, to state that, say " 20 per cent of the population failed to have incomes adequate for buying enough food to meet the average nutritional requirements for that community " is a statement about poverty of some interest of its own, even though it is not at all equivalent to saying that " 20 per cent of the population failed to meet their nutritional requirements ". The two statements are of interest for rather different reasons : the first enlightens us to income deprivation related to some average standard, while the second throws light on the prevalence of actual malnourishment. Thus, considerations of average nutritional requirements can be used for one perspective on poverty, even when nutritional requirements vary from person to person.

Another reason for not discarding the nutritionally-based absolute poverty line is that the method of calculating absolute poverty lines by valuing minimum diet and non-food needs has the advantage of a built-in procedure for correcting for cost-of-living differences within a country, particularly between urban and rural areas (28). Thus poverty lines can be calculated for different regions or urban areas by varying both prices and the components of a minimum needs basket. Comparisons between countries usually involve an even greater element of subjectivity, due to differences in consumption baskets and in relative prices, but again, in principle, an absolute poverty line based on dietary needs

(28) See Webb (1976) *opt. cit.* for a good defense of this argument.

provides a point of reference. There is no need to translate local currency poverty levels into dollar terms; comparisons can be made directly of the numbers of persons falling below the respective (local currency) poverty line in each country. This procedure side-steps the difficulties introduced by exchange rate distortions, and which were highlighted by the Kravis study (29).

In summary, then, the procedure for arriving at absolute poverty levels involves applying international dietary standards for calorie and protein requirements (calculated for world regions by FAO) to the locally available staple foods, allowing for local family size and age composition and if possible for average body weight and climatic differences.

A different concept of the poverty level is based not on an ideal diet, but on actual consumption behaviour. To derive this measure, one starts with a household budget survey, and measures the caloric and protein content of the actual consumption baskets of different income groups. The family expenditure level corresponding to the minimum dietary intake is then identified as the poverty line. This measure of poverty will generally be higher because it allows for an in-efficient use of family income, at least, from the point of view of dietary maximization. This is especially true in cities, where the efficiency achieved in rural areas through adaptation to the environment is upset by different patterns of food availability and tastes, and often, by downgrading of nutritional content through food processing.

(29) Kravis et al. (1975), 'A System of International Comparisons of Gross Product and Purchasing Power', The John Hopkins Press.

Webb (1976) suggests that ideally both of these measures should be derived. He feels that the " ideal diet " measure is more absolute, more stringent and more easily derived with local regional detail. The behavioural measure, however, is a useful tool for nutritional policy because (a) the gap between the behavioural and the ideal poverty lines measures the potential for nutritional improvement through policies (such as education and fortification) that increases the nutritional efficiency of eating habits; and (b) the behavioural measure predicts the nutritional improvement that will result through income increases alone. (30)

Lastly, and very briefly, another special case of the absolute poverty approach is the social organisation principle advocated by Rawls (1971)(31). Rawls regards the optimal income distribution as that which makes the worst-off individual(s) in the economy as well-off as possible. Only if the poorest person's economic position is raised is there a welfare improvement. Nobody else's economic position matters to Rawls, nor does inequality. Income distribution need not be exactly equal at the optimum. Inequalities are tolerable if and only if the absolute welfare of the worst-off individual(s) is higher in the presence of inequality than it would be in its absence. This principle of maximizing the welfare of the poorest individual is known as the ' maximin ' principle.

(30) Richard Webb (1976) opt. cit., p 16.

(31) John Rawls (1971) 'A Theory of Justice', Cambridge, Mass., Harvard University Press.

4. Finally, we must turn to the relative poverty approach. In addition to the approaches already considered, there is a newer one being promulgated by researchers at the World Bank and elsewhere, known as the relative poverty measure (see, for example, Chiswick, 1976). This figure is the absolute income (in constant dollars) received by the poorest 40 per cent of the population or some other predetermined percentage (32). By this approach, economic growth is thought to raise social welfare when the average income of the poorest 40 per cent is higher.

The relative poverty approach suffers serious conceptual limitations for measuring who benefits from economic development. The reason is that development processes are typically uneven, and only some of the poor benefit, not all. If we look at those who are the poorest 40 per cent as such, and continue to look always at those who are the poorest 40 per cent, at different times, we remove from consideration those who originally were in the poorest 40 per cent but who were lifted out because of economic growth. In this way, the relative poverty approach is insensitive to the rate of movement out of poverty, and measures only those left behind.

(32) The choice of the poorest 40 per cent is purely arbitrary. What matters in this approach is the constancy of population share, along with income variability within that share.

The Income-based Measurement of Poverty

The nutrition-based ' biological approach ' for the identification of a ' Poverty line ' has already been discussed in the previous section, along with its advantages and disadvantages. Let us turn now to look at a composite index of poverty, which is of significance along-side the identification of a ' poverty line '. Having defined a ' poverty line ', there are a number of ways in which one can identify 'the poor'.

Let us denote the poverty line by $\hat{\pi}$. ' The poor ' then are those whose incomes are less than $\hat{\pi}$. Proponents of the absolute poverty approach, which is of central importance to this thesis, offer various judgements about the extent of poverty (P):

1. P falls when the number (or proportion) of income recipients (individuals or families) with incomes below $\hat{\pi}$ falls.
2. The larger is the average income of those below $\hat{\pi}$, the lower is P.
3. For the same number of poor and the same average income among the poor, the more unequal is the distribution of income among the poor, the more severe is P. (33)

Absolute poverty measures like those just presented have been used in research in the United States for many years ; see for example, Bowman (1973) or Perlman (1976) for summaries of the

(33) See Gary S Fields 1980, opt. cit.

US literature. But their application to less-developed countries is quite recent. Let us examine each measure in greater detail.⁽³⁴⁾ By such an examination, it will become clear that despite the attractiveness of these absolute poverty measures, each has certain limitations.

The first measure listed is known as the ' head-count measure ' - H for short - which tells the number of people below the poverty line. This is done very simply by just counting the number of the poor, and then expressing poverty as the ratio of the poor to the total number of people in the community in question. If q is the number of people who are identified as being poor, and n the total number of people in the community, then the head-count measure H is simply q/n .

This ' head-count ' measure has at least two serious drawbacks. First, H takes no account of the extent of the short-fall of incomes of the poor from the ' poverty line ' : in other words, it fails to gauge the extent of their poverty : that is, a reduction in the incomes of all the poor without affecting the incomes of the rich will leave this head-count measure completely unchanged. Second, it is insensitive to the distribution of income among the poor; in particular, no transfer of income from a poor person to one who is richer can increase this head-count measure. Both these defects makes the measure H , which is by far the most widely used measure, quite unacceptable as an indicator

(34) See A K Sen 1981, opt. cit. , p 32. - 38

of poverty, and the concept of poverty that lies implicit in it seems eminently questionable.

The second of these measures is known as the ' poverty gap ', and is the aggregate short-fall of income of all the poor from the specific poverty-line ; it thus gives information on the amount needed to raise the incomes of the poor to the poverty standard. The poverty-gap is the second most widely used of the poverty measures. Sen has normalized this index by expressing it as the percentage short-fall of the average income of the poor from the poverty line. This measure - denoted I - he has called the ' income-gap ratio '. Thus, if π is the poverty line, and y^* the average income of those below the poverty line, then I , or the income-gap ratio is
$$\frac{\pi - y^*}{\pi} .$$

The income-gap ratio also has two major drawbacks. Firstly, I is completely insensitive to transfers of income among the poor so long as nobody crosses the poverty line by such transfers. Secondly, it pays no attention whatever to the number or proportion of poor below the poverty line, concentrating only on the aggregate short-fall, no matter how it is distributed and among how many.

So, the head-count measure H ignores the extent of income short-falls, while the income-gap ratio I ignores the numbers involved, as it does not tell the number of people to whom the gap applies. Even a combination of the two measures is still inadequate. If a unit of income is transferred from a person below the poverty line to someone who is richer but who still is (and remains) below the

poverty line, then both the measures H and I will remain completely unaffected. Hence any 'combined' measure based only on these two must also show no response whatsoever to such a change, despite the obvious increase in aggregate poverty as a consequence of this transfer in terms of relative deprivation.

The third measure, the 'Gini coefficient' - denoted by G - takes care of this, by measuring the degree of income inequality among the poor. However, this measure fails to locate the level of their economic malaise - which is done by I - because it measures only dispersion.

Thus, all three commonly used measures of poverty are incomplete when used in isolation. However, when taken together, changes in these measures may provide a comprehensive indication of the extent of poverty of the poor. Amartya Sen (1981) has combined these measures and argued elegantly for the use of a composite index of poverty. The measure recommended by Sen, so called the Sen's Poverty Index, is :

$$P = H [I + (1 - I) G_p] \quad \text{or} \quad P = H (I + G_p - I G_p)$$

where, H = head-count ratio of the poor (ie how many there are);

I = income-gap ratio or the average income short-fall of the poor (ie the gap between the poverty line and the average income of those below the poverty line); and

G_p = Gini coefficient of income inequality among the poor.

The precise axiomatic derivation of this particular way of combining H, I, and G_p , is discussed in Appendix C of Sen (1981). When all the poor have the same income, then the Gini coefficient G of the income distribution among the poor equals zero, and P equals

HI. Given the same average poverty gap and the same proportion of poor population in total population, the poverty measure P increases with greater inequality of incomes below the poverty line, as measured by the Gini coefficient. Thus, the measure P is a function of H (reflecting the number of poor), I (reflecting the aggregate poverty gap), and G (reflecting the inequality of income distribution below the poverty line).

Given suitably disaggregated data, the severity of poverty in various countries and the extent of their progress in alleviating poverty over time can be measured with Sen's poverty Index.

Much as the Sen's Poverty Index is a remarkable index of the extent and degree of poverty, by combining three fundamental measures of poverty, it tells us little about the nature of poverty. By the nature of poverty, I mean the characteristics of the poor - who are the poor? Development specialists have learned that 'the poor' are not a homogenous group of people who, even though sharing their common lack of economic well-being, can not all be sided by the same policies. Rather, poor households have a variety of characteristics, and it is necessary to tailor assistance to their specific needs and problems. For policy purposes, it is therefore important to learn in what ways households that are poor differ from households that have a more adequate income, recognising that these differences may be cause or consequence of low economic status. In other words, there is much more to learn about the poor than just their economic malaise, before we can hope to help them. 'Poverty profiles' identify the differentiating demographic and economic features associated with poverty and permit policymakers

to design policy accordingly. (35)

(35) For a further discussion of this approach, see Chenery et al, 1974, op. cit. pp 19-26 and 237-240.

A Profile of Poverty : Describing the Poor

Who are the poor? What social and economic characteristics are associated with poverty? Such questions related to poverty characteristics rather than poverty measurement pertain to compilation of poverty profiles. Such an approach recognizes that for policy purposes it is important to learn in what ways households that are poor differ from households that have a more adequate income, and further it recognizes that these differences may be cause or consequence of low economic status. Poverty profiles have been mapped out for various countries in the developing world ; to mention a few of the most recent ones: Watanbe and Mueller's Poverty Profile of rural Botswana; Haaland and Keddeman's Poverty Analysis of rural Somalia; and ILO's remarkable compilation of poverty profiles of different areas of rural Asia. (36)

Needless to say, the particular traits of poor households depend on the structure of the economy of which they are part. Nevertheless, it is possible to make some guarded generalizations about certain uniform traits and trends concerning poor households. For the purposes of this thesis, I shall confine my observations to rural

(36) Barbara Watanbe and Eva Mueller, ' A Poverty Profile of Rural Botswana ', World Development Vol 12 No 2 pp 115-127, 1984.

Gunnar Haaland and Willem Keddeman, ' Poverty Analysis: The Case of Rural Somalia ', Economic Development and Cultural Change, July 1984.

ILO 1977, ' Poverty and Landlessness in Rural Asia ', ILO Geneva.

poverty, recognizing that even though certain 'absolute' criteria of poverty apply to all poverty groups, the social and economic characteristics associated with that poverty varies to a considerable extent between rural and urban poverty (37). [I have also attempted to compile a poverty profile for rural Bangladesh in chapter 4, though it must be noted that this task has also been undertaken by various other persons, viz. Alamgir (1978), Mahmud (1981), Januzzi and Peach (1979), Dowling (1983), Hartman and Boyce (1982,1983), World Bank (1983), are but to name a few. Issues related to the status and the socio-economic situation of women in Bangladesh have been highlighted in chapter 5.]

A description of the condition of poor rural people might start with communities or with individuals. Starting with communities would have the advantage of distinguishing two types of situation:

- a) those where the poverty of whole communities is linked to their remoteness or inadequate resources or both; and
- b) those where there are marked differences of wealth and poverty within the same community. (38).

Starting with the individuals would have the advantage of pointing to the disadvantages of females, for example, in many societies, sometimes from the moment of birth. These two dimensions - of

(37) For a detail on Urban Poverty, see Webb 1976, opt. cit.

(38) For a revealing analysis of India village survey data which identifies two polar types of villages - those which are remote, with less irrigation, and more equal distribution of assets, and those which are more accessible, with more irrigation, and greater inequalities of wealth, see Dasgupta 1975 (as cited in Chambers 1983, opt. cit.) Biplab Dasgupta, 1975, ' A Typology of village socio-economic systems from Indian Village Studies ', Economic and Political Weekly Vol X Nos 33-35, pp 1394-414, August.

location and resource base, and of gender - are both significant, and qualify all that follows : some communities are much poorer than others, and more uniformly poor; and women are usually, but not always, poorer than men.

Households are, however, seen as a useful unit for analysis, as they are the common, and increasingly distinct economic entities for production, for earning, and for sharing consumption. A more detailed look at the household as a unit for analysis is undertaken in chapter 2. Here, to make a start, five clusters of disadvantage have been distinguished which can be described towards presenting a composite sketch of a rural poor household. These five clusters of disadvantage are : poverty, physical weakness, vulnerability, isolation, and powerlessness (39). The description of these disadvantages, which follows, draws heavily on evidence presented by Mueller and Watanbe (1984), ILO (1977, 1979), World Bank (1984), Chambers (1983), Chenery et al (1974), Haaland and Keddemen (1984), and Marty Chen (1983), among others, including personal field work experience with BRAC in Bangladesh in 1984.

(39) Clusters of disadvantage have been analysed by Chambers (1983) ' Rural Development - Putting the Last First ', Longman, USA; see Chapter 5 pp 103-139.

(i) The household is poor. It has few assets. Its hut, house or shelter is small, made of wood, bamboo, mud, grass, reeds, palm fronds, or hides, and has little furniture : Mats or hides for sleeping, perhaps a bed, cooking pots, a few tools. There is no toilet or an unsanitary one. The household has no land, or has land which does not assure or barely assures subsistence, or which is rented or sharecropped. It has no livestock, or has only small stock (hens, ducks, goats, a pig, sheep..) or has a few weak cattle or buffalo. The household borrows from neighbours, kin and traders, and is in short-term or long-term debt. Clothes are few and worn until they are very old. Family labour has low productivity : if it farms, its land is marginal or small; if it does not farm, it has little or no control over the means of production, and its main, often only, productive asset is the labour of its members.(40).

The household's stocks and flows of food and cash are low, unreliable, seasonal and inadequate. The household is either locked into dependence on one patron, for whom most work is done, or contrives a livelihood with a range of activities which reflect tenacious ingenuity in the face of narrow margins for survival. Food for cash obtained meet immediate needs and are soon used up. All family members work when they can, except the very young, the very old, the disabled, and those who are seriously sick. Women work long hours both at domestic tasks and outside the home. Returns to the family's labour are low,

(40) For a more detailed discussion of employment issues, see Chenery et al (1974), David Turnham (1971), ILO (1974, 1976, 1977, 1979), World Bank (1984), among others.

and in the slack season often very low, if indeed there is any work then at all. (41).

(ii) The household is physically weak. There is a high ratio of dependents to able-bodied adults.(42). The dependents may be young children, old people, the sick, or handicapped. The ratio of dependents to able-bodied adults is high for one of several reasons:

- because there is no man and the household head is a woman with responsibilities for child-care, food processing, cooking, drawing water, collecting firewood, marketing, and domestic chores, besides earning a livelihood for the family ; or
- because of the stage of the domestic cycle when there are small children demanding time, food and care but not yet contributing economically ; or
- because adults have been permanently weakened or disabled by accident or illness ; or
- because of early deaths of other adults ; or
- because active adults have dispersed or migrated to escape poverty or debts or to survive.

The high dependency ratio means that the earning members are continuously, or at least seasonally pressed for time and energy. The household is seasonally hungry and thin, and its members

(41) For a comprehensive analysis of the seasonal dimensions to rural poverty, see Chambers, Longhurst and Pacey (1981) eds., ' Seasonal Dimensions to Rural Poverty ', especially chapter by Jeremy Swift ' Labour and Subsistence in a Pastoral Economy '.

(42) For a detailed examination of the issue of dependents, see ILO/NORAD 1983, UNICEF 1981, Webb 1976.

weakened by interactions of parasites, sickness and malnutrition. Pregnancy, birth and death are common. Birth weights are low. All have small bodies, stunted compared with their genetic potential. (43).

(iii) The household is isolated. The household is isolated from the outside world. Its location is peripheral, either in an area remote from town and communications, or removed within the village from the centres of trading, discussion and information. Often illiterate and without a radio, its members are not well-informed about events beyond the neighbourhood. Its children do not go to school, or go and drop out early (44). Its members either do not go to public meetings, or go and do not speak. They do not receive advice from extension workers in agriculture or health. They travel only to seek work or to beg from relatives. They are tied to their neighbourhood by obligations to patrons, by debts, by immediate needs that must be satisfied, or by lack of means for travel (45).

(43) For malnutrition effects of poverty see Lincoln Chen et al (1981), Reutlinger & Selowsky for the World Bank (1976), ILO (1977), Youssef et al (1982). See also Susan Schofield (1974) 'Seasonal factors affecting nutrition in different age-groups and especially preschool children', Journal of Development Studies 11, 1 October.

(44) See Coombs and Ahmed (1974) and eds. (1975), World Bank (1980), Simmons ed. (1980), UNESCO (1974 & 1980), among others, for the role of education and literacy in rural development.

(45) See Chambers (1983); for effects of migration on women see Buvinic et al (1983) among others.

(iv) The household is vulnerable. The household has few buffers against contingencies. Small needs are met by drawing on slender reserves of cash, by reduced consumption, by barter, or by loans from friends, relatives and traders. Disasters and social demands - crop failure, famine, a hut burning down, an accident, sickness, a funeral, a dowry, brideprice, wedding expenses, costs of litigation or of a fine - have to be met by becoming poorer.(46). This often means selling or mortgaging assets - land, livestock, trees, cooking pots, tools and equipment, ration books, jewellery, a standing crop, or future labour, often on distress sale or usurious terms (47). Vulnerability is heightened during wet seasons when food shortages, sickness and agricultural work coincide, and is acute when rain and agricultural seasons fail. The family at such times is especially prone to sickness and death.

(v) The household is powerless. Ignorant of law, without legal advice, competing for employment and services with others in a similar condition, the household is an easy victim of predation by the powerful. It has inherited or descended to low social status. Its position is weak in negotiating terms for the use of its labour or the sale of its produce or assets. It is easily exploited by money-lenders, merchants, landlords, petty officials and police. Aware of the power of the richer rural and urban people and of their alliances, the household avoids political activity which

(46) See chapter 6 of this thesis and also Cuny 1983

(47) See Mueller and Watanbe (1984), Marty Chen (1983), Chambers (1983). See also Tables 1.2 and 1.3 in Appendix 1.

might endanger future employment, tenancy, loans, favours or protection. It knows that in the short term accepting powerlessness pays (48).

This sketch may perhaps appear exaggerated to some readers, and there certainly are exceptions to what has been described. Poor people in different rural settings have different patterns of deprivation. It would be too great a task here to go into a detail of these differences ; but the purpose of this description is to present a picture that holds true for a majority of the rural poor population in developing countries ; and references that have been cited throughout the description should certainly add credence to the view that it is safe to assume that this is very possibly the case. Commenting on the above description, Chambers writes, " Most poverty, quite simply, goes unseen ; and where perceived, is only seen in one or a few dimensions. My best judgement is that for the greater concentrations of rural poverty in South and Southeast Asia, in Africa, and in Latin America, most of (this) description holds true, applying broadly to perhaps a half to three quarters of the rural people in the third world ". (49).

The vicious circle of poverty, or the ' poverty trap ' as so defined by Alamgir (1978) could certainly be seen as an interlocking of these clusters of disadvantages. Chambers (1983) has gone a step further, and linking the five clusters, he has called it the

(48) For a comprehensive analysis of the power structures within villages, see BRAC 1980 " The Net : Power Structure in Ten Villages ", BRAC, 66 Mohakhali, Dhaka 12, Bangladesh, February.

(49) Chambers (1983) opt.cit. p 111.

' deprivation trap '. Figure 1.1 (below) gives the diagramatic presentation of this interlocking ' deprivation trap ' which gives twenty possible causal relations. The strength of these linkages varies, and Chambers goes into their detailed illustration by starting with each cluster in turn (50).

Figure 1.1 : The Deprivation Trap

Image redacted due to third party rights or other legal issues



Source : Chambers (1983) p 112.

(50) Chambers (1983) opt.cit. p 112-139.

The above, rather simplified sketch of a rural poor household should give the reader some idea of the magnitude of the problem of rural poverty in the developing world. This was nevertheless, a look at some of the perhaps micro-level, or household level characteristics. Needless to say, there are various macro-level, or national level (even regional level) characteristics of poor nations that correspond with, explain, and further exacerbate the condition of the rural poor. Perhaps among recent literature, the most comprehensive account of rural poverty profiles has been presented by ILO in their study on ' Poverty and Landlessness in Rural Asia ' (1977). Ten empirical studies were undertaken in an attempt to determine the trends in absolute and relative incomes of the rural poor in seven Asian countries : Bangladesh, India, Indonesia, Malaysia, Pakistan, the Philippines, and Sri Lanka. These countries account for approximately 70 per cent of the rural population of the non-socialist developing world. The ILO's view is that since the average income of these seven countries is below that of the rest of the developing market economy countries, it is likely that their share of the poor is even greater. The findings of this study are discussed briefly in Appendix 1 and shown in charts 1-10 in that Appendix.

Here, I shall attempt to summarize the key factors and characteristics of rural poverty which together help to formulate a ' poverty profile '. Most of these points have already been mentioned, but the hope here is to give it further clarity. I shall start at the macro-level and move on to the micro-level; the first set of points cover the evidence which signifies the general trends and facts that can be

observed about poor rural communities within poor nations of the world, and the evidence for this is taken mainly from ILO (1977, 1979), Chenery et al (1974), Nancy Birdsall (1980), Amartya Sen (1981), Chambers (1983), World Bank (1983), Dowling (1983), Stewart (1985), Webb (1976), Fields (1980), BRAC (1984), though the literature available on this is truly vast, as is the literature available for the second set of points; the second set of points cover the evidence which qualifies the conditions of poor households within poor rural communities, and the evidence for this is taken mainly from Mueller and Watanbe (1984), Haaland and Keddeman (1984), Marty Chen (1983), Hartman and Boyce (1983), Chambers (1981, 1983), BRAC (1974-1984), Morris (1979).

Significant trends and facts observed about poor communities within poor nations :-

1. Even under conditions of over-all growth, its benefits do not always 'trickle down' to those most in need, ie. the poorest factions. ("... sustained growth in a country can be accompanied by continuing poverty of certain groups of people, in that their income in real terms remains stagnant or is even falling." ILO, 1977).
2. The proportion of the population below the ' poverty line ' has been increasing over time. (ILO 1979, Sen 1981, Chambers 1983, World Bank 1983).
3. The real incomes of the lowest decile or quintile groups have been declining. (ILO 1977, Fields 1980, World Bank 1983).
4. A majority of the labour force is employed in the agriculture sector. (ILO 1979 , Alamgir 1978, World Bank 1980).

5. The real wages of the more traditional types of labour, particularly of agricultural labourers, have failed to rise. (ILO 1977, World Bank 1983, Alamgir 1978).
6. A substantial proportion of the poor are engaged in production as "independent" workers, ie. they are self-employed, and they suffer from very low wages. (Chenery et. al. 1974, World Bank 1983).
7. Landlessness and population are both increasing among the poverty groups, thereby affecting their economic situation adversely still. (ILO 1977, especially chapters by Nayyar and Khan, Nancy Birdsall 1980, Alamgir 1978).
8. Distribution of total productive wealth, measured by ownership of productive assets, is perhaps even more unequal than the distribution of income. (Chenery et al 1974, ILO 1979, "... .. unequal distribution of productive assets, especially land, can be identified as the principal factor in the process of poverty generation.").
9. A large percentage (averaging 35-40%) of farming households own less than 1 acre of land (ILO 1977, Alamgir 1978, Dowling 1983, World Bank 1983, Mueller and Watanbe 1984, BRAC 1984).
10. Access to and availability of social services like health, education, water and sanitation, etc. is poor. (Dowling 1983, World Bank 1983, Stewart 1985, Webb 1976).
11. Frequency of disasters both at the national and at the village/household level is high. (Cuny 1983, Chambers 1983, and chapter 6 of this thesis).
12. Seasons are significant, for seasonal variations can influence heavily the well-being of rural poor communities. (Chambers, Longhurst and Pacey 1981).

General conditions of poor households within poor rural communities :-

1. Either landlessness or owning a small plot of land, usually less than one acre.
2. Average family size is five to six members with a high dependency ratio.
3. All members of the household between the ages of approximately ten to sixty years of age are engaged in some form of income-earning activity.
4. Primary source of income is some form of wage labour (agriculture labour, day labour, seasonal wage labour, etc.)
5. Usually engaged in subsistencefarming, including 'home-grown' vegetables and fruits, which is often done in the household compound.
6. Ownership of productive assets other than land is also very low. Productive assets include cattle (cow/buffalo), small animals (goat/sheep/poultry), equipment (plough, sewing machine, spinning wheel, other agricultural equipment, tools), furniture (bed, storage utensils), cooking pots, etc.
7. Usually own a small hut, house or shelter, constructed with make-shift materials like bamboo, jute, mud, grass, wood, etc and very occasionally tin.
8. Very few clothes which are worn till they are very old and dissolve into being rags.
9. Majority (about 90%) of the income earned by all members of the household is used for buying food (this includes income in kind, and indirect income like home-grown fruits and vegetables, milk, eggs, etc).
10. Fresh clean drinking water is usually some distance away, and a major activity of every day is to fetch it.

11. Low sanitary conditions, and low level of hygiene. Consequently, and also due to other environmental and physical conditions, proneness to sickness and death is high.
12. Malnutrition is highly prevalent with often serious consequences for both physical and mental health : people are often very weak and literally exhausted.
13. Infant and child mortality is high; life expectancy is low; usually women are the worst off due to a compounded effect of frequent pregnancies with brief intermediate periods, malnutrition (especially due to sex bias in allocation of food), long hours of strenuous work, and general weakness and sickness.
14. Family debts are high due to a combination of many factors - low incomes, exploitation, sudden illness or death, marriage, seasonal factors, etc. ; distress sale of productive assets including land is quite frequent.
15. Women of the households are usually engaged in strenuous work for long hours (usually longer than men) and carry a heavy burden of responsibilities eg. child-care, food processing, cooking, cleaning, fetching water, collecting fuel, marketing, other domestic chores like sewing and mending, besides contributing in a major way to the earning of a livelihood for the family.
16. Many of the households are headed by women, due to desertion, divorce or death. Migration of male members, especially due to seasonal variations, is a primary reason for female-headed households.
17. Households and villages are usually situated in remote areas, far from roads, markets, trading and information centres.

18. Incidence of illiteracy and near-illiteracy is high; attendance of school (usually only primary school) is very low.
 19. Availability of social services like education, health centres, credit, etc., is scarce.
 20. Level of skills and expertise is usually low, confined to a subsistence/household sector economy.
 21. Bargaining power is very low, almost non-existent, due to lack of capital strength, low level of skills and training, ignorance of law and personal rights, illiteracy, etc.
- Consequently, proneness to exploitation is high.

In addition to the points mentioned above, there are a few basic issues that need to be pointed out and clarified in connection with the problem of rural poverty and its main causes. The need for doing so has arisen out of the misconceptions that often tend to accompany them. These basic issues are the following, though one can be sure that there are more than those being covered here:

1. Employment and Unemployment
2. Consumption, Cost of Living and Entitlement
3. Population and Food
4. Inequality and the Structure of the Economy

1. Employment and Unemployment:

It has long been known that part, usually a small part, of the rural workforce is often openly unemployed, particularly during the slack season in regions where multiple cropping is not practiced. (For a comprehensive analysis of the seasonal dimensions to rural poverty, see Chambers, Longhurst and Pacey, 1981, op. cit.). In

addition, a large part of the workforce may be underemployed in the sense that it is engaged in tasks with a very low level of productivity.

A view once commonly held was that a major symptom of poverty is unemployment. Recent evidence has shown however, that there is relatively little open unemployment in rural areas although in some localities seasonal unemployment can be severe. In urban areas, measured rates of open unemployment are much higher, but there is little evidence that the rate of unemployment has increased in the course of time. (51). Hence growing poverty is not necessarily

(51) See for example David Turnham, 1971, 'The employment problem in less developed countries: A review of evidence', Paris OECD., and also Guy Standing, ILO, 1978, 'Labour force participation and Development'. See also ILO, 1971. A.D. Smith, 'Concepts of Labour Force Underutilisation'.

associated with growing unemployment alone any more. Indeed it is noteworthy that in none of the empirical studies of Asia done by ILO (1977) was unemployment cited as a prominent cause of poverty.

In broad terms, unemployment is , first, an urban phenomenon and, second, a phenomenon of the middle class, as is clearly pointed out by the ILO study. The very poor can not afford to be unemployed; they must obtain a source of livelihood even if this implies pitifully low earnings. Unemployment rates are often higher among women than among men, though this is not the case when work in the 'household sector' is taken into consideration.(52) Further, it is noted that unemployment is much higher than average among the younger members of the workforce, and lastly, unemployment rates tend to be higher for dependents and those who are not heads of households than for the primary breadwinner. For example, in the Philippines in 1972 the unemployment rate among heads of households was 2.1% whereas the unemployment rate among other workers was 9.3% (53

Those who must find employment are likely to do so by entering the flexible income sector, ie the informal sector. The informal sector, for a large number of the rural poor means wage labour in the agriculture sector. On the subject of agriculture in rural areas, the ILO study (1977) points out that agriculture production in

(52) Detailed analysis of women's work participation rates follows in subsequent chapters.

(53) ILO 1974, ' Sharing in Development : A Programme of Employment, Equity and Growth for the Philippines ', table 1 p 6.

developing countries is characterised by diminishing returns to labour, which of course in principle could be offset by high rates of investment and technical change. Unfortunately however, investment in agriculture has generally been modest, especially on the small farms, yet the sector has been forced to carry a large fraction of the annual increase in the labour force. On this Chenery et al comment (1974) : " If population growth in poverty groups is faster than for the rest of the economy, there is a tendency toward greater dilution of owned capital in these groups. In the case of agriculture this would lead to progressively diminishing holdings, or larger families supported by the same holding, and also a steady migration of landless poor to the cities." Thus, the tendency toward diminishing returns and falling labour productivity has not always been compensated by rising investment. " As the land-man ratio has fallen, the level and share of rents has increased while the wage share, real wages and the number of days employed per person have tended to fall. In other words at the going terms of agricultural remuneration, the demand for labour has increased less rapidly and hence the standard of living of those who depend on work as a source of income has fallen. This has affected some plantation workers, unskilled landless agricultural labourers, pure tenants, and some small landowners who have to supplement their income by engaging in paid labour." (ILO 1977, opt. cit. p 23)

Small land owners become temporary wage labourers during the slack season; landless workers from, say Bihar, migrate to the more prosperous rural areas of western Uttar Pradesh ; some rural residents (individuals as well as entire households) abandon the

countryside and move to the city. Labour is continuously reallocated in response to income differentials between different regions and between job categories to which the poor have access. (However, the sad truth is that the process of migration results in the gradual elimination of the income differentials which initially provoked it, and the movement of labour represents little more than a shuffling around of poverty). (54)

One additional comment about utilization related to the labour utilization issue. In many developing countries, land and other natural resources are also not efficiently utilized and exploited. Here again the evidence comes from the ILO study (1977), which indicates that especially on the larger farms, the length of the fallow period is often excessively long, the degree of cropping intensity is too low and the amount of land in natural pastures is high. At the same time, many of the smallest farmers are forced to over-exploit their land, with the result that useful land is destroyed through exhaustion of soil fertility. Such economic systems not only make poor use of their human resources, but also make poor use (which can even lead to destruction) of part of its natural resources. Moreover, underutilization of labour and land is also often accompanied by under-utilization of capital. Large irrigation facilities are not used to capacity; irrigation canals and drainage ditches are allowed to fall into disrepair; fish ponds are permitted to become overgrown with weeds; mechanical equipment

(54) For a study of migration, look at Michael P Todaro, 1976, ' Internal Migration in Developing Countries - a review of theory, evidence, methodology and research priorities ', ILO, Geneva.

becomes inoperative because of poor maintenance and lack of spare parts. Furthermore, much of the savings potential of the peasantry remains untapped and hence the rate of accumulation of capital remains lower than necessary.

Lastly, investigating occupational status of different social groups, Khan (55) argues that the occupational status of the low income groups in an underdeveloped rural economy is such that poor workers must work much harder than persons belonging to higher income groups. Yet few studies make an allowance for the amount of calories and other items of consumption required by persons in different job and income categories. If income were calculated, Khan proposes, say, on the basis of the calories required by workers during the process of production, then the indices of inequality would be considerably greater than those usually given.

(55) Azizur Rahamn Khan ' Poverty and Inequality in rural Bangladesh ', chapter 7 in ILO 1977 opt, cit.

2. Consumption, Cost of Living and Entitlement :-

It has been mentioned elsewhere in this chapter that often it is claimed that the distribution of current consumption, rather than current income, is the better measure of expected lifetime income. It is difficult to make such generalizations, however, when referring to contemporary developing countries. A great deal more must be known, for example, about the ways in which households accomodate differences between current consumption and income. Various case studies (56), including mine, indicate that in general, low income groups tend to consume more than they earn, and this is largely because their meagre incomes are less than the minimum required for physical survival. This phenomenon is described by ILO (1977) as " it is likely that this occurs, not because expected lifetime income is so high as to make it desirable to have an intertemporal allocation of consumption different from that of income, but because the requirements for physical survival are in excess of current income. It also seems highly likely that the most important mechanism for financing an excess of current consumption over current income is borrowing and the sale of the meagre assets owned by these income groups." Some evidence of this is presented from Bangladeshi villages in the following chapters, where it is found to be certainly true to say that sale of productive assets is very highly correlated with impoverishment.

Another point worth noting about consumption and cost of living for the rural poor is that the cost of living for the lower income

(56) ILO 1977 opt. cit., Marty Chen 1983, ' A Quiet Revolution'.

groups has generally increased faster than the general cost of living (57). The reason for this is that the prices of food and other wage goods have increased faster than the average. (For an analysis of cost-of-living index see ILO 1977 opt.cit. pp 11-13). Sen's analysis of poverty and famines (58) has led him to face the injustice of people's declining 'entitlements' to commodity bundles including food, and he has argued eloquently giving evidence to show that this decline is not because of shortage of food as such, but because of steady price rises of food items, thereby resulting in mass starvation. On the entitlement approach, Sen writes, " The entitlement approach to starvation and famines concentrates on the ability of people to command food through the legal means available to the society, including the use of production possibilities, trade opportunities,entitlements vis-à-vis the state, and other methods of acquiring food. A person starves either because he does not have the ability to command enough food, or because he does not use this ability to avoid starvation. The entitlement approach concentrates on the former, ignoring the latter possibility." He goes on to say elsewhere (59) that "it is sometimes said that starvation may be caused not by food shortage but by the shortage of income and purchasing power. This

(57) See Osmani 1983, Sen 1981, Alamgir 1978, Mueller 1984, ILO 1977, among others.

(58) A K Sen 1981 opt. cit. See chapter 5 for the Entitlement Approach.

(59) A k Sen ibid. chapter 10.

can be seen as a rudimentary way of trying to catch the essence of the entitlement approach, since income does give one entitlement to food in a market economy." I shall not go into the details of Sen's analysis and evidence, which has been drawn from a number of case studies of recent famines, including the Great Bengal Famine of 1943, the Ethiopian famines of 1973 and 1974, the Bangladesh famine of 1974, and the famines in the Sahel countries in Africa in the seventies. But Sen concludes that "all the evidence shows clearly that the traditional analysis of famines focussing on food supply, is shown to be fundamentally defective - theoretically unsound, empirically inept, and dangerously misleading for policy". (Sen, 1981). The problem appears to be more one of the complex dynamics of ownership and exchange.

3. Population and Food :-

A related issue to that of entitlements is that of population and food. The claim that growing poverty is due to a world food shortage, or to a failure of food production to keep up with the expanding population, must be questioned. While it would be wrong to deny the seriousness of the periodic food scarcities which beset the world, particularly in certain parts of Asia and Africa, it would be an improper simplification to use food shortages as the explanation for increasing poverty in rural areas.(60) In fact many serious scholars recognise, as one has

(60) See Shlomo Reutlinger ' Food Security in Food Deficit Countries ', World Bank Staff Working paper no. 393, June 1980, and Susan George ' How the Other Half Dies : The real reasons for world hunger ', Penguin books 1976, for a comprehensive analysis of this issue.

said, "that there is little reason to anticipate severe food supply limitations in the medium-term future." (61)

As can be seen from figure 1.2 below, world food production per head has modestly but noticeably increased during the last two decades (1955-75). When the poor starve, it is not mainly because there is no food but because they do not have the wherewithal to acquire food. In other words, the problem of world hunger cannot be solved merely by attempting to increase production. The solution

Figure 1.2 Food output per head, 1955-74
(index: 1961-65=100)

Image redacted due to third party rights or other legal issues



Source : ILO (1977) p 16.

(61) Lance Taylor, ' The Misconstrued Crisis : Lester Brown and World Food ', in World Development Nov/ Dec 1975 p 832, as cited in ILO 1977 .

requires, rather, better distribution and more productive employment in order to create the ability to acquire food.

As this point has already been discussed previously, I shall not labour it further here; (see also chart 6 in Appendix 1 for a look at the evolution of cereal output per head in seven Asian countries, which shows that output per head has also increased); but I will draw attention to Table 1.4 which shows the growth of population and food production in seven Asian countries. If one

Table 1.4 : Growth of population (1960-73) and food production (1952-74) (per cent per annum)

Image redacted due to third party rights or other legal issues



Sources: Food production data obtained from FAO; population growth rates reproduced from *World Bank Atlas*, 1975.

Source: ILO 1977 p 18.

examines the countries individually, it transpires that in only one of them did population expand faster than the domestic food production. This was in Bangladesh, where as can be seen from Table 1.5, even GNP per head has been falling.

Image redacted due to third party rights or other legal issues



Source: *World Bank Atlas*, 1975. Because of differences in the period covered, the growth rates in this table sometimes differ from those reported in the individual chapters.

Source: ILO 1977 p 16

Thus only in Bangladesh could one conceivably argue that the trends in food production explain the trends in poverty that have been indicated. But since poverty has increased even in countries which enjoyed a rapid expansion of food production, one must conclude that the connection between the two is tenuous. It is for this reason that the argument that " the nutritional problem is ... primarily a poverty problem : a problem of ineffective supply " (Joy 1973, (62)) seems to be more relevant than the statement that " the raising of agricultural output remains of paramount importance and that the solving of distributional problems is secondary..." (Lal 1975, (63)).

Lastly, does rapid population growth exacerbate the situation of the poor through its effect on food demand? Nancy Birdsall (1980) (64) attempts to answer this key question by revealing the complexity of the situation. The poor spend proportionately more of their income on food. By maintaining demand for food products, rapid population growth may prevent the reductions in the relative price of food which could benefit the urban poor and landless agricultural workers; on the other hand, higher food prices do benefit poor farmers and may help landless farm workers if production and the demand for their labour increases. When much of the unskilled labour force is in agriculture, the pay position

(62) See Leonard Joy, ' The Agrarian Question ', in South Asian Review, July/ October 1975 p 399.

(63) See Deepak Lal, ' Food and Nutrition Planning ', in Journal of Agriculture Economics, January 1973 p 1-22.

(64) Nancy Birdsall 1980, ' Population and Poverty in the Developing World ', World Bank Staff Working Paper no. 404.

of unskilled to skilled labour deteriorates less when demand for agricultural products is relatively greater. Furthermore, questioning the assumed negative effect of population growth on food-production, Nancy Birdsall comments, " ... we certainly can not assume that had population growth been only half as great, growth in food output per head would have been twice as large...(it would be) a mistake to attribute poor food-growing performance primarily to pressures of population on land. Other factors, including distorted prices, lack of credit, inadequate roads, lack of irrigation, and poor extension services, are more important, particularly in Africa and Latin America, where densities are relatively low, but also in Asia where densities are much greater." For the world as a whole, she suggests, the Ricardian spectre of diminishing returns to land can still be stayed by capital-investment and exploitation of new agricultural technologies to increase yields.

In short, the situation varies from one country to another; the indirect and countervailing effects of population growth on food (prices and production) and on the situation of the poor can only be isolated in carefully constructed country-specified models. However, there is little doubt that malnutrition in developing countries is a widespread problem. Nancy Birdsall's final comment on this is that " in the short run at least, income inequality is a much greater barrier to improving the nutritional status of the poor than is rapid population growth per se."

4. Inequality and the Structure of the Economy :-

The answer to why the poverty of the poorest groups of the rural population has increased has more to do with the structure of the economy than its rate of growth. One structural feature common to all developing countries is a high degree of inequality. The ILO (1977) study has compiled data from six countries which is shown in 1.1 (see Appendix 1). The table suggests that in the economy as a whole the richest 20 per cent of households receive about half the income, whereas the poorest 40 percent receive between 12 and 18 percent of total income. The bottom 20 percent fare even worse, receiving between 3.8 and about 7 percent of the income.

The counterpart to the compression of the income of the poor is the concentration of the economic surplus in the hands of a minority. The methods of disposal of this surplus, in turn, largely determine the pace and composition of economic growth. The preferences of the upper income groups as between present consumption and savings will effect the rate of accumulation. The pattern of demand, itself strongly influenced by the distribution of income, will determine in large part the sectors into which investment flows. And the set of relative factor prices which confront those who invest the surplus will have an effect on the methods of production that are used, the amount of employment that is generated, the productivity of that employment and the distribution of income.

The structure of factor markets is such, as has been evaluated by various economists, and recently by the ILO study, that the

unequal distribution of income arising from an unequal distribution of productive assets is reinforced by the operations of the price mechanism. Those who have access to the organised capital market are able to obtain finance capital for investment on relatively favourable terms. This introduces a strong bias in favour of investment in the more capital-intensive methods of production. As a result, the demand for labour is lower than it otherwise would have been. Paradoxically, the relatively high productivity of labour associated with the more mechanised processes may lead to higher wages for those who find employment in the sector, thereby further reducing the demand for labour.

Furthermore, the capital markets operate in such a way that a small minority of the labour force is equipped with excessively capital-intensive techniques. At the same time, the majority of the labour force (in urban as well as in rural areas) is forced to work with techniques which are insufficiently capital intensive. As a result, the productivity and incomes of the majority are exceptionally low compared to those employed in the so-called modern, capital-intensive sector.

Price-cum-rationing mechanisms also are present in other parts of the economy. In fact most markets for intermediate goods and services operate in a fashion parallel to that of the capital market. For instance, electric power typically is distributed highly unevenly, many rural areas being excluded from the national network. Efficient transport services are available to only a relatively few producers, and many rural areas are thus isolated

from the main currents of commerce. Within the rural areas, technical assistance is concentrated on the large farmers and research programmes often are oriented toward their needs. Finally, even the labour market operates to the disadvantage of the poor, with a high degree of concentration of wealth and ownership of land and other assets.

It is these revealing factors about the structure of the economy which have led the ILO study to observe that, " The initially high degree of inequality of income and wealth, the concentration of the economic surplus in relatively few hands, and the fragmented allocative mechanisms constitute a socio-economic context in which powerful dynamic forces tend to perpetuate and even accentuate low standards of living of a significant proportion of the rural population."

One last point. It is often claimed that inequality is necessary in order to provide incentives, to encourage the labour force to increase its skills (and hence its income) through training and education and to induce efficient allocation of resources. When, however, one examines the evidence (ILO 1977), it appears that inequality of earnings is one of the mechanisms perpetuating low income among the poor rather than the device for its alleviation. Moreover, the acceptability, or not, of a given degree of earnings inequality can not be determined in isolation from the social and political system. It could be argued that the greater the degree of social mobility in a country, the more effective will be wage differentials in ensuring an efficient allocation of resources.

In other words, if equality of opportunity and social mobility are considerable, earnings inequality may be more tolerable. On the other hand, if social mobility and inequality of opportunity are not present, inequality simply confirms our worst fears. A system which combines restricted education opportunities with wage differentials is obviously far more objectionable than a more fluid system in which all have access to knowledge, skills and education, but in which inequality still prevails. One of the sad things about so many of the developing countries is that the wage structure provides potentially strong signals to acquire skills and training, yet the social and educational systems inhibit workers from responding to them.(65) As a result, inequality is perpetuated and indeed, as has been seen, in many countries poverty has increased.

(65) See for example, Phillip Coombs, ' The World Education Crisis: A Systems Analysis ', New York, Oxford University Press, 1968.
Ivar Berg, ' Education and Jobs : The Great Training Robbery ', New York, Praeger, 1970.

CHAPTER II

WOMEN'S POVERTY AND DEVELOPMENT POLICY

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Acceptance of Women's Issues as a Development Policy Issue :

The establishment of a conceptual link between women's issues and economic development theories was a major step toward achieving acceptance of the fact that women's issues have development policy implications. Apart from the new emphasis placed on the condition of women as a result of the International Women's Year (1975), three new ideas or priorities in economic development theory and policy in the 1970s promoted receptivity to women's questions (1). Furthermore, the change in emphasis from equity- to poverty-centered analyses (to be discussed later) translated women's questions into the language used by economic development theorists and practitioners.

First of the three new changes in the theory and policies of economic development, came the growing awareness of a world population problem, along with the realisation that women are the main actors in determining population trends. Concern with population growth led to the targeting of Third World Women as the primary beneficiaries of family planning programmes and as important subjects of development-oriented research.

The second priority grew out of the acknowledgement that the "trickle down" approach to development had failed. Realising that the capital and technology transferred from the industrialised

(1) See Buvinic 1983 for an outline of these three shifts in priorities (Chapter 3 of Buvinic, Lycette and McGreevey eds: ' Women and Poverty in the Third World ', John Hopkins University Press, Baltimore, USA, 1983)

countries had not filtered down to the poor in developing countries, development agencies changed priorities and established a new strategy to improve directly the levels of living of the poor. In his address to the World Bank's Board of Governors in 1973, Robert S McNamara made explicit the need for a target-group approach to development interventions. This approach made it necessary to ask questions such as : Who are the poor ? Where do they live ? What do they do ? How do they survive in the face of poverty ? What problems do they encounter in their attempts to overcome poverty ? (This shift has already been examined in some detail in Chapter 1). The earlier concentration of development agencies on macro-economic development had left them ill-equipped to provide reliable answers, and the target-group approach made theorists more receptive to research that would yield insights into these questions. Research on the economic roles of Third World women (women being one of the major target-groups) met some of the new information needs of development agencies.

The third was the development of a 'basic needs strategy' against poverty. The basic needs strategy calls for assurance to all individuals of the basic requirements for life (food, shelter, and clothing) and of access to essential community services, such as safe drinking water, sanitation facilities, public transport, and health and education facilities. (The basic needs approach to development policy has been discussed in greater detail both in Chapter 1 and Chapter 6). This shift in emphasis to the fulfilment of 'basic needs' further aroused a marked interest in women because of their traditional importance in satisfying many of these basic needs.

These three changes in economic development more or less coincided with International Women's Year, and a main theme of the International Women's Year Conference in Mexico City in 1975 was international economic development. This relatively recent realisation, that special attention must be paid to the role of women in the development process has led to the evolution of two distinct approaches to policy-oriented research on women. Both of these approaches, in turn, have further affected the acceptance of women's issues as being important for development policy. (2)

Two Approaches to Policy :

I. Equity - oriented Approach :

This was developed in the early stages of interest in women's issues (1975) and has focused on the effect of economic development programmes on the economic status of women, suggesting that women lose ground relative to men as development proceeds (3). United Nations agencies have spoken out on the need for intensified action to promote equality between men and women and " to ensure the full integration of women in the total development effort." (United Nations Economic Commission for Africa 1975).

It is perceived not only that the development efforts of the recent past have ignored the ways in which women's lives and roles have been affected by conditions of changing technology, but in

(2) See Buvinic 1983 opt. cit. p 14-34, and Nici Nelson 1979 : 'Why has Development Neglected Rural Women?', prepared for ILO 'Women in Development' series, p4-5.

(3) See in particular Irene Tinker and Michele Bo Bramsen 1976 : 'Women and World Development', Overseas Development Council, Washington DC , USA.

addition that women have been adversely affected by technological and sociological changes brought about by the development process. (ILO 1975)(4). Women have been viewed as passive or neutral factors in the socio-economic and technological transformations being implemented by funding agencies, economists, planners and administrators. One of the many results has been that women have not benefitted from the education and training programmes that have in the past taught new skills to men. A glance at the comparative male-female literacy rates in most countries further reveals the disparity. Technological development has either largely ignored the areas of life which are women's work (eg. food processing, food storage, water fetching, fuel collection, etc.) or has usurped important women's roles, such as craft production, without providing them with any alternative productive activities. The main premises of the argument emerging from the equity-oriented approach can be summed up as follows (5) :-

1. Women have productive as well as reproductive roles in society, and the less monetized the economic system, the more important is their productive role;
2. Conventional (ie. Western) measures of economic activity underestimate the magnitude of women's productive roles by failing to acknowledge the value of unpaid work and by undercounting women's paid work outside the modern sector;
3. This underestimation and the glorification of motherhood in the industrialised societies have helped to define a development policy for the Third World that erects barriers to paid work for women, and

(4) ILO 1975 : Proposal for an ILO Project on Technological Change and the Condition of Rural Women.

(5) See Buvinic 1983 opt. cit. p 15.

4. As a result of this development policy, women are relegated to the economy's traditional sector, and the income gap between the sexes is widening.

These premises have been supported by two types of analysis and case studies, both retrospective in nature: one at the micro level and the other at the macro level. The micro level case studies (Elmendorf 1976, Remy 1975) have looked at the adverse impact of particular interventions, such as the introduction of the animal-drawn plows, modern harvest tools, and road construction, on the status of women in small communities. On the other hand, functional and conflict (Marxist) sociologists and political scientists have analysed at the macro level changes that accompany capitalist development, such as urbanization, industrialisation, and class stratification (see Blumber 1978, Giele and Smock 1977), and have developed quantifiable indicators of the effect of these changes on women's status (6). In her discussion of these, and similar case studies, Buvinic comments (p 15, 1983) that these studies, however, can not empirically test the hypothesis of the negative impact of development on sexual equality, because they lack an adequate data base and they are qualitative rather than quantitative in nature.

(6) The references have been cited in Buvinic et al. 1983 opt. cit. Elmendorf 1976 : 'Nine Mayan Women : A Village Faces Change', New York, Schenkman ; Remy 1975 : 'Underdevelopment and the Experience of Women : A Zaria Case Study', in Rayna Reiter ed. 'Towards an Anthropology of Women', New York: Monthly Review Press ; Blumberg 1978 : 'Stratification: Socioeconomic and Sexual Inequality', Dubuque, Iowa : William C Brown ; Giele and Smock 1977 : 'Women and Society in International and Comparative Perspective', New York : Wiley-Interscience.

II. Poverty - oriented Approach :-

In recent years (1980) the equity approach to research on women has evolved into an alternative approach that links women's issues to poverty and tries to qualify the positive effects that may result from incorporating women's concerns into economic development programmes. There are two noticeable shifts in this approach:

- Firstly, this approach focuses on women as participants in, rather than beneficiaries of, development programmes.
- Secondly, this approach restricts those being studied to women in economic need, the argument being that to escape poverty, women must become more productive, and societies must seek ways to make that possible - because of, and in the context of, women's double roles. (7).

The poverty oriented approach is based on the following premises:-

1. The ratio of women to men is greater in the poorest income groups than in the population as a whole;
2. The economic performance of households in the lowest income brackets is directly related to the economic activity of women in these households;

(7) See for example, Constantina Safilios-Rothschild 1980 : 'The Role of the Family: A Neglected Aspect of Poverty', in Peter Knight ed. 'Implementing Programmes of Human Development', World Bank Staff Working Paper no 403, Washington DC, USA ; UNICEF 1977 : 'Women's Development Programme: Report of a Feasibility Survey of Productive/Income-generating Activities for Women in Bangladesh ; Kathleen Staudt 1979 : 'Tracing Sex Differentiation in Donor Agricultural Programmes', paper presented at the annual meeting of the American Political Science Association, Washington DC ILO : Women in Development Series 1979-82, especially papers by Nici Nelson and Abdullah and Ziedenstein.

3. The importance of women's productive role increases with poverty but the extent of their reproductive functions does not diminish, resulting in a dual burden for poor women; and
4. To promote balanced economic growth, a major goal of development policy should be to increase the productivity and income of women in the lowest income households.(8)

This shift in emphasis from an equity-oriented approach to a poverty-oriented approach substantially changes research questions and methods, as well as the issues raised for the consideration of policymakers. In summary, there is a shift from :-

- a) description to analysis of women's condition,
- b) from the qualitative definition of women's economic problems to the quantitative documentation of their existence, and
- c) from anthropological to sociological and economic methodologies.

Under the new approach, measurement of the economic contribution of women to the household and the marketplace is undertaken, rather than retrospective assessment of the impact of programmes on women's economic condition. This quantitative language breaks down communication barriers between economic development theorists and practitioners, and by phrasing women's issues in terms of poverty and economic growth, facilitates the translation of women's issues into development policy issues and hence their incorporation into development strategies.

(8) See Buvinic 1983 opt. cit. p 16.

Conceptualizing women's issues in economic development in terms of poverty and economic growth brings into the foreground four key issues relevant to the formulation of development policy :-

1. The magnitude of women's poverty;
2. The measurement and valuation of their productive work in the home and in the marketplace;
3. The means of promoting women's income;
4. The relationships between women's work and family security.

The first issue shall be looked at in this chapter when we look at issues related to women's share of poverty and the findings of an evaluation of women's participation in the home economy. The second issue of measurement shall be discussed in the next chapter where methodologies for measurement of women's participation are outlined, and in Chapter 6 where a new approach is proposed for the measurement of economic viability of women.

The third issue of means of promoting women's income is looked into in Chapter 5, especially by drawing on the example of the BRAC effort in Dhakuly village in Bangladesh.

And finally, the fourth issue of relationships between women's work and family security is discussed and documented in Chapter 8.

Women, Poverty and Development :-

In discussing women, poverty and development, one point deserves special emphasis : women both affect and are affected by the development processes, and it is clear that benefits to, and contributions by, women can not be dealt with separately.

There are three major themes that help to show the relationships among women, poverty and development :-

I. First theme: Home Production - its value and costs :-

Time-use studies indicate that the typical woman spends most of her day working, not only in the labour market, as do men, but also in home production. The home production activities of women are not included in conventional household and labour force surveys in poor countries, yet they are a critical part of the poor household's total production and are important to any understanding of the dynamics of poverty. (For a critique of time-use surveys see Chapter 3).

The combination of work at home and work outside the home shifts over a woman's lifetime, in response to the changing demands of her household, that is to say that a woman's household and non-household activities intersect with and are affected by the presence and activities of other household members. (Examples: Married women with young children work more hours than married men ; unmarried women are much more likely than men - married or unmarried - to be poor, and their burdens are usually greater, for they must care for children and the household and also

contribute to the family income ; women-headed households tend to have the lowest income, have less access to land, capital and technology, and include more depend nts and fewer secondary earners than male-headed households ; there is a close association between the emergence of these households and changes resulting from economic development, such as male labour migration, urbanisation, and the provision of services and job opportunities for women.)

This brings to the forefront the need for looking into the nature and the magnitude of the difficult trade-offs women in poor economies face because of their double roles at home and in the job market.

The combination of work at home and work outside the home is one that maximizes family full income, but of course it entails costs : The most obvious cost is leisure for the women themselves; when women work outside the home they enjoy less leisure. For example, they manage not to reduce child care time - both by sacrificing leisure and by working relatively less outside the home when they have young children. Mayra Buvinic (1983 p 20) observes, " Unlike the evidence from industrialized societies, which shows a trade-off between market-work and child-care, evidence from the Third World indicates that poor women tend not to make trade-offs between child care and market work. When these women enter the labour market, it is leisure time rather than home production time that is reduced. The need for more income makes it necessary for poor women to work in the market-

place, and there is no surplus income with which to purchase child care or other household services."

In summary then, the evidence on the unpaid work of poor women in home production obtained through time-use surveys indicates the following :-

1. Poor women tend to work longer hours and have less leisure time than poor men. (McSweeney 1977, Mueller and Kossoudji 1984, Mueller 1979).
2. When these working hours are assigned an economic value and added to the household's cash income, the contribution of poor women and children to household income can be greater than that of poor men. (King and Evenson 1983).
3. When women enter the labour market, it is leisure time rather than home production time that is reduced. (Popkin 1983).
4. Women and children must adapt to the differing demands of household and market, whereas men's roles remain resistant to change. Increasing household burdens, such as additional children, tend to change women's and children's but not men's allocation of time among market work, work at home and leisure. (Mueller 1982). (9).

(9) McSweeney 1979 : 'Collection and Analysis of Data on Rural Women's Time Use', in Studies in Family Planning 10:379-83.

Mueller and Kossoudji 1984 : 'Economic and Demographic Status of Female-headed Households in Rural Botswana' in Economic Development and Cultural Change,

Mueller 1979 : 'Time Use in Rural Botswana', Ann Arbor : University of Michigan, Population Studies Centre.

King and Evenson 1983, Chapter 3 in Buvinic et al opt. cit.

Popkin 1983, Chapter 8 in Buvinic et al opt. cit.

Mueller 1982, Chapter 3 in Anker, Buvinic and Youssef eds.

II. Second theme : Job Opportunities - Supply and Demand :-

It is apparent that women in poor countries, and particularly poor women, end up - by choice or by custom - in the particular occupations that enable them to adjust hours between home and market work as the size and structure of the household change. Occupations that allow this flexibility, however, are not usually found in the modern sector ; they tend to be labour intensive, poorly remunerated, and low in productivity.(10).

In summary, the evidence shows that poor women in developing countries have both home and market production roles and that the poorer the household, the more burdensome both roles become. The division of labour between the sexes within the household assigns women to labour-intensive production, and the division of labour within the market restricts women to work characterized by low technology, inefficient production, and marginal wages. The evidence shows an increasingly large "invisible" female contingent working in low-paying seasonal or part-time occupations on farms and plantations and in some of the lowest paid and lowest status jobs in the service and informal sectors of the urban economy. It is largely economic rather than cultural variables that appear to be the main determinants of the extent and nature of women's participation in the marketplace.

(10) See in particular, Standing and Sheehan 1978, 'Labour force participation in low-income countries', ILO, Geneva; and T S Papola 1982 'Sex discrimination in the Urban Labour Markets : Some Propositions based on Indian Evidence' in Anker, Buvinic and Youssef, 'Women's roles and Population Trends in the Third World', a study prepared for the ILO, 1982.

Past research focused on variables affecting the supply of female labour in order to explain the lack of participation of women in the modern sectors of the economy, but recent evidence shows that these variables - high fertility and lack of education - do not have great explanatory power. Increasingly, women with many children are participating in the labour force, and this participation peaks at the lowest and highest education levels. Therefore, research has begun to focus on the demand for, rather than the supply of, female workers and the variables that may restrict this demand. More and more research is showing that sex segregation patterns in the labour market that are cultural in origin break down easily in the face of changes in labour market demand. (11)

All this evidence supports the view that women's issues are also development policy issues. Women are producers and thus participants in the process of economic growth, but their production occurs within a dualistic economy in which women are relegated to sex-specific, traditional work, or to occupations with neither access to productive resources nor large economic returns.

The corollary to this view is that women's poverty requires different solutions from men's poverty. Policies specifically designed to increase women's productivity and income will reduce income differentials between men and women, and economic dualism

(11) See Youssef, Nieves and Sebstad 1980, 'Keeping Women Out : A Structural Analysis of Women's Employment in Developing Countries', AID, Washington DC, International Centre for Research on Women, Women in Development office.

by modernising production that is in the hands of women.

Conventional anti-poverty policies that place no special emphasis on women will tend to ignore the large subgroup of women among the poor who work in home production and in sex-segregation occupations.

Current programmes that seek to increase household income by concentrating on women have the following priorities :-

1. Reducing the time required for household production;
2. Increasing the efficiency, output, and returns of economic activities in which women currently engage;
3. Transforming subsistence activities into income-generating activities; and
4. Creating new employment opportunities for women.

III. Third theme : Less Education and Training for Women :-

The expectation that the typical woman's occupational choice will be limited, due perhaps to household responsibilities, and that she will spend less time in work for cash income than the typical man, probably helps to explain the pattern of less education for women in many countries and the minimal emphasis in development programmes on raising productivity in typically female jobs.

Less education, however, entails costs to society, not only because of the loss of women's potential for higher productivity in market work, but also because women as mothers make the first

investments in the nutrition, health, and education of children - investments that are critical for future economic growth.

Worse, many women will not at every stage of their lives be "typical" in the sense of sharing economic needs and work with husbands. Some will become heads of households - their numbers may be growing because of higher rates of differential migration by sex and a general weakening of the fabric of the traditional societies. Others will be divorced or widowed or will never marry.

Findings of an Evaluation of Women's Participation in the Home Economy :-

It is clear that women's poverty persists in spite of the development effort. In summary, then, the following set of points emerge from studies that have looked at rural women's participation in home and market production, in trying to explain this phenomenon.

1. There is a large "invisible" female population, that is engaged in 'productive' work.
2. Women's participation is concentrated in the lowest-paying, lowest-status occupations.
3. Women are largely engaged in seasonal or part-time occupations.
4. Women's occupations are concentrated in the informal/traditional sectors.
5. Women have both home and market production roles.
6. The poorer the household, the more burdensome home and market production roles become, and hence the more time women spend in working.

7. Economic rather than cultural variables are seen to be the main determinants of the extent and nature of women's participation.
8. Sex segregation patterns in labour market that are cultural in origin break down easily in face of changes in labour market demand.
9. Women's participation peaks at the lowest and highest levels of education.
10. Poor women work longer hours and have less leisure time than poor men.
11. When these working hours are assigned an economic value and added to household's cash income, the contribution of poor women and children to household income can be greater than that of poor men.
12. When entering market work, it is leisure time rather than home production time, or child care time, that is reduced.
13. Increasing or changing household burdens tend to change women's and children's but not men's allocation of time among market work, work at home and leisure.
14. Division of labour between the sexes within the household assigns women to labour-intensive production.
15. Division of labour within the market restricts women to work characterised by low technology, inefficient production, and marginal wages.

The Household as a Unit of Analysis :-

Research on women from the perspective of the household has helped carry women's issues into the policy-making arena. Such research stemmed primarily from the increasing incidence and poverty of households headed by women. Subsequent research in the Third World has provided data on women's share of poverty and has made an impact largely because it has focused on the household rather than the individual. (12) This research examines the incidence of poor woman-headed households and the factors that affect this incidence, measures household income levels, and analyses the socio-economic characteristics of woman-headed households and how they influence the household's economic performance.

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- (12) See especially, Mueller and Kossoudji 1984 : 'Economic and Demographic Status of Female-headed Households in Rural Botswana', opt. cit.
Mayra Buvinic and Nadia H Youssef with Barbara Von Elm 1978 : 'Woman-headed households : The Ignored Factor in Development Planning', Report submitted to the office of Women in Development, Agency for International Development, Washington DC, International Centre for Research on Women.
Nadia Youssef and Carol B Hetler : Chapter 11 'Establishing the Condition of Women-headed Households in the Third World : A New Approach', in Buvinic, Lycette and McGreevey 1983 opt.cit.
Merrick and Schmick : Chapter 12 'Households Headed by Women and Urban Poverty in Brazil', in Buvinic, Lycette and McGreevey, ibid.

The evidence suggests that woman-headed households tend to have the lowest incomes and that this is due in large part to a lack of productive resources. These households most often generate their income in the traditional sector of the economy ; have less access to land, capital and technology ; and include more dependents and fewer secondary earners than male-headed households. These studies have also postulated a close association between the emergence of these households and changes resulting from economic development, such as male labour migration, urbanization, and the provision of services and job opportunities for women. The predicted permanence of the woman-headed household in developing countries, its significance as an economic rather than a cultural phenomenon, and the use by researchers of the household as a unit of analysis have made woman-headed households in the developing world an accepted focus of policy-makers and a target of development policy.

Although poverty in the developing world is not restricted to woman heads of households concerns about the poverty of these women have tended to overshadow concern about other categories of poor women. Research is needed to uncover other categories of women who also bear the burden of poverty but are not as visible as woman-heads of poor households. One such attempt is made in this study, the results of which, are outlined in Chapter 8.

Despite the attractiveness of research on women from the perspective of the household, there are potentially serious conceptual problems and policy risks associated with using the household as the

preferred unit of analysis in an attempt to understand women's situation and poverty: Mainly, the household emphasis ignores economic and social behaviour that occurs both within and without the household ; in particular, by assigning a reality to the household that disguises the behaviour of individual members with subordinate preferences or low status - that is, women. Three main problems can be identified, which derive from using household models and the household as a unit of analysis :-

1. The first problem derives from assuming that the physical boundaries of the household define units of social and economic organisation. People living together are assumed to constitute a family (nuclear or extended), and domestic functions are assumed to take place within the physical boundaries of the household. However, individuals sharing a roof often do not constitute "families" ; and this is particularly true among poor woman-headed households. In such households, domestic functions often include inter-household social and economic exchanges, and these seem to be an especially important source of support for poor women (13).

Transfers are flows of goods and services that do not represent compensation for work performed but are given because of kinship ties or social obligations. A family may give and/or receive

(13) See Eva Mueller : Chapter 13 'Measuring Women's Poverty in Developing Countries', in Buvinic, Lycette and McGreevey, 1983, opt. cit.

transfers. Transfers can also occur within a family and between families. The majority of inter-household transfers in developing countries take the form of remittances from migrants. It must be kept in mind when studying poor households in developing countries, that women may be absorbed into extended families instead of being supported in a separate household. For example, rather than sending funds to a widowed sister's household, a man may move the sister and her children into his own household. She may or may not add to family income by engaging in market work. Likewise, female heads of household may take in relatives who may be secondary earners, help with child care while the mother goes out to work, or merely share in household consumption. Very few studies have investigated the economic factors influencing household composition in developing countries.

2. The second problem arises from the economic principle that defines the household as a basic decision-making unit behaving according to the rule of maximization of household utility. This assumption doesnot allow for recognition of the different preferences of individual members and masks any sex discrimination in the intra-household allocation of production and consumption. For example, Lincoln Chen (19) (14) shows that discrimination by sex in the distribution of work and benefits (ie. food, leisure, etc.) is pervasive within poor households in the Third World.

(14) See Lincoln Chen

Furthermore, the household model cannot pick up the divergent interests of those women who are less powerful than men. Anker, Buvinic and Youssef (1982, opt. cit.), providing evidence on the socio-economic determinants of fertility, show that husband and wife can exhibit different and sometimes opposite interests regarding family reproductive behaviour.

In addition to this, there must be reason to believe that differences also occur in other important areas of family decision-making, such as household expenditure, employment, and education. My personal survey data adds much support to the belief that women, in general, hold secondary positions in such decision-making - though the situation is very gradually showing signs of change. It is interesting to note that this change is primarily symptomatic of the increasing recognition of women as major economic contributors to poor rural households.

3. The third problem derives from the implicit assumption, based on the model of the industrialised world, that only non-market production and consumption take place within the household (and are in women's hands). Therefore, when market production/consumption is investigated, farms and firms rather than households are chosen as the units of analysis and the household's (women's) contribution to market (farm) production is ignored. Few studies recognise the inter-dependence of production and consumption activities in most farms/households, and thus women's contribution to farms/households is ignored. The failure to see this inter-dependence can confuse analysis of the effects of development

programmes that are dependent on farm/household behaviour and decision-making, for example, analysis of the effects of credit that is formally granted for agricultural purposes but diverted to non farm or household uses.

More important, such an approach is a major deterrent to the recognition of women's productive roles and thus has affected the delivery of productive resources that would help to modernize women's farm/household production (15).

(15) See Theodore Shultz 1980 : 'Effects of the International Donor Community on Farm People', American Journal of Agriculture Economics 62 : 873-78.

CHAPTER III

A PROBLEM OF MEASUREMENT :

A LOOK AT THE METHODOLOGIES FOR EVALUATION OF WOMEN'S WORK

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I. Measures of Women's Work :-

A. Present Practices : The Counting of Women

Women are counted by governments in six ways :

- (i) as a total population of females, usually by age categories;
- (ii) as economically active (by sector, occupation and status)
or as economically inactive;
- (iii) by education received;
- (iv) as migrants;
- (v) by marital status; and
- (vi) by life expectancy, death and reproduction rates.

For planning purposes, figures on present labour force participation by sector suggest in which directions the present female labour force could be shifted, if desired. Figures on economically inactive homemakers indicate the reserve labour force. Figures on female migration tell where that labour force is ; figures on education show what its modernization potential is ; and figures on marital status, life expectancy, and fertility and child-to-woman ratios indicate the capacity for production of the future labour force (1).

Governments, however, systematically undercount the number of women workers for one or more of the following reasons :

- the definition of economic activity excludes home-makers and working children and undercounts unpaid family labour ;
- statistical systems simply fail to count large numbers of women workers ; and
- enumeration systems are inaccurate and out of date.

(1) See Elise Boulding 1983 : Chapter 14 'Measures of Women's Work in the Third World : Problems and Suggestions', in Buvinic, Lycette and McGreevey 1983 opt. cit.

Accurate enumeration of persons of any social category depends on the quality of the enumeration system of a given country, and the enumeration infrastructure is not well-developed in many Third World countries (2). Numbers reported may be based on official guesses or sample surveys rather than on complete enumeration. Relatively few countries have up-to-date and complete census information on their women workers.

To the general deficiency of reporting infrastructures, add the inexperience in counting women at all as separate persons, and the social invisibility of women's activities, and the most likely outcome is that there will be undercounting of women's work in all societies, and especially in the Third World.

B. Definitional Biases :

Enumeration of women in the labour force is often undertaken according to rules laid down by the United Nations. They can be summarized as follows : "(The) total economically active female population is the sum of those females above a specified age, generally fourteen or fifteen, who furnish labour for the production of economic goods and services - for market or exchange in contrast to those for individual or family use, subsistence, or consumption. Unless otherwise noted, it must be assumed to include members of the armed forces" (3). The economically

(2) See Salma Khan 1984 :

(3) See Boulding et al 1976 : 'Handbook of International Data on Women', New York: Halsted Press p 296.

active female population consists of "the total of employed persons (including employers, persons working on their own account, salaried employees and wage earners, and so far as data are available, unpaid family workers) and of unemployed persons at the time of the census or survey". (United Nations, 1972 : 'Yearbook of Labour Statistics', p 3). Unpaid family workers can be included if they contribute at least one-third of normal working hours to an economic enterprise operated by another household member, and unemployed women are to include those seeking work for the first time. Specially excluded are students, women who are solely homemakers, retired persons, persons living on their own means, and those "totally dependent on others", as well as institutionalized persons.

It can be seen immediately that it is easier to leave unpaid family members in the "free labour" category of "economically inactive homemaker" than to count them as economically active. Cultural attitudes toward women affect the degree of bias ; some countries report large numbers of women in the "unpaid family worker" category and others report almost none (4).

There are numerous other pitfalls inherent in such a definition. It is plain for the eye to see that in fact, usually there is only a very small proportion of women in poor communities of the developing world who do not produce some food, craft, or service for exchange in their own community. Whether a woman's products

(4) See Youssef, Nieves and Sebstad, 1980 opt. cit.

find their way into the market is another matter ; besides, most sell for cash from their own courtyards without ever entering a market, and many sell through the help of (mostly) male children in the weekly village/community market.

Another, rather serious problem, is the exclusion from the definition of the economically active population of the productive labour of those under age 15 and, frequently, of those over age 65. Evidence from the field makes it starkly obvious however, that often children enter the labour force when they are as young as 5 years of age, and are mostly regularly active by the age of 10. Moreover, they tend to continue in the labour force usually until they die.

Even more disturbing is the use of the concept of "economically inactive homemaker". As has been amply documented in other studies on women's economic roles in developing countries (Boserup 1970; Tinker and Bo Bramsen 1976; Elliott 1977; Boulding 1977) (5), it is the productive work of women both in the home and in the market in the least capitalized traditional

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- (5) Ester Boserup 1970 : 'Women's Role in Economic Development', London : Allen & Unwin;
Tinker and Bo Bramsen 1976, opt. cit.;
Carolyn M Elliott 1977 : 'Theories of Development : An Assessment' in Wellesley Editorial Committee ed. 'Women in National Development : The Complexities of Change', Chicago, University of Chicago Press;
Elise Boulding 1977 : 'Women in the Twentieth Century World', New York : Halsted Press.

sectors of the economy that makes it possible for the agricultural cash crop and industrial sectors of Third World countries to make any showing at all in the world markets. The value in the subsistence sector of the food "economically inactive homemakers" produce and process for family consumption ; of the water and fuel they haul long distances for family use ; of the craft and construction work they do in producing home equipment and the homes themselves ; and of the services they render to men, children, and the elderly in the home is not included in the national accounting system. Even when valued at the miniscule rate of the alternative wages these women could command as paid labourers, the 15-hour (or more) workday of the "economically inactive homemaker" would probably contribute up to one-quarter of the GNP, even in the least industrialized countries (Boulding 1983). Furthermore, the issue of placing such a low alternative wage value on the work women do for domestic maintenance, even allowing for the lack of efficiency fostered by time spent in hauling water and wood, ought to be reconsidered, since the values assigned are often an artifact of the type of economic analysis made. In the basic needs approach discussed later in this chapter, we see that a large proportion of basic human needs are met by precisely these home-based activities and that they should be appropriately and highly valued.

C. Women "Unaccounted For" :

Perhaps the most serious deficiency in the statistics regarding women's labour is that a large number of women workers simply are not accounted for at all. Table 3.1 shows the mean rates for female crude labour force participation and economically inactive homemakers, and the residual between these figures and 100 per cent, by region, for the 32 countries that report both figures.

Table 3.1 : Regional Means of Female Labour Force Participation Rates and Economically Inactive Homemakers, and Residual

Labour force Category	Europe/ North America (n = 8)	Latin America (n 9)	Africa/ Middle East (n = 4)	Asia (n = 11)
Crude Labour force Participation Rate	.24	.15	.11	.19
Economically Inactive Homemakers	.52	.45	.40	.51
Residual	.24	.40	.49	.30

Source : Boulding et al 1976 (opt. cit.) p 29, 33.

NOTE : $\text{Residual} = 100 - (\text{Crude Labour force Participation Rates} + \text{Economical: inactive homemakers})$

The magnitude of the difference between the total accounted-for women and 100 per cent reflected in this residual category suggests that there is a significant number of unaccounted-for women, which includes women in the formally excluded categories of students, retired persons, those totally dependent, and those institutionalized.

Europe and North America, which have the best enumeration procedures, also have the smallest differential. It is not possible that up to 49 per cent of the women in the four African and Middle Eastern countries belong, as Table 3.1 indicates, in these formally excluded categories. Boulding (1983) stresses that in general, a good rule to follow in estimating de facto, as contrasted with de jure, employment in subsistence economies is to assume that in low-income groups, all persons aged 10 years and over, both male and female, are "at work", in the sense that they are regularly engaged in some activity that helps keep them alive. It is recognised that only the middle classes can "afford" unemployment, because only in the middle class is there a support system that allows people to choose leisure in the absence of the type of work they prefer. (This point has already been stressed in Chapter 1). Much more research needs to be done to throw some light on what may be the activities of some of the women in the "residual" category in Table 3.1. One such analysis has been conducted by myself for Dhakuly village, Bangladesh, the findings of which are shown in Appendix II, Table A2.2.

D. Key Questions in the Evaluation of Women's Work :

Three key questions, then, seem to emerge, given the current state of affairs, on how to evaluate women's work. These are the following :-

1. Which definitions of home production and consumption, or of work and leisure, are useful for policy formulation ?
2. Which techniques are most appropriate for setting a value on home production activities ?

3. How can valuation measures be designed to take account of market imperfections, such as discrimination and bias ?

An attempt is made in the following section to answer some of the issues raised in these questions by examining various approaches to measurement of labour force participation (including women). More particularly, the approaches are described in order to point out their shortcomings in measuring women's work, along with some of their advantages as measurement tools.

II. Approaches to Measurement of Labour-force Participation

(including women) :-

A. Direct Inquiry Approach :

The investigator goes to the village with a questionnaire and makes a direct inquiry into the income of each household and of the women's contributions to this income.

Drawbacks :

- 1) Women's income is almost always in the home-production and is not received as regular 'wages' as such. In this way it is almost 'invisible' and will not therefore be recognised clearly as income by the women or by the investigator.
- 2) Women's income is often in kind and not in cash and thus will be difficult to recall and to put a value to.
- 3) Women's income is seasonal and irregular. The problem of recall will exist and if the investigator approaches during a month when income is regular, there may be a bias towards valuing it higher than it actually is.
- 4) Bias will also exist as some will have a tendency to quantify their income as higher than others for similar activities, and vice-versa. In this way, the information might be unreliable.
- 5) This method will also be very time-consuming.

Advantages :

- 1) If the questionnaires can, however, be filled with accuracy, then all the information is directly available for analysis.
- 2) There is a special appeal for the direct inquiry actually made in a village. There is always a degree of estimation in indirect methods.

B. Production Function Approach :

Definition of Production function : (cf Paul A Samuelson, 'Economics' 9th edition, McGraw Hill Kogakusha Ltd, 1973 ; p535)

The production function is the technical relationship telling the maximum amount capable of being produced by each and every set of specified inputs (or factors of production). It is defined for a given state of technical knowledge.

Definition of The Marginal Product : (cf Samuelson ibid. p 537)

The 'marginal product' of a productive factor is the extra product or output added by one extra unit of that factor, while other factors are being held constant. Labour's marginal-product is the extra output you get when you add one unit of labour, holding all other inputs constant. Similarly, land's marginal-product is the change in the total product resulting from one additional unit of land, with all other inputs held constant - and so forth, for any factor.

Marginal productivity of labour determines the wage rate.

For example, if a woman is working somewhere and one knows the production function of that activity, then the marginal product of her labour determines her wage rate. The wage rate will indicate the contribution she is making to domestic economy.

Diminishing returns can be stated as diminishing marginal product.

In other words, if production function is :

$$Y = F^a \cdot M^b \cdot K^c$$

where $a+b+c = 1$ (Cobb-Douglas type of production function, with constant returns to scale, Samuelson p 537)

F = female labour

M = male labour

K = capital

then contribution of female labour = a . total output

$$\text{or, } a = \frac{\text{contribution of female labour}}{\text{total output}}$$

Marginal productivity of F = $\frac{dy}{dF}$

If $y = F^a$

$$\text{then } \frac{dy}{dF} = a \cdot F^{a-1}$$

Therefore, total share of all F = $F \cdot \frac{dy}{dF}$

$$\begin{aligned} \text{Therefore, we get } F \cdot aF^{a-1} \cdot (M^b \cdot K^c) \\ = a (F^a \cdot M^b \cdot K^c) \\ = ay \end{aligned}$$

Furthermore, $F \cdot \frac{dy}{dF} = ay$

$$\frac{F}{y} \cdot \frac{dy}{dF} = a$$

This is called the elasticity coefficient of output (y) with respect to F. In simple language this is obtained as follows :

$$a = \frac{\% \text{ change in } y}{\% \text{ change in } F}$$

Drawbacks :

- 1) Production function varies from unit to unit and activity to activity. Therefore it cannot be applied in practice to a village situation in which women work in different occupations at different degrees of competence. (Samuelson : "There are thousands of different production functions ... at least one for each of the innumerable productive units." p 536).
- 2) The production function approach is more suitable for mechanized activities in which there is similarity in the type of work and efficiency of labour.

3) To estimate the production function, a lot of information is required for each input which is difficult to obtain in practice. It also assumes that every input has been identified.

However, theoretically it is possible :

for example : If one wanted to calculate the production function for milk selling and the share of women's work in it, then to calculate :
$$a = \frac{\text{contribution of female labour}}{\text{total output}}$$

one would need information on all women milking cows and selling milk, and they would all have to be doing that activity in more or less similar fashion;

To calculate total output one would have to get information on the money value of all milk produced and sold;

One would also need to have an idea of how much men were participating in this and also how much capital was being used;

Even so, one would be able to calculate the production function of only one type of activity. The same procedure would have to be carried out for all other types of work, eg. agriculture, handicrafts, home improvements, horticulture, etc.

Furthermore, in order to calculate the production function, one needs to utilize the method of marginal productivity. In a mechanized activity it is much more feasible to increase one unit of any given factor, but in rural village activity, it might be more difficult.

However, with enough staff and time-series data and the aid of a computer for calculations, the production function approach is

perhaps theoretically possible. But since the task is rather huge, it has never been attempted and certainly never been calculated for the contribution of women to rural development through the domestic economy.

C. Multiple Regression Approach :-

There are two approaches :

1. The first measures the effect of all known variables, which are independent of each other, on the women's income.

ie. to measure the contribution of variables to determining women's income, one would look at perhaps the following variables :

Supply side

skills and training
educational attainment
time available
age and health
literacy
awareness of opportunities
child-care constraints
other dependants

Demand side

job opportunities
wage rates
distance
attitudes

One would collect information on each of the variables for each woman in every household. Each variable will have to be independent of each other.

2. The second measures the effect of all known variables, which are independent of each other, on the total household income.

ie. to measure the role of different contributors to the household economy, one would look at perhaps the following variables :

Land, Homestead and other Productive Assets

Number of male and female earners by age (separately)

Male and female education and training (separately)

Male and female occupations (separately)

Other variables like dependants, access to services, etc.

By multiple regression, the contribution of women to household income can be estimated.

Advantages :

- 1) One can get an objective estimate of the contribution of each variable - which of them have a significant contribution, and which of them do not have a significant contribution.
- 2) Earlier, this method was very complicated, but now-a-days, with the availability of advanced computers, this method has become relatively easy.

Drawbacks :

- 1) The variables have to be independent of each other, and in reality, this is often not the case.
- 2) Large numbers of independent variables require large sampling frames to attain statistical significance.

D. Expenditure Approach :-

In this approach, a direct inquiry is made into the total expenditure of the household. From this, approximate estimate of household income is then derived.

Advantages :

- 1) It has been observed that households are willing to give information about expenditure but not about income. Therefore an expenditure survey is usually easier than an income survey.
- 2) For poor households, total expenditure and total income are nearly the same. Only in rich households, information on expenditure has to be supplemented with information on savings to obtain household income. In any case, expenditure constitutes the major part of household income.

Drawbacks :

- 1) It is difficult to make a distinction between the types of expenditure based on men's income and those based on women's income.
- 2) Home production, which is also partly consumed, is difficult to quantify.
- 3) Seasonality of expenditure can be estimated only if the inquiry is made several times in the year, which is very difficult.
- 4) People generally tend to over-estimate expenditure.

E. Time as a Measure of Women's Income :-

In this approach, an estimate is made of the time that the woman spends in different activities from morning to evening. The time devoted is seen by direct observation or reported by direct inquiry.

Value is assigned to each unit of time and in this way the income from different activities is estimated. The assumption behind this is that one would need to pay somebody else for the same work for the same time, if the women were not doing the work themselves.

Advantages :

- 1) Theoretically it is justified as a measurable and objective criterion and if the information is accurate, it provides a scientific approach to evaluation of women's work.
- 2) It recognises the value of women's work.
- 3) It also gives an idea whether women are getting reasonable leisure or not.

Drawbacks :

- 1) It is time-consuming.
- 2) It is unrealistic in the real-life situation of the village. Why? Because often more than one activity is going on at the same time and the women have no capacity to employ others to do their work anyway.
- 3) The methodology of time-use surveys assumes that all time units have equal value, are interchangeable, and have equivalent outcome. Time-use studies therefore tend to ignore or misrepresent those situations where quantity of time is not a good measure of the

quality of output, where the time units have varying intensiveness and are not interchangeable, and where social variables change the value of particular time units. (For examples, see Buvinic et al. opt. cit. p 22).

4) Policy based on these values may result in women devoting more time to home production than is economically efficient.

5) Home production values based on market wages will reflect market imperfections and underrate the value of home work.

F. Moving Average Approach :-

This approach is used a) to smoothen fluctuations, and
b) to give a better indication of the general trend.

In each year, one should have the contribution of women's work to household income.

for example, Year 1 2 3 4 5

Take average and call it for Year 3

Next Year 2 3 4 5 6

Take average and call it for Year 4

and so on.

In a situation like that of Bangladesh, where fluctuations are frequent and often serious, without the moving average approach, one would not have much of an idea of the general trend, ie. whether things are improving, or whether they are getting worse.

Advantages :

- 1) If we have data for many years, this gives a better estimate of trend.
- 2) If there is discontinuity due to catastrophe, then the moving average method automatically takes that into account.

Drawbacks :

- 1) The applicability of this method is limited to situations where data for many years is available, which is seldom the case for household or village surveys.
- 2) If we are projecting the same trend for the future, we are assuming that the same frequency of calamities will occur in the future also.

G. Economic Viability Approach :-

This is a new approach, introduced for the purposes of this thesis. As the approach has been described in much more greater detail in Chapter 7, I shall only summarize the points here.

The economic viability approach is an estimate of the economic viability of the members of each household through five main determinants :

- 1) Ownership of productive assets (including land and homestead)
- 2) Number of male earners and their earning capabilities.
- 3) Number of female earners and their earning capabilities.
- 4) Household characteristics, access to services and other relevant factors.
- 5) Household size.

A detail of the method adopted , its justification, and the practical application of this approach to analyse data from Dhakuly village, Bangladesh, is shown in Chapter 7.

Justification :

- 1) Other approaches are too theoretical and do not fit for practical application.
- 2) Economic viability depends on a combination of factors rather than just by looking at what income people earn.
- 3) The information is easier to collect than income or time-use.
- 4) This approach is more capable of remaining valid and relevant under catastrophic occurrences.
- 5) The analytical part is simple and yet quite sophisticated.

Drawbacks :

- 1) The weights assigned to each component is not wholly scientific.
(The justification for the choice of weights assigned is given in Chapter 7).
- 2) A linear additive approach has been adopted, but in real life there are many non-linear and interactive elements. (explanation in Chapter 7).
- 3) The approach does not adequately take account of seasonality.

III. The Basic Needs Framework and Women's Contribution :

The basic needs approach to development has already been discussed in Chapter 1 and will be discussed further again in Chapter 6. Very briefly, here, the basic needs approach to development considers progress by the extent to which the life conditions of the poorest sections of a society are improved, even at the cost of slowing growth as conventionally measured by GNP. The ILO defines basic needs as : " the minimum standard of living which a society should set for the poorest groups of its people. The satisfaction of basic needs means meeting the minimum requirements of a family for personal consumption : food, shelter, clothing ; it implies access to essential services, such as safe drinking water, sanitation, transport, health and education ; it implies that each available for and willing to work should have an adequately remunerated job. It should further imply the satisfaction of needs of a more qualitative nature : a healthy, humane and satisfying environment, and popular participation in the making of decisions that effect the lives and livelihood of the people and individual freedoms." (ILO 1977, 'Meeting Basic Needs', p 7)

Elise Boulding (1983) notes that many basic needs do not enter into the calculation of the GNP of the Third World Countries, because the activities that satisfy them are not part of the market sector and are performed by women. Such activities include the provision of food, shelter, clothing, water, fuel, transportation of goods and children, health care, and education in agriculture and handicraft skills ; the creation of a domestic space in which

each person is, to some degree, an individual and individual desires are taken into account ; the provision of nurturance and leisure opportunities ; and the preparation of feasts and celebrations. Boulding goes on to stress that since these are the activities that satisfy the basic human needs, it is necessary to begin collecting data on them so that they can take their place in national income accounts along with market-based activities. She presents three reasons for collecting such data :

1. Such data render visible, and assign public value to, basic dimensions of human welfare that are now largely hidden by market-based development measures, and thus give more status to the activities that women traditionally engage in. They include the activities of women in the poorest sectors, both women living with male heads of household and women who head households; they include unpaid family labour and the work of the economically inactive as well as that of the employed.
 2. The attention focused on such activities will make visible the imbalances between women's and men's work loads, facilitating a social dialogue on the redistribution of work, on alternative roles for women and men, and the provision of better tools at the domestic level for meeting family needs.
 3. Enumerating valued human activities may encourage an increase in the quality of certain kinds of participation in a society as it becomes known through the enumeration process that these values are indeed valued. The process of enumeration is in itself a value statement and, therefore, a potential tool for social change.
- (See Boulding 1983, opt. cit. p 293-99 for details)

CHAPTER IV

A POVERTY PROFILE OF RURAL BANGLADESH

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A : The Setting :

Land and water : The first important thing to remember about Bangladesh is that the countryside is mainly water - it is fields upon fields laced by pools of standing water or streams of flowing water. Both land and water inspire emotion : Land is bountiful and peaceful - the source of well-being. In contrast, water is fickle - a source of both well-being and destruction. Rain water, sea water, river water - much as it is needed, it also brings fear with it.

Several major rivers divide and change their course on their way to the sea to create the delta. Many minor rivers divide and sub-divide making countless small streams, smaller channels and canals. Most streams, canals, rivers, both large and small, overflow their banks in an annual ritual. Seen at a distance, the land in the delta seems deceptively vast, flat and low. Seen at a closer range, the land reveals its contours. The waters of the delta not only replenish but also rebuild and contour the earth year after year. There is low land which is replenished by the flood waters. There is less low and less fertile land which is only partly inundated during the floods. And there is the high and less fertile land from which the rain water siphons off the fertile top soil.

The village : Across the sea of fields and water, one sees sporadic uprisings of land, where some land stands higher than all the rest. This is where the trees grow and this is where

people and animals live. These are the villages, some 70,000 in number in an area of 55,000 square miles. These villages sit partly on high land contoured and raised by the water, but largely on raised land, contoured and raised by people over the years. One can see that the delta is essentially uninhabitable. The same waters that replenish the soil, also flood the land. Nearly all roads and homes are built on land that has been raised by people. In the countryside, one is distinctly aware of the movement of the earth - people dig, lift and carry mud and clay in a daily ritual to redistribute the earth : one sees people piling, pounding, and leveling their homestead plots ; women digging and carrying mud and clay to plaster floors and walls of their huts ; women moulding mud to make their cooking stoves ; people moving mud and clay to be fired into bricks ; men, women, and children breaking bricks to make the roads ; and so it goes on.

The people : The villages of Bangladesh, spread out over the delta, inhabit some 80 million people - 80 million people whose pattern of life revolves around the rising sun. Almost half of these people donot own land of their own, or donot own enough land to make a living. Most of these people cannot read or write. At least half of these people donot get enough to eat each day. All of these people are affected year after year by natural disasters beyond their control. Life is hard in the villages of Bangladesh. And yet, the contrast in the lives of people comes glaring out as one walks through the villages.

As one walks through the paths heavily shaded by trees of many description - date palm, bamboo, beetlenut, mango, banana - one can see cattle and goats tethered to stalks along the path, small chickens dart in and out through bamboo fences, children stop and stare and wave and laugh, women linger in the shadows. One can smell the rotting jute, the smoke of the dung fires. Through this amalgamation of sights, sounds and smells, one can see some tin roofs. To reach the tin roofs one has to climb up a slope of a homestead, through an arborway of pumpkin vines, past a fenced-off vegetable garden, past an area for livestock, and past some hay stacks, piles of jute straw, and many trees. One comes to a courtyard surrounded by several large mud huts with tin roofs. The hard-packed mud surface of the courtyard is spread with jute and coddung to dry. Inside one of the larger huts one can see a wooden bed, some wooden furniture, several large mud storage bins, and tin boxes in the rafters. The women of this homestead cook under the protection of a special cooking hut where they have constructed three mud stoves. The hut also shelters their wooden husking instrument. They own land, cattle and poultry. They have a few luxuries - milk, and eggs, plus oil, spices and lentils to eat with their rice. They donot worry about their meal when the sun sets. For them life is mostly peaceful.

Near this homestead, as one crosses a narrow bamboo bridge over a dried up water channel, one can see a single, one-room hut made from jute stalks with a straw roof. This hut is about eight feet by twelve feet and has no spaced bamboo meshing to serve as a

window. Inside the hut one can see a table, a quilt of rags, and several macrame jute hangers hung from the ceiling. Most of them have small empty glass bottles. The woman of this home cooks on a mud stove in the open courtyard which she stokes with leaves, grass, whatever she can find. She has a calf which she has taken on sharecropping. This family will eat rice with some salt and chillies that day. They can sometimes find a pumpkin to eat with their rice, which is made to last for several days. They cannot afford oil, spices, or lentils. Here life is not peaceful. It is in this context of rural Bangladesh that one must look for ways to improve the lot of the poor, especially women.

B : Historic and Demographic Situation of Bangladesh :

For centuries, what is present-day Bangladesh was part of the region in Eastern India known as Bengal. More recently, with the partition of India in 1947, the predominantly Muslim East Bengal became part of the new nation of Pakistan. The East and the West wings of Pakistan were united under a common name and a common religion but remained divided by 1000 miles and by different language and race. At best it was an illogical union and increasingly it became an unequal one. Eventually the union proved untenable to those in the East wing. After a prolonged civil war in 1971, Bangladesh was born.

The union with West Pakistan was unhappy both politically and economically. Bengalee economists see the association with

West Pakistan as a time of economic exploitation, in fact, as a second colonial era. There can be little doubt that in the early years of Pakistan, the financial resources of East Pakistan were diverted to the development of West Pakistan. This was possible because of the integrated nature of the two economies. The Central Government operated overall economic control, and the Regional Governments had very little say in the formation of economic policy ; there was virtually no room for independent action by the East Pakistan government. (1) There was a common external tariff on imports from other countries but trade between the wings of the country was regarded as internal trade and no fiscal restraints were imposed upon it, although the quality of goods that could be moved depended on the availability of transport and to some extent on government regulation. The use of a common currency was combined with freedom to move money from one wing to another. Earnings of West Pakistani businessmen in East Pakistan could be reinvested in West Pakistan and the proceeds of the export of jute and jute manufacturers diverted to the development of other parts of Pakistan. (2)

In 1972, for the second time in twenty-five years, the people of East Bengal were faced with the necessity of adjusting their economy to a new economic order. The partition of India in

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- (1) See Just Faaland and J R Parkinson, 1977, 'Bangladesh : A Test Case for Development', S Chand & Co. Ltd., New Delhi, Chapters 1 & 2; and UNICEF, 1977, 'Women's Development Programme : A Report of Feasibility Survey of Productive/Income Generating Activities for Women in Bangladesh'.
- (2) The way in which resources were transferred is described in detail in Keith Griffin and A R Khan, 1972, 'Growth and Inequality in Pakistan', McMillan.

1947 severed the traditional ties with surrounding districts ; and a quarter of a century later, severance of ties with Pakistan had similar effects for Bangladesh. New markets had to be found for products previously sent to Pakistan, new sources of supply had to be developed at a time when the machinery of government had to be established and new institutions built up.

The material damage caused by the war in 1971 was estimated to be of the order of \$ 1,200 million. (3) Clearly such a figure cannot be regarded as a precise estimate ; neither can it take account of many intangible costs, nor the effects of the war in delaying the recovery of production to normal levels.

Included in the cost was the loss of agricultural output caused by the war, estimated at some \$ 300 million, and while this had to be made good out of the contributions made in conjunction with the United Nations Relief Operations, it could be more quickly remedied than the damage to physical structures. Food apart, the major effects were the loss of animals and damage to fishing equipment. Damage to housing was estimated to have amounted to about \$ 200 million - this was mainly damage to bamboo huts. The effects of the war on education included an important element for the rehabilitation of students and teaching staff. The most critical form of damage, however, affecting the recovery of the economy was that to transport facilities - the total cost of such damage was estimated at about \$ 130 million.

(3) See 'A Survey of Damages and Repairs', United Nations Relief Operation, Dhaka 1972.

The damage caused by the civil war of 1971 compounded the devastation that was caused by the cyclone of 1970. And soon after, there was the 1974 floods and famine. The great extent of disaster, devastation and suffering that was caused in Bangladesh due to the quick succession of three catastrophic occurrences, has truly left a challenge for developmentalists of the world. The extent of that challenge has led some economists to the view that :

"If the problem of Bangladesh can be solved, there can be reasonable confidence that less difficult problems of

development can also be solved." (Just Faaland, 1977, p 5)

Today there is the Bangladesh we are all familiar with - the media dramatised "international basketcase" (Marty Chen, 1983). With a population of only 10 million people, life in Bangladesh could be very pleasant. Incomes could be high and most people could live out of reach of floods and natural disaster. But the population is over 90 million - living in 55,000 square miles. Corresponding with Britain, this means that the area is two-third the area of Britain, with the population two thirds more. The density is more than two and a half times. By the time I finish writing this thesis, it will become three times ! (4)

(4) United Nations Statistics : (1984)
 United Kingdom (p 229) : Population 58 million ; Area 244,000 square km. ; Density 238 per square km.
 Bangladesh (p 170) : Population 95 million ; Area 143,000 square km. ; Density 664 per square km.
 Ratio of density : 2.8 times.

Just Faaland comments : (1977, p 1) "It must be a fond hope of most educated people that man can control events and his own future. There is little to give credence to that view in Bangladesh. There can be little prospect of a spontaneous movement to reduce the increase in population and it is impossible to see how a much larger population can be given any prospect of attaining the type of living standards to which the Western world has become accustomed. Nature, not man, is in charge of the situation in Bangladesh."

Indeed, the starting point from which economic development must be attempted is unpromising in Bangladesh. Income per head in 1972 was estimated at US \$ 70 and is now US \$ 100. In terms of consumption this means a diet mainly of rice with very little to supplement it. Indeed, more than half of Bangladesh's people do not eat enough each day. The calculations of need after the famine of 1943 were based on consumption of cereals of 1 lb per head per day. The same basic calculations are more often based on 15 oz. rather than 16 oz. a day : fractions of an ounce make a great deal of difference to the amount of imported food required by 90 million people - such fractions also make a great deal of difference to the daily lives of the population. A diet largely based on minimal amounts of rice, besides providing insufficient calories, is deficient in other ways. Rice contains less protein than wheat and there is inadequate consumption of pulses and animal products to supplement it. The most important source of protein is fish, but even so consumption amounts to only about 4 lb per head per year, and consumption of milk, another source of

protein, to about 20 lb per head per year. Over half the households in Bangladesh get too little protein. Fats are also scarce; average consumption of cooking oil amounts to about 5 lb per year. A diet of rice is deficient in various vitamins which are not supplemented sufficiently by consumption of other foods ; shortage of Vitamin A in the diet is particularly serious.

(Statistics taken from BBS and Faaland). Inadequate nutrition leaves the way open for disease and combines to reduce the expectation of life. Child mortality is particularly high : about a sixth of all children die before the age of five.

(IBERD 1981 IMR = 135, CMR = 20) Those that survive are smaller and lighter than they would be with better food.

(For a discussion on minimum nutrition requirements and an estimated poverty line, see Chapter 1. Briefly, Poverty line for Bangladesh = \$ 90 per person per year ; Minimum caloric requirements per person per day = 2103 (Osmani, BBS : based on ADB 1976/77 1080, adjusted for inflation by USAID))

Average daily caloric intake (calories) :

Dhaka Nutrition Survey (rural) 1975-76	2,094
(percent of minimum daily caloric requirement)	93%
IBRD (1980)	1,960
(percent of minimum daily caloric requirement)	87%

Nine out of ten Bangladeshis live in the villages. Most of them try to make a living from land but only five out of ten rural Bangladeshis own enough land to make a living. (See ILC, 1977, World Bank 1983, and BBS statistics) A more detailed discussion of land distribution follows in later sections of this Chapter.

C : The Incidence of Poverty :

a) The Poverty Line :

The ILO has defined two poverty lines for rural Bangladesh : namely, the absolute and extreme poverty lines, ie below per capita incomes of Tk 23.61 and Tk 17.02 per month respectively at 1963-64 prices. (5) Based on these definitions, Table 4.1 below summarises the situation in Bangladesh over one decade.

Table 4.1 : Incidence of Poverty in Bangladesh (Percentages)

Image redacted due to third party rights or other legal issues

Source : Khan, ILO 1977, p 147

The outstanding feature indicated in the Table is the sharp increase in poverty in the decade since the early 1960s. The increase in the proportion of the extremely poor is truly remarkable. While only 5 percent of the rural population in Bangladesh could be categorised as extremely poor in 1963-64, the proportion rose to over 40 percent in the 1970s.

(5) See Azizur Rahman Khan, 'Poverty and Inequality in Rural Bangladesh', 1977, in ILO : 'Poverty and Landlessness in Rural Asia', opt. cit.

b) Real Wages :

Figure 4.1 below illustrates the movement of real wages of agricultural labourers in rural Bangladesh over almost three decades.

Figure 4.1 : Real Wages in Rural Bangladesh

Image redacted due to third party rights or other legal issues



Source : Khan, ILO 1977, p 152

While it is impossible to find any trend over the entire period a few phases can be distinctly identified :-

- (i) during the late 1940s and early 1950s real wages declined sharply ;
- (ii) for about a decade thereafter there was a steady rise ;
- (iii) after 1964 real wages started to decline again and since 1964, despite some short-term fluctuations, there has been a pronounced downward trend ;
- (iv) in the early 1970s the rate of decline accelerated sharply and real wages reached a lower level in the first half of 1975 than in any period during the preceding two decades.

This movement in real wages is consistent with the findings of a growing incidence of poverty. The average of real wages in 1968 and 1969 was 15 percent below the average in 1963 and 1964. Khan suggests that this must be the major explanation for the dramatic increase in the numbers of the extremely poor in the later years.

D : The Process of Increasing Impoverishment :

Khan of the ILO has presented several points which might explain the alarming phenomenon of increasing impoverishment in Bangladesh during 1964 - 1975:

a) The living standards of the vast majority of the rural population in Bangladesh declined in absolute terms. The real wages of agricultural labourers fell. These phenomena have been particularly pronounced in recent years. Comparing the decline in recent years with the already dreadful poverty in the benchmark year (1964), it is clear that the vast majority of the rural population today must be suffering from severe malnutrition and starvation in various degrees.

b) Per capita rural income and output fell in recent decades, especially during the last five years. Average income thus moved in the same direction as the incomes of the vast majority. It is, however, not true that the incomes of all groups fell. A very significant proportion of the households at the top of the scale obtained increases in real incomes. This was quite pronounced in recent years. i.e. precisely in the years when the real incomes of the poor declined precipitously.

Who moved down the income scale and how, and what are the forces operating in the reverse direction, raising the incomes of those at the top of the scale ? These are perhaps some of the answers :

- growth in non-agricultural employment was not fast enough to absorb the increase in the labour force. Agriculture, being the residual source of employment, thus accumulated labour at a higher rate than the expansion in demand for labour consequent upon changes in output.
- as a consequence, the share of agriculture in total employment increased steadily ; and the gap between the supply and demand for labour in agriculture has been widening.
- the widening gap led to the decline in real wages ; and the real earnings of agricultural labourers declined even more than is indicated by the fall in daily real wages. The absence of workers' organisations in agriculture helped this process of adjustment.
- the number of landless labourers increased both absolutely and as a proportion of the agricultural population. This process of increased proletarianisation was brought about by the conversion of families owning small amounts of land into households of landless workers.
- at the same time, an increasing proportion of landowners joined the category of small or "below subsistence" cultivators.

E : Rural Employment Profile :

a) Labour Force Participation :

The following data is based on 1974 census figures, and has been analysed by the World Bank (6). The participation rates for both males and females are calculated for age groups 10 and above. The predominance of agriculture and very low school enrolment ratios account for a rather high percentage of the 10-14 age group, especially males who help their parents in income earning opportunities.

While the age-specific participation rate for males, 10-14 years old, was 41.9% in 1974, it was only 6.4% for females.

While the former is much higher than the average for developing countries of 21.6% (1970), that for females is low compared with the average of 14.4% for developing countries.

According to the 1974 census, the overall participation rates for the age group 10 and above were 80.4% for males and 4.0% for females.

The World Bank believes that female participation rates can be expected to increase over the rest of the century. While religious^u and cultural practices might inhibit the entry of females into the labour force, there are a number of factors which might push female participation. Significant among these are :-

- a) deliberate policies now being pursued by the government to raise the status of women, particularly through promotion of vocational training among adult women, reservation of jobs for women within the government and semi-government institutions, raising the age at marriage and other social measures ;

(6) See World Bank 1983
'Bangladesh : Selected Issues in Rural Employment'

- b) special efforts to increase enrolment of females in primary schools, and proposed scheme of scholarships to prevent school dropouts ;
- c) promotion of family planning measures which are expected to influence a substantial proportion of eligible couples - about 60% by 2000, and consequent release of women from reproductive functions once they reach the age of 25-30 ; and
- d) the increase in landlessness is likely to force females into the labour force.

b) Major Occupations : (7)

The rural work force in Bangladesh is predominantly agricultural, generally self-employed, and suffers from low productivity and high under-employment due to seasonality of agricultural activities, high levels of landlessness, and lack of non-farm employment opportunities. In FY 80, 79% of Bangladesh's labour force was engaged in agriculture (49% in crop production, and 30% in non-crop activities), 5% in industry and the remaining 16% in construction, transport, trade and other services. Proportionately more women are engaged in non-crop activities than men ; 80% of the male work force and 50% of the female work force are engaged in agriculture.

The average number of days worked in agriculture is 185 days per worker per year, 115 in crop production and 70 in other allied

(7) All the figures in this and the following sections have been taken from the World Bank (1983), opt. cit.

activities, in the handloom sector it is about 200 days per year; in other rural industries and service sectors, the intensity of employment is not known but is considered low. The seasonal nature of agriculture affects the employment pattern. During the agricultural slack season nearly 62% of the rural employed males and 77% of the employed females suffer from under-employment; the extent of under-employment among non-agricultural workers has been assessed at 21% and 60% for employed males and females respectively. On the other hand, during the agricultural peak seasons, over two-thirds of the employed males and one-third of the employed females work more than normal hours (i.e. more than 40 hours a week). See Table 4.2 below for a glance at the distribution by major occupations and status of rural labour force. (Source : World Bank, 1983 op. cit. Table 1.5, p 12).

Table 4.2 : Distribution by Major Occupations and Status of Rural Labour Force - 1980 (%)

Image redacted due to third party rights or other legal issues

Source : Manpower Situation in Contemporary Bangladesh - Findings of the Bangladesh Manpower Survey of 1980, Bangladesh Bureau of Statistics, June 1982. Tables 30 and 31.

Only a small proportion of the work force is employed on wages and salaries - about 13%. The majority (56%) are self-employed workers, as subsistence or cash crop farmers, in trade and in other non-crop activities, and as unpaid family labour. As no one can afford to remain unemployed unless someone else can provide at least minimum subsistence, and as there are no employment benefit schemes, the remaining 31% of the labour force takes up any work available - the great majority are the 'working poor', people working long hours generally in low productivity activities, eking out a bare subsistence. The reason for their low productivity is the lack of land or capital or skills or all of these.

c) Wage Rates :

Agriculture remains the most important source of wage employment in rural areas. Agricultural wages, when deflated by the rural cost of living index or simply by the price of rice, show a long-term downward trend. (See Table 4.3 below ; Source : World Bank 1983, Table 1,7, p 14). Real wages of agricultural workers in FY81 were 88% of those in FY74, 77% of those in FY70, and only 64% of those in FY64.

Although FY70 was a record year for agricultural production, real wages of agricultural labour were nearly 18% lower than in FY64. With the drop in agricultural production between FY70 and FY75, real agricultural wages declined further. Agricultural production in FY76 exceeded the levels achieved in FY70 and since then has increased substantially. The national average

Table 4.3 : Average Daily Wage Rates of Workers in Rural Areas

Image redacted due to third party rights or other legal issues

N = Nominal wages in Tk/day
R = Real wages in Tk/day
I = Index of real wages, FY74 = 100

Source : Statistical Appendix Table 7.6 (World Bank, 1983).

real wage of agricultural labour, however, has continued to stagnate around the FY76 level and remained well below the FY70 level.

Real wages in two other major rural activities, fisheries and handloom industry declined between FY64 and FY76; they remained stagnant during FY76 - FY78, but increased substantially during FY78 - FY81. Despite this increase during those last three years, real wages in FY81 were still 10 - 14% below the FY70 level.

The main reason for the above trends is that the labour force has been growing faster than employment opportunities in spite

of the considerable increase in the use of irrigation, chemical fertilizers and high yielding varieties. The aggregate demand for labour in crop production has not increased by more than 1.5% per annum over the last 10-12 years. This is much less than the expansion of the labour force.

F : Socio-Economic Stratification :

The magnitude and intensity of poverty and unemployment in Bangladesh is further aggravated by a set of complex socio-economic relationships and attitudes. In rural Bangladesh it is possible to recognise four broadly distinct socio-economic groups in terms of their control over economic resources and the form of economic transactions among them.

First, there are the large landowners - the top 6-7% of the rural households who own nearly 45% of all cultivable land and whose average farm size is more than 5 acres. Traditionally, they have rented out land on a sharecropping basis ; over three-fourths of all land rented out in Bangladesh is by farm households who own more than 5 acres of cultivable land. They are also money lenders and mortgage-in land. To the extent that they cultivate land on their own account, they generally use hired labour.

Second, there is the class of medium-sized peasant farmers who are largely owner-cultivators who use some hired labour and produce a substantial surplus for sale in the market. They constitute about 15% of the rural households, and cultivate farms of 2-5 acres on about 30% of the total cultivated area. They have

had significant success in adopting the new seed-fertilizer-irrigation technology, and have been able to obtain institutional credit.

Third, there is the large class of small farmers who cultivate 0.5-2.0 acres. They constitute about 30% of the rural households, and while they own only about 20% of the cultivated area, they cultivate over 40%, sharecropping substantial parts of the land they cultivate. Nearly 80% of all rented-in land is rented-in by this group. They usually do not generate any production surplus over their own consumption needs. They rent-in a substantial portion of their farms. Since three-fourths of the rented-in land is rented from group one, there is a substantial flow of funds and/or return on credit from this group to group one. Many members of the households of this group also have to work off their farms to support themselves and their families. Households in this group generally keep more draft animals than their own needs, enabling them to supply draft services to other groups.

Fourth, there are the landless and near-landless households, comprising nearly one-half of all rural households who largely depend on wage employment for their livelihood. In addition to providing agricultural labour and participating in food processing, they also engage in traditional village trades as weavers, carpenters, potters, fishermen, milkmen, etc. Almost all the women of these households are forced by circumstance to engage themselves in some kind of 'productive' work.

(See Table 4.4 below ; Source : World Bank 1983, opt. cit., Table 1.8, p 16)

Table 4.4 : Distribution of Land Owned by Major Household Groups in Rural

<u>Bangladesh</u>						
Size of Ownership (acres)	1977			1978		
	Rural Households	Rural Population/a	Land Owned/b	Rural Households	Rural Population/a	Land Owned/b
	<----- % ----->					
0.0 - 0.5	48/c	41	2	50/d	42	3
0.5 - 2.0	30	29	23	27	27	19
2.0 - 5.0	16	19	33	16	19	30
> 5.0	6	11	42	7	12	48
All Groups	100	100	100	100	100	100

/a In rural Bangladesh, the size of a household is smaller among households owning little or no land than among households that own more land.

/b Does not include rural land owned by urban households.

/c Includes 33% of all households with no cultivable land whatsoever.

/d Includes 29% of the households with no cultivable land whatsoever.

Source : Calculated from data in Land Occupancy Surveys, 1977 and 1978.

As movement out of agriculture into rural trades and industry is caused largely by oversupply of agricultural labour, 70% of the rural industrial households are landless and near-landless. (See 'Rural Industry Study', BIDS, 1982). Their ability to take initiatives in diversifying the rural economy is severely limited by illiteracy, lack of training and inadequate finances; thus their productivity is extremely low and their economic prospects limited. While rural entrepreneurs who also own land are able to borrow from institutional lenders, the landless non-farm workers face exploitative terms on borrowing from money-lenders belonging to group one.

The social hierarchy in rural Bangladesh which is in effect based on traditional ownership and control of land, wealth and education also influence economic transactions. The landowners's link with tenants/sharecroppers often follows kinship lines ; landowners prefer to rent land to kinsmen and to those who have some land, draft animals and farm tools of their own. Most of the completely landless - about one-third of all rural households are thus almost eliminated from renting land. They can work only as wage earners. With their numbers increasing rapidly, rural wages have continued to decline during the 1970s.

The competition among the rich for control over available limited resources and the needs of the poor for security and protection bring together several households, having either kinship ties or living in or near a cluster of homesteads, into groups known as dal - also called 'factions'. These factions cut across economic groups with the wealthier members who have control over village resources - land, credit operations, external resources and employment opportunities - having the greatest influence.

Under a patron-client relationship, the poor households depend on the rich for access to resources for making a subsistence living, such as renting land, employment as agricultural labour, or credit for petty trading, and allied activities. This relationship of dependency in an environment of limited resources is essentially that of unequal exchanges between the patron and the client in almost every aspect of rural life ; for example, wages paid are generally subsistence wages, interest rates

usurious, and land rents exorbitantly high. The costs of protective patronage for the poor are high and due to lack of direct access to resources, they continue to function in a disadvantageous position.

The patron-client relationship and the system of social stratification reinforce each other. The relationships are difficult to break, as those dependent upon rented land and agricultural labour do not have alternative opportunities to settle on new land or to enter into alternative productive non-farm opportunities. In fact, as unemployment has increased and real wages have declined, the position of the landless and marginal farmers has become more vulnerable ; the big landowners on the other hand, have continued to extend their influence and domain by acquiring more land through direct purchases and money lending operations.

This is a broad description of the rural poor in Bangladesh. For the purpose of this study it is necessary to go a step further and examine the condition of women, especially the women of poor households. In the following

Chapter, I have attempted to highlight some of the issues related to the lives of rural poor women in the villages of Bangladesh. In the context of such mass poverty and hardship, I have then gone on to describe the efforts of one non-governmental organisation, namely, ERAC, towards combating this situation of social stratification, exploitation, and deprivation.

CHAPTER V

WOMEN'S ORGANISATION, TRAINING AND WORK IN DHAKULY VILLAGE,
BANGLADESH.

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A : Underlying issues of women's organisation, training and work :

When we are beginning to consider the possibilities of creating or enhancing women's productive/income-generating capacities through their organisation, training and work, towards fulfilling basic needs at the village level, there are some underlying issues that must be briefly looked at first.

It is clear that programmes for women cannot be developed in a vacuum. They relate to the socio-economic context, to the existing structures, and to the government policy. In Bangladesh, most women's programmes sprang up from different governmental and non-governmental initiatives after the liberation war which left many women as the sole family support because of widowhood, divorce or abandon. Since 1975, the government policy emphasized the necessary involvement of women in the development process. It is a significant feature in Bangladesh now that most social programmes designed to reach the poorest, include income-generating activities for women, which are an integral component in the group of basic services offered.

It was felt that previous approaches that aimed at reaching out to women and helping them towards a better socio-economic status, had largely failed in achieving that objective. These approaches had viewed enhancing women's participation and awareness mainly through literacy and education programmes, or through programmes that addressed themselves to health issues, including hygiene and family planning. The biggest shortcoming of such approaches was that they didnot positively address women in their role as economic participants and bread-winners. The paramount need to do so has

been a relatively recent phenomenon in development theory and policy (see Chapter 2), and is perhaps the key turning point towards not only a more egalitarian society, but also towards a more productive one. Women all over the world, and especially rural women play a major role in sustaining their families through their (meagre) incomes. The point has already been stressed in Chapters 1 and 2, and is one that needs to be stressed over and over again. Women's incomes are important, indeed crucial, to many a rural household. Unless development policy can recognise women not only as mothers and nurturers, but also as economic contributors and participants, the future of poor societies will continue to look rather bleak.

An attempt has been made in Chapter 2 to show how conventional anti-poverty policies that place no special emphasis on women will tend to ignore the large subgroup of women among the poor who work in home production and in sex-segregation occupations. This thinking leads to the view that policies specifically designed to increase women's productivity and income will also reduce economic dualism by modernizing production that is in the hands of women. Current programmes, therefore, that seek to increase household income by concentrating on women, have the following priorities :-

1. Reducing the time required for household production.
2. Increasing the efficiency, output, and returns of economic activities in which women currently engage.
3. Transforming subsistence activities into income-generating activities.
4. Creating new employment opportunities for women.

When talking about transforming subsistence activities, one must also talk about intermediate technology. The term intermediate technology is frequently heard now-a-days, and it is therefore important to be absolutely clear as to what it means. UNICEF (1983) has defined it as : "Intermediate technologies may be defined as these which are an improvement on the ones already in use but which are not too advanced. They are, therefore, a half way stage between the sophisticated and costly technologies used now in most of richer countries and the simpler and sometimes too primitive methods employed in some of the poorer ones. They are also meant to be technologies which are appropriate to the circumstances in which they are to be used, hence another term which is also often used is "Appropriate Technology"(1). It is obvious that intermediate technology has an important role to play in helping rural women to not only reduce their work load, but also to increase the efficiency, output and returns of the economic activities in which they currently engage. Later in this chapter, we shall look at the simple technologies that BRAC has introduced in Dhakuly village of Bangladesh, for that purpose.

We have already examined the historic and the demographic situation of Bangladesh in Chapter 4, where a poverty profile of Bangladesh has been sketched out. Here we must examine, as a preliminary exercise, the status and the socio-economic situation of women in Bangladesh, along with the numerous 'domestic' tasks

(1) UNICEF (1983), p 22 'Simple technologies for rural women in Bangladesh', UNICEF Bangladesh, Women's Development Programme.

rural women there perform, and the multiple constraints within which they live, in order to establish the context within which efforts are being made by a non-governmental organisation like BRAC.

B : The status and the socio-economic situation of women in Bangladesh :

It must be obvious that among the poor, the plight of women is harder still. Some 47 million women live in Bangladesh; 42.6 million in her villages. The average rural woman will experience 11 pregnancies but only 6 live births. Only five out of six of her children will live to the age of five. She herself can expect to live to about 50 years of age (See basic data in Chapter 4).

It is also obvious that in the course of any detailed work with women, one encounters certain mental barriers which stand in the way of women's integration into development. Formal, legal barriers to women's participation in economic and social development are sometimes less formidable than certain ingrained pervasive attitudes toward women. (See also section D b of this chapter). Kushi Kabir, Ayesha Abed, and Marty Chen (2) (three staff members of BRAC and pioneers of BRAC's integrated rural development programme with women in the various districts of Bangladesh) have defined these stereotyped ways of conceptualising about women in Bangladesh as "myths", and have been bold enough to show how they are simply not true, or must be revised and updated. They argue that these "myths" are barriers to creative,

(2) Kushi Kabir, Ayesha Abed and Marty Chen: Rural Women in Bangladesh: Exploding some Myths. Ford Foundation, Report no.42 Dhaka, Bangladesh, May 1976.

innovative thought on rural women, and that they must be re-examined, if not exploded, before a strategy for the better integration of rural women in national development can be found. I have drawn on their line of thinking as they, in exploding these "myths", have focused down on some key issues pertaining to the status of rural women in Bangladesh and to their socio-economic situation.

Myth 1 : Women in Bangladesh do not do economically productive work :

Rural women in Bangladesh are major, but largely unrecognised, contributors to agricultural and economic production. Rural women in Bangladesh are responsible for grain processing and storage ; they grow most of the family's fruit and vegetables ; they care for poultry and livestock ; they supplement family's nutrition and incomes through kitchen garden and cottage industry. In weaving and fishing communities women contribute substantially to the work load by making nets and spinning thread. Yet women's contribution to agricultural and household production receives less recognition than their domestic and child-rearing chores (also considered economic tasks in most views).

Nearly all agricultural policy and programme attention including the new technologies, are focused on grain production (men's work) rather than on grain processing and storage (women's work) ; few economists measure the "value-added" from harvested paddy to cooked rice ; women's unsalaried work in the home is omitted from the national census. One precondition for designing effective development programmes is to give due attention to the actual and potential role of women in economically productive work.

Myth 2 : A woman's role in Bangladesh is predetermined as static :

The women of Bangladesh have entered a transition phase ; their roles are no longer static but dynamic. Economic pressure may be the key factor precipitating role transformation, but nevertheless, transformation is taking place, and the traditional cultural barriers are breaking down in the face of rising poverty. Nowhere is this transformation more stark, than in the roles of rural women coming from the poorest families. Unpredictable changes are taking place in their lives (eg, desertion, death or disaster) causing not only them to change their behaviour and attitudes, but by so doing forcing those that surround them to do so also. Programmed change must bear the responsibility of finding ways to allow for constructive changes and improvements in the lives of these poor women. These women have shown a willingness to cross all barriers and join the casual, day labour force, and food-for-work activities. As more diversified activities become available, there is definitely reason to believe that women will participate. It is for the planners and organisers to make sure that they will benefit. Of course it goes without saying that programmes must be cautious about the tempo and kinds of changes they foster, and they must not undermine certain standards and values that affect women's lives.

Myth 3 : If women are encouraged to work this will add to male unemployment :

Leaving aside the argument of equity, there are several other reasons why the integration of women in development cannot be taken as a threat to male unemployment. Firstly, unemployment is largely an urban phenomenon ; in rural settings everybody is

'employed'. The question of whether they are 'employed' productively is a different issue. Secondly, men and women perform different roles. For example, in agriculture, the men do the harvesting while the women are largely responsible for the post-harvest activities ; in the home, women are almost always solely responsible for home-activities in which men have a negligible role to play. Programmes that encourage women to work are doing so by encouraging them to do better what they already do - to make those activities more efficient and productive. Women can therefore hardly be seen as displacing men. Thirdly, development is reflected by the overall productivity of communities and the improved efficiency and increased value of work , whether male or female. Women , instead of swelling the ranks of the unemployed in the towns and cities can help increase rural productivity. Fourthly, there is an increasing number of women who are the major, if not the sole, income earners for their families. It should be remembered that where and when these women seek employment they do so to fulfill their basic economic needs. And lastly, while there is a shortage of jobs for men, there is a shortage of women for jobs that men cannot fill. For example, there is a critical need to hire women in providing services of health, family planning, education, etc. - services which rural women might not avail themselves of if men were to deliver them.

Myth 4 : Women necessarily benefit from development programmes directed toward men :

The proponents of the "trickle down" theory of development suggest that any development activity that benefits men, will also benefit women automatically. There is enough evidence available now to

falsify such an assumption. Not only do the benefits received by men not "trickle down" to the women and children of their households, but with the rising incidence of women-headed households, it is becoming increasingly obvious that rural development objectives must be spelt out in terms of providing opportunities for women's participation so that they become direct beneficiaries of the development process. One must also be absolutely clear that "development" is not just about receiving benefits, but is about participation first.

Furthermore, there is also enough evidence available now to suggest that women not only go unnoticed, but in certain sectors, eg. the agricultural sector, women often suffer a negative impact from development activities directed towards male productivity. Biased programmes only help to enhance the disparity between men and women's productive function, their economic importance, and the kinds and levels of technology used for their productive activities. Moreover, new agricultural technology often has an overtly prejudicial impact on women, eg. the introduction of the mechanised rice mill has succeeded in, amongst other things, replacing one of women's most important traditional function of paddy husking. Dhekis are almost nowhere to be found now except in the rich households where they are sometimes used by hired labour. The introduction of the rice mill has thus left a big vacuum in the lives of poor women, who must now seek other ways to earn their modest living, a task that is hard to accomplish, considering the scarcity of activities available that encourage women's participation.

Myth 5 : Programmes for women should be directed exclusively
towards their roles as mothers and home-makers :

The culture of Bangladesh stresses the motherhood role for women. Development policies therefore tend to seek to reinforce this role of women to the exclusion of other roles. Admittedly, there is a continuing need to pay special attention to women's roles as mothers and home-makers; women are the crucial links in the development of new human resources. But care must be taken not to make this area development's exclusive concern for women. Women do not necessarily perceive it to be to their advantage to simply read, write, or be informed about nutrition; they feel a more urgent need to participate in programmes and activities that offer economic advantages. Efforts must be made therefore to plan programmes for women that incorporate in a substantial way the income issue, so that they may help improve women's earning power and help to ease the burden of the routine chores of women. Such programmes are the most popular and successful. Moreover, there are compelling demographic arguments for development policies which afford women new economic and role opportunities - e.g. there is found to be a negative correlation between women who seek and find activities beyond their household tasks and their fertility (see Youssef et al 1982). It is also painfully obvious that without the incomes to purchase food with, women will find it impossible to use their nutrition education.

Myth 6 : Women's activities in Bangladesh can only be bari-centered :

Given economic pressures women are being forced to change their attitudes and behaviour patterns and take on new tasks. There are, for example, an increasing number of female casual labourers in the countryside (3). If women are so changing, policy planners must also.

Programme experience moreover indicates, that women will participate in programmes outside their homes when there is necessity and/or opportunity. Women will come to a central place (house, school, community centre) for functional education classes, mother's clubs, paramedical health services. Women will come forward to work in food-for-work schemes. Rural women can be hired to provide services - family planning, functional education - within and outside their own villages.

In view of such encouraging evidence, development planners must be urged to turn from the "myths" which discourage programme innovations to real-life examples which might inspire creative programme planning.

Myth 7 : Women are too busy to take on additional activities :

Programme experience indicates that if their interest and motivation are aroused, women are able to overcome existent time-constraints. When provided with a new activity that is economically productive (especially in cash terms), women will find odd times of day and night to perform this activity.

(3) See also Marty Chen 1983 , opt. cit., pp 82-84 and 166-172 :
bari centered --> village centered --> outside the village.

One is compelled to ask however - Are they over-exerting themselves ? The answer to this is not clear-cut. It is obvious that economic need is great, and while there is economic need, women will and must participate in activities to meet that need. What development planners can do is search for appropriate and acceptable technologies to make women's routine chores more efficient, ie. less time-and-labour-consuming. What development planners must do is address both what women already do - to make those activities more efficient and productive - and what women can do - to supplement existent activities with new economically beneficial ones.

Myth 8 : Women in Bangladesh are helpless and ignorant :

Women's inferiority is implicitly accepted by most people in Bangladesh. One hears not only that women "do nothing" but, more insiduously still, **that** women are ignorant. One needs only to spend a little time with rural women before it becomes clear that women **not** only do a great deal both domestically and agriculturally, but that women also have their own informed perceptions of the world around them. Family planning workers often argue for example that women are ignorant of the concept of birth control. This kind of argument reflects not on the women's ignorance, who often have very knowledgeable and sound reasons for not wanting to practice birth control practices, but mostly on the family planning worker's ignorance of the women's reasoning, their incompetence in delivering the concepts and the methods to them, and their inability to deal with the causes behind the women's reasoning. Women are also logical and "aware" in many other ways - they do take decisions and voice opinions ; at times they save money on the sly (without their husband's knowledge) to cover

health and other emergencies; increasing numbers of women are managing and providing for their families. It is clear that if the "myth" of women's ignorance and helplessness persists in development planning, development programmes will not only be detrimental but also unacceptable to women.

Myth 9 : Before considering women's roles, development planners must address two critical problems : population explosion and lack of food :

Certainly the pressures of population growth and the insufficient level of food production and distribution are the problems most keenly felt by the rural population of Bangladesh. The impact of these problems are especially severe on women who must bear, care for, and feed children. Failure to integrate women in development will only further exacerbate these very problems.

Food production and fertility control cannot be successfully promoted in isolation from concerns for women's roles and productivity. Generally accepted is the notion of a negative correlation of an enhanced status of women with fertility. (See World Bank Staff Working Paper No. 682, 1984 pp 9-30). The present field survey and other studies have moreover established that women's work can supplement food production in the home. Development programmes directed at enhancing the roles and increasing the productivity of women are essential components of programmes aimed at the problems of population and food.

C : The 'domestic' tasks of rural women :

We must turn now to take a brief, yet enlightening look, at the daily 'domestic' tasks of rural women, in order to enhance our understanding of their lifestyles and the routine workload they already undertake. It is important to remember here once again, for this is a point that cannot be overstressed, that it is not likely that women will be able to expand their participation in income-generating activities until their workload is lightened through training and improved technology.

Following is a list of some of the routine tasks rural women of Bangladesh perform :-

1. Repairs around the house. The walls are made of mud and bamboo and the roofs are thatched with grass. Rich households have tin roofs. The floors are also made of mud. The house will require constant repair, especially in the rainy season. Also since the floor is made of mud, it can not be washed and the women often spread a thin layer of new mud over it to renew the surface. Shelves are made by suspending a plank of bamboo horizontally from ropes hung from the ceiling, or they may be built up out of mud.
2. Firewood is very scarce in Bangladesh so the women have to collect fuel of all kinds, eg. leaves, twigs, grass, including dung which is dried and made into pats for burning. The women take a pride in this and often embellish the pats with design.
3. Making of hangers - shikas - made out of jute or bamboo to hold household articles. These are macrame hangers and are suspended from the ceiling.

4. Making of the cooking stove (chula). This chula may be sunk in the ground but more often it is raised up and is made of mud with two holes in it to take the cooking pots. Sometimes women make a smaller stove, of mud re-inforced with bamboo, which is portable and which they can carry to the site of any special activity or place it so that **they** can work in the shade.
5. Cooking for the family is a task that takes up a lot of the rural woman's time. The meal usually consists of rice, cooked or salted rice paste, and some chilli; ocassionally there may be a pumpkin or some fresh vegetables grown in the homestead. Some households will eat wheatflour but rice is preferred. Only rich households can afford oil, spices, lentils, green vegetables and ocassionally fish or meat.
6. Fetching water daily from a pond or/and tubewell is a daily excercise for the rural woman, especially as all drinking water must be fetched from a tubewell. Often this is done over long distances and she may have to carry two or three earthenware pitchers at the same time depending on consumption. Due to scarcity of time, she tries to fetch all the water the household will need for one day at the same time. Sometimes, when she runs short, children are used to help out with the extra pitcher or two.
7. Bathing time is an important activity as this usually precedes water fetching. In the process of digging out the clay to make the houses, a pit will have to be formed which is filled up with rain water and, here the women bathe. If the pit dries up, they will use a larger pond with other women, usually at mid-day when the men are away in the fields. Most women possess at least two sarees so that one is removed and the other worn simultaneously after the bath.

8. Washing of clothes is done at the same time as bathing during the day. The wet saree after the bath is washed along with children's and men's clothes. These are then wrung and carried to the home where they are hung for drying. Sometimes the woman carries clothes to be washed down to the river or to the village pump, using soda and sometimes ashes to clean them. She also uses a stone or a wooden plank. Sometimes women make soap from ashes and plantain leaves.

9. Cleaning the house is also a woman's responsibility and this she normally does first thing in the morning. She sweeps the courtyard every day, sometimes twice a day and tidies up inside the hut. She sometimes decorates her home and her pots and pans etc with her own designs, making her colours from local herbs and using fish scales, coconut shells, beads, buttons and palm leaves for embellishment.

10. Sewing and mending clothes for the use of the family members is carried out at odd times during the day, usually towards the evening. Women also sew patchwork quilts with torn pieces of rags from old clothing. This they sometimes do collectively and two or more women will pool in their resources to make a bed quilt.

11. Child care is of course one of her major activities and consumes most of her time and energy. Not only does she give birth to them, feed them, clothe them, bathe them, and entertain them, she also has to work hard to maintain their health. With an infant and child mortality rate of about 15%, she must be very careful about the health and nutrition aspects of her children. For this she sometimes has to walk many miles to the nearest

clinics or other health services. The children's education is also her concern and she must make time available to allow the children to go to school.

12. Vegetables and fruits for the family consumption and for selling are grown by women who have some land to make into a vegetable garden. Fruits are usually picked from trees that surround their homesteads. Women and children spend long hours in this activity, for this is a major source of their daily diet, but more importantly, because it is a good source for her extra income that she can utilize for buying essentials.

13. Looking after the animals of the house is also part of the woman's activity. Animals of the house usually contain some chicken, goat, sheep, calves and cows - depending on economic capacity in that order. (Cows are a status symbol in the village). The woman must feed the animals, provide water and shelter for them, and watch over them. She constructs their shed with bamboo sticks and jute and carries water for them. These sheds are cleaned regularly by the woman also. Often children are put in charge of watching on the cows and goats whilst they are grazing. Otherwise the woman provides them with rice fodder mixed with gruel, mustard cakes, pulses, husks, or grass brought from the fields; water hyacinths are also used, but only in limited quantity as they contain a large quantity of water and too much is bad for the cattle. In addition to all this, the woman also milks the animals and is usually responsible for selling this milk on a daily basis. However, as the market sometimes lies outside the village, men and boys are used for the selling. When the house

has some chickens, the woman collects the eggs and makes sure the chicken doesnot go into the neighbours' baris as this is likely to result in the death of the bird. Of course the woman must also look after the health of all her animals and must obtain medicines and inoculations for them from the local source.

14. A market is held usually every week on a fixed day at a fixed time in every village. This is the only market - a haat- to which traditionally a woman would venture, though now they are beginning to go outside the village also. This haat is important to the woman for it is here that most of her buying and selling is carried out. She is assisted in this activity usually by her children.

15. Paddy husking is a traditional activity that the village women perform as a post-harvest activity on their dhekis. Before the introduction of the rice mills this was a very important activity for the women and they were largely responsible for the post-harvest activities. However, the use of dhekis is now dying down except in the rich households where they employ wage labour for this work.

16. The making of handicrafts is a woman's traditional skill and it is usually handed down to her from her mother. During the monsoon season, when she cannot find much work outside, or during the day at odd times snatched here and there, this is a skill that is well used to supplement her income. Her handicraft skills include the making of grass mats and screens, bed quilts, bamboo baskets, fans, sieves, ropes, brooms, hangers (sikas) made from jute grass or straw or coconut fibres, pitcher stands,

lamp stands, stools and other articles from bamboo. Of course the home-making skills, ie the making of walls, ceilings, windows and floors with mud, bamboo, jute and grass goes without saying. The handicrafts that are not used in the home are sold in the local haat usually and sometimes at the edge of the village to passers by.

17. Chira, muri and khoi making is carried out by some women, usually the slightly better off, both for home consumption, as a delicacy, and for sale. This again is a traditional skill and is passed on over the generations. Of course it is most common in Bengal, as there is plenty of rice there.

Making muri is a special skill that requires quick action on the part of two women working together. It is made by boiling the paddy and then soaking it overnight and boiling it again in the morning. It is then dried in the sun. The specially treated paddy is next husked and the rice produced is roasted brown on the chula and constantly stirred with a bunch of small twigs tied together. This rice is then quickly transferred to another pot containing heated sand so that the rice puffs up quickly. This takes only a minute or two. It is then kept in tightly sealed containers.

Khoi is prepared from a special variety of fine paddy. It is not boiled first but is placed on heated sand in an earthen pot until it is puffed. It is then removed from the pot and the paddy husks are cleaned.

Chira requires a special skill in processing the paddy. It is boiled in hot water. Then the women bite the grain to see whether it is sufficiently tender. It is then strained into a basket but is not dried. The paddy is then roasted in a pot until it has

burst and then two women quickly crush the treated paddy in a dheki so that it is flaked.

Chira, muri and khoi are sometimes made into balls with molasses by women who do it professionally, and they are known as muriwali.

13. Other activities of rural women include food preservation, making powdered rice, bee-keeping, and perhaps some others.

Women in the villages of Bangladesh do not of course perform all these activities every day, but will rotate the activities depending on time and need. UNICEF (1983, p 12) and Nici Nelson (1979 Appendix) (4) have constructed a rural woman's timetable to help towards a keener understanding of rural women's daily tasks :-

A Rural Woman's Time-Table

- | | |
|-----------|--|
| 5 o'clock | - Rising, washing and cleaning the house and compound, releasing the poultry, collecting eggs. |
| 6-7 am | - Preparing the early morning meal for working members of the family before they go out to the fields. |
| 7-8 am | - Milking, collecting fuel, making dung cakes, tending kitchen garden, cleaning cowshed and compound, drying straw to burn it. |
| 8-9 am | - Preparing food for the mid-day meal, grinding spices, peeling vegetables. |
| 9-11 am | - Husking paddy, winnowing and sifting, preparing rice products. |
| 11-12 am | - Cooking. |
| 12-1 pm | - Washing clothes, bathing, fetching water, feeding the animals and poultry. |

- 1-2 pm - Drying jute and paddy, putting other stores out in the sun to dry.
- 2-3 pm - Feeding husband and family, after this eating herself.
- 3-4 pm - Making articles such as baskets and quilts for home-use or sale.
- 4-5 pm - Preparing and cooking the evening meal.
- 5-6 pm - Praying, bringing the children home, shutting up the poultry and animals.
- 6-7 pm - Eating the evening meal and cleaning up.
- 7-8 pm - Rest period, sitting on the verandah talking and smoking before going to bed.

(Source : UNICEF, 1983. p 12).

(4) UNICEF 1983: Simple technologies for Rural Women in Bangladesh, Women's Development programme, UNICEF, Dhaka.

NICI NELSON, 1979: Why has development neglected Rural Women, Prepared for ILO 'Women in Development' Series.

D : Multiple constraints in the lives of rural women : (5)

a) The technological and structural constraints :-

A fact that has already been well stated before is that nearly all village women work long and strenuous days. Yet, for a variety of reasons, this simple fact has not been fully comprehended :

- First, under the census only what is directly paid is regarded as work.
- Second, to most outsiders women's work remains "invisible" because it is not carried out in a work-place, not even in the fields usually, but in and around huts scattered throughout the village. Moreover, women's "productive" work is done in and around the so-called "domestic" work (house-work, childbearing, and child-rearing). So much so that the productive work of women appears as a natural manifestation of their domestic roles.
- Third, women produce as much to conserve as to generate income. And even when women's produce is marketed, the marketing is almost always done by men so that women's production remains unrecognised.
- Fourth, women's and men's economic roles are often so complementary that women's contribution is subsumed under men's work.

The result is that men, whose main occupation is to raise grain for their families, are listed in the census as "full-time workers", while women, who raise and tend the domestic animals; thresh,

(5) See especially, Marty Chen 1983, opt cit. pp 45-72 ; Martha Loutfi, ILO 1980, 'Rural Women : Unequal Partners in Development'.

parboil, dry, store and husk the grain; clean and maintain the huts and homestead; give birth and raise the children; and, occasionally, produce craft for the markets, are listed as "housewives" even though their tasks are as critical to the welfare of their families and to national production as are the men's.

Micro-studies have begun to show that nearly all rural women work, but macro-data is largely still 'incorrect'. For example, the census in Bangladesh tell us (6) :

- a total of 31.6 million women (92% of the total female population) live in the villages of Bangladesh ;
- a total of 20 million of these rural women are above the age of 10 ; and of these 20 million
- a total of 15½ million are "housewives" and over 3½ million are "inactive" ; some 740 thousand are "employed" (in paid work) and 26 thousand are "looking for (paid) work".

Clearly something is terribly wrong with this data, and clearly the definitions of work and of rural production systems in Bangladesh need to be reanalysed. Since most of the detailed information on women's contribution under the traditional division of labour has only recently begun to appear in micro-studies, very little social and economic value has been placed on women's work in development policy and intervention. Women contribute substantially to national production, but they have

(6) Data taken from Institute of Statistical Research and Training, 'Statistical Profile of Children and Mothers in Bangladesh', University of Dhaka, Dhaka : March 1977. The figures are based on the 1974 census.

to date received very few of the support services that men have, eg. credit, inputs, training, technical assistance, and extension services. It is clear that urgent assessment needs to be taken of the wide range of productive activities by women with a view to enhance their output or productivity and to transform subsistence-level productive activities to a commercial level.

Martha Loutfi of the ILC writes (1980) : " The basic problem that women have in common is that existing socio-economic-political structures do not afford them equal opportunities for remunerative employment, for access to productive resources, inputs or credit, or for participation in the decisions which affect them as well as others." She says elsewhere in the same paper that " Concentrating on material aspects of well-being, and more conveniently assuming a social structure based on male household heads, government policies have tended to provide training and resources to acknowledged "full-time" producers (by definition largely male in rural areas) and to relate to households legally and materially through presumed male heads."

Referring to the constraints on women's work, Marty Chen (1983,p71) observes that the main constraints on women's employment is the level of demand for their labour. Under the traditional division of labour by sex, Bangladesh women are excluded from wage employment in field activities and assigned tasks related to grain processing at the village level. Until recently, the segregation of male labour (in the fields and outside the village) and female labour (in the homestead and inside the village) had been strictly

maintained. So much so that very few women have ever competed with men in the wage labour market. However, now, women from poor households are, out of necessity, entering that competition. But they carry the double disadvantage of being poor and women.(7)

Marty Chen goes on to observe that other constraints on women's employment have been brought about by certain capital-intensive development interventions. The introduction of rice mills threatens to deprive a large number of women from one of the few traditionally "female" paid employment options. Rice processing as paid village labour by women has provided a critical margin of income to many poor households. But that margin of income will be, and is being, taken away by the introduction of intermediate and high technology rice mills. Moreover, capital intensive interventions in the textile industry threaten the handloom sector which supports a very large number of households, second only to the agricultural sector.

Referring to this issue of 'modernisation' and its effect on women, Martha Loutfi (ILO, 1980, p 29) says : "There are elements in the process of modernisation which have worked to the detriment of rural women. The development of monetisation, of capital relations, of an emphasis on production as the source of value, has in a recognised and documented manner adversely affected the condition and status of lower class rural women."

(7) See Marty Chen 1983, op. cit. p 71

So, these are just some of the technological and structural constraints on rural women. Apart from these, there are numerous social and cultural constraints on their lives also.

b) The social and cultural constraints :-

At one BRAC-organised workshop for women, the participants were asked to list their problems as women. They listed the following in no particular order (Source : Marty Chen 1983, p 57-58) :

- oppression by mothers-in-law
- differential feeding as a child
- no education
- no inheritance
- religious constraints
- no choice in marriage, remarriage or multiple marriage
- treatment according to husband's whims
- beatings by husband
- no freedom of movement
- dowry
- differential feeding as an adult (literally, "eating last")
- blame for sterility (typically women are blamed and punished when a couple is sterile)
- treated for fertility (more women undergo tubectomies than men vasectomies)
- few options and low wages for paid work
- social interference

Purdah : When people describe the status of women in Bangladesh, more often than not, they refer to the custom of 'purdah'. 'Purdah' means, literally, curtain. 'Purdah' is used, figuratively, to

mean the veiled seclusion of women. In the narrowest sense, 'purdah' involves the seclusion of women within the four walls of their homes and the veiling of women when they move outside the homes. In a broader sense, 'purdah' involves the exclusion of women from the public "male" sphere of economic, social, and political life. In practice, most rural women in Bangladesh remain confined to their homesteads but, at prescribed times for prescribed reasons, move out without a veil. Referring to this seclusion of women through custom, Martha Loutfi (ILO, 1980) comments that where women are by custom secluded - restricted to the household compound - it is rare for them to contravene tradition and seek employment outside the home. Only extreme poverty and an absence of alternatives would induce such a break, since it results in great loss of status for them and the family. She goes on to say that there are many illustrations to show that the most 'invisible' of women - those who are secluded - may in fact lead very hard lives, and are also the most difficult to reach and help.

Patriarchy : In Bangladesh, patriarchy describes a system of male dominance over women with economic underpinnings. Men are said to exert power and authority over women because they control property, income, and women's labour. Under this analysis, 'purdah' is seen as one instrument (together with the Muslim laws of inheritance) of patriarchal control (8).

(8) See M.T. Cain, S.K. Khanam and S. Nahar; 'Class, Patriarchy, and the Structure of Women's Work in Rural Bangladesh', Centre for Policy Studies, Working Papers #43 (May 1979), The Population Council.

Class : Bangladeshi society, like most societies, is divided by class. But what is particularly alarming about Bangladesh is the extent of the class differentials, and the extent of mass poverty. The figures are alarming. Over 40% of rural households own no cultivable land, and, if one includes those who own less than half an acre, over half (56 percent) of rural households are "functionally landless". And, further, among the 'poor' households, the plight of women is worse still.

Do the economic roles of women differ from class to class ?

Do all women in Bangladesh possess the same skills ? Do they all perform the same kind of work ? IRAC has found that almost all women perform the same set of traditional tasks. The sexual division of labour is more or less inflexible across class. Most women possess roughly the same set of skills, although women from richer households find more time and materials to perfect "leisure-time" skills eg. embroidery, crochet, etc. But within the limits of a set of traditional tasks and set of traditional skills, women from different classes pursue these tasks under different conditions. Some women perform the given set of tasks only as unpaid labour within their own households. Others perform the same tasks both within their own households and as paid labour in other households. Some women hire other women to perform the same tasks in their stead. Some keep more busy and some less busy at the given round of tasks each day and each season. (For a sketch of these differences between the classes, see Marty Chen, 1983, p 65-68). In summary, the classes of rural households in terms of women's labour and women's income, can be defined as follows :-

- rich households ; those which can preserve (for status reasons) their women from some unpaid family labour and which consume most of what women produce.
- middle households ; those which can subsist given the unpaid family labour of their women and the income from what women produce.
- marginal households ; those which cannot subsist without the paid village labour of their women and the income from what women produce.
- poor households ; those which cannot subsist even given the paid village labour of their women and must deploy all members of the family to seek wage labour outside the village.

These four classes of households can be distinguished one from another by the degree to which women's paid or wage labour and income from women's produce are required to provide food to the family. Generally, the more dependent a household is on the income and labour of women, the poorer the household.

Employment and Education : Preferential treatment by all household members for males is the custom - not only with respect to food, but also health care, education and work. Male children are generally preferred to female children, and the raising of a daughter is considered a liability. This is on account of her perceived 'lower productivity' and additional 'costs' in terms of dowry, etc. Women are almost always less well-educated than men and are more frequently in marginal, low income occupations (which can more readily be combined with child-care), and have a low level of skills (relative to men) that are necessary for 'productive work'.

Subservience and Oppression : Abdullah and Ziedenstein write (see 'Village Women of Bangladesh : Prospects for Change, ILO, 1981, p 123) : "Given the structure of rural society as it affects women, the strategies of obedience, self-sacrifice and submission ... seem the most likely to provide women with some guarantee of security. They do not always work, but there are no obvious alternatives."

On a similar note, Marty Chen observes (1983, p 72-72) : "The real constraint, as the women see it, is that the rich control the paid labour opportunities within the village and dictate the norms that prohibit women from seeking work outside the village. If the rich disapprove of what poor women do they can always threaten to or actually cut off their work within the village. Or, if the rich disapprove of poor women working outside the village, they can put pressure on the woman or her family through the religious leaders ... In this way, the rich and elders (through the religious leader, the 'mullahs') can determine what work is suitable or not suitable for women to perform. In fact, few activities are without social stigma. The only work outside the village which might increase a woman's standing, that of a teacher or a government extension worker, requires education and ^{is} ~~are~~, therefore, an option taken primarily by women of rich households. Some wage work available to women in rural Bangladesh has an ambivalent effect but most has a slightly or significantly negative effect on women's status."

D : Dhakuly Village : The Social Context :

Let us now turn to one village in Bangladesh. Of course no village alone is "typical" as such of a vast country like Bangladesh with its diverse geographical and social conditions. But one can assume that Dhakuly village represents a large number of Bangladeshi villages. The aspect in which Dhakuly village does not resemble a large number of Bangladeshi villages is that it is one of those oldest villages in which a non-governmental organisation has been working with a 'target-group' of landless and near-landless families. It is for this reason that Dhakuly village was selected. Before going on to look at what the non-governmental organisation (BRAC) has been doing in Dhakuly village for the last ten years or so, I would like to present a brief description of the community of Dhakuly village.

The village, Dhakuly, is situated in Manikganj Thana of Manikganj District (Jila), about forty miles away from Dhaka city and about two and a half miles away from Manikganj town. Dhakuly is adjacent to the Dhaka-Aricha trunk route from where the village is accessible on foot or by bicycle.

Dhakuly is a Muslim village with a population of 870 of which 440 are male and 430 female. There are 155 households with an average population of 5.6 per household. 32.3 % of that population is below 10 years of age.

Literacy rate : 24% (Females) (42% (Males)

Secondary school Certificate: Male 14 ; Female 0

Modern sector employed : 5 Males

Land distribution : Gini Ratio of Land = 0.76

42.6% of households are landless

Households owning no land or land less than/equal to 1 acre=67.8%
(their share of total land owned=9%).

Households owning land more than 5 acres each=2.6%
(their share of total land owned=35%).

Homestead distribution: Gini Ratio of Homesteads = 0.44

17.4% of households do not own their own homesteads.

Mosque : 1

School : 1 (primary)

School attendance : Male 55 Female : 28 Total : 83

(See Appendix 2 for details of this data).

The village is divided into six neighbourhoods of which 5 are very small. All neighbourhoods have their own leaders. But the leadership of the village is concentrated in the neighbourhood which is the biggest one. The leadership is based on kinship or economic status. Presently there are 5 leaders in the village. Manu Bepari (55), Mohammad Ali (50), and Afajuddin (70) are elderly leaders. Among young leaders, Mujaffar Mian is relatively less affluent, though he has a big kinship group. Mannaf Mian, another young leader, is rich and educated. he has linkages with urban political leaders and government officials in the Thana and the Upjilla (sub-division) of Manikganj. All members of his family are educated and employed outside the village. He himself is a government official and his brother is the Chairman of the local Union Parishad. He exerts much influence in the village.

The village is part of the Zagir Union and the Chairman of the union belongs to Dhakuly village. However, he does not play any role in the affairs of the village and he has engaged his younger brother to look after these.

The leaders of the village take decisions in all spheres of village life. No socio-religious function is held without their consent and they also exercise certain judicial authority within the village.

The economy of the village is land-based. There are acres of arable land within its boundary, lying over the sandy bank of river Dhaleshwari. Due to its proximity to the sandy banks of the river, this land is less fertile as compared to other regions of Bangladesh. Paddy, jute and rabi crops are cultivated here, of which, the yield of rabi crops is sizeable. Two to three paddy crops are cultivated each year. The aman is the main crop. Broadcast aman may be sown in March-May and grows more rapidly than the rise of the monsoon water, surviving drowning by floating on the surface. It is harvested in October-December. The boro crop is cultivated mainly during the dry season, November-May, and has to be irrigated. The aus crop is sown in March-April and harvested in June- August. Various combinations of the rice crops are possible and they can be combined with the cultivation of other crops and periods of fallow. The aus crop, in particular, uses land which can often be put down to jute, and the two are competitive in this respect. (See also Sen, 1981, opt. cit.)

Number of villagers engaged in agriculture :

Men: 280 Women: 95 (These figures include farmers as well as agricultural labourers. For women it also includes those growing vegetables and trees).

There are 11 tubewells in the village including 6 government tube-wells. Eight out of these are located in the big neighbourhood. The government tubewells are sunk in houses of powerful persons of the village.

Besides agriculture, some villagers are engaged in trade and business. Fulchand Bepari is a cloth merchant. He owns a shop. He owns more than 6 acres of land. Afajuddin, another businessman with more than 6 acres of land, owns a rice mill.

Some small farmers (ie, those owning about 1 acre of land) and marginal farmers (ie those owning less than 1 acre of land) also engage in different types of trade, eg. tea shop, blacksmith, potter, fishing, barber, carpenter, shoemaker, rickshaw-pulling, boatman, etc.

Inu Bepari and Kurshid Ali, both landless labourers, buy milk from door to door and sell it in the market. Pashan Ali and Mayar Ali, both owning less than 1 acre of land, peddle clothes in different markets.

Households owning 1-2½ acres of land are regarded as the middle class of the village. They help the upper strata to preserve and perpetuate their vested interest. A sort of patron-client relationship exists between them. They do not have adequate land, but possess some sort of capital and agricultural implements. They thus rent land from those in the upper strata and lease it out for sharecropping.

The landless people live on wage labour. They get employment for six months in the year and live in acute poverty during the rest of the months. Marginal farmers, ie. those owning less than one acre of land, rent out their scanty land since they cannot cultivate it for lack of capital. They also live on wage labour for a considerable period of the year. However, it is prejudicial

to them to work as hired labour outside the village, and so they sell their labour to land-owners of their own village. The landless have no such prejudice, and they work for a daily wage of Taka 11.50.

Women belonging to landless households also work as wage labourers doing paddy husking, earth-cutting, food-for-work, and other casual work. They sometimes get a square meal per day for their work, or at other times a daily wage of Taka 5.50. However, they are not assured of regular employment in this type of work.

The children belonging to the 'target group' in Dhakuly village are all malnourished.

There used to be no health care facilities in the village. Only one Kabiraj (indigenous medical practitioner) used to attend to patients. There is a public dispensary but the people do not go there and they do not get proper facilities there. Scabies, diarrhoea, dysentery, worm infestation, etc. are extremely prevalent in the village. There is one mid-wife in the entire village who attends to women of all strata during births. BRAC has now improved this situation, and we shall look into that in a later section. Family planning is also an area in which BRAC has been working. The idea of family planning was not popular here, probably due to superstitions and traditional values. There are now 130 fertile couples in the village and 54 women use some means of birth control. (See Chapter 8).

All households have fruit trees in their homesteads. Banana, date, mango, beetlenut, papaya, coconut and jackfruit are the main fruits grown by the people. Households of the "target group" have less trees, since they possess small pieces of homestead land. Fruits are used both for consumption and for selling, and thus constitute a substantial part of the 'income' of the poor households.

Types and distribution of fruit trees in the village by sub-groups of households:

Sub groups	Coconut	Date-Palm	Mango	Jackfruit	Bamboo	Beetlenut	Papaya	Lemon	Guava	Banana	TOTAL
Female/ Male BRAC	4	55	21	16	18	9	38	4	3	120	288
Male BRAC	3	19	31	6	12	6	18	6	5	126	232
Non BRAC <= 1 acre	14	36	18	21	16	9	29	5	6	116	270
Non BRAC > 1 acre	67	116	86	46	36	122	45	27	31	170	746
TOTAL	88	226	156	89	82	146	130	42	45	532	1536

Vegetables are also grown by the women in the homestead land, which are also used for consumption and other income. Some of the types of vegetables grown in the village are: pumpkin, spinach and other kinds of leaves, aubergene, tomatoes, potatoes, squash, garlic, onion, etc.

Many households, except very few, engage in poultry, goat, sheep and cow rearing. Mostly rich households own cows as they are very expensive (about 2-3000 Taka), and cows are regarded as a status symbol. Eggs and chickens both are a good source of income and nutrition for the poor. Goats and sheep are reared mainly to be sold in time of hardship. Cows are very productive in terms of the milk they produce which fetches very good income. They are however, quite expensive to keep also. BRAC has now helped the poorer people through their credit scheme to purchase more cows, thus enhancing their income.

Distribution and ownership of cows and calves in Dhakuly village
by sub-groups of households:

Sub-groups	No. of cows	No. of calves	Average per household	
			Cows	Calves
Female/ Male BRAC	49	23	1.2	0.6
Male BRAC	42	16	1.2	0.5
Non BRAC <= 1 acre	28	21	0.8	0.6
Non BRAC > 1 acre	117	59	2.5	1.3
TOTAL	236	119	1.5	0.8

Looking at this basic general data on Dhakuly village, it is clear that land is the main source of income - both for men and women. However, land is concentrated in the hands of a very few, and these households determine the livelihood of agricultural labourers. Labourers, being surplus in number, cannot bargain for a fair wage.

The pattern of land ownership vis-a-vis the credit system, mortgage system, investment system, etc are also responsible for poverty in the village. Surplus farmers reinvest their profit in land or business. The existing administrative system facilitates such expansion of capital and assets. Concentration of capital in a few hands accelerates the rate of landlessness in the village. But the government is indifferent to the problem of low wage in agriculture. It does not support the landless with capital. On the contrary, the landless have to mortgage their scanty assets to the rich when they require capital. Conditions of mortgage are also determined by the rich in their own interest. Since the poor have inadequate capital and also lack business facilities, they often consume the whole stock of capital and fail to get back their assets which have been mortgaged out earlier.

One of BRAC's major tasks has been to better the exploitation of poor in the agricultural sector. They have also tried to diversify the types of activities the poor engage in, to reduce their exploitation. These efforts made by BRAC shall be discussed in a later section. First, a brief description of BRAC - the organisation.

F : BRAC : The Organisational Context :

a) History and Approach to Development :

The Bangladesh Rural Advancement Committee (BRAC) is a private, non-governmental rural development institution founded and managed by Bangladeshis. Begun as a relief and rehabilitation effort in the aftermath of the Bangladesh war of Liberation (early 1972), BRAC today is an established, comprehensive, multi-faceted development institution employing over 1500 full-time staff. BRAC field activities, with programming and administrative support from the central office, have spread to roughly 900 villages in several rural locations. In addition, BRAC disseminates and communicates the development experience gained in its field operations through its rural training centre, its educational materials, its development journal, and its research and evaluation publications.

(see Appendix of Marty Chen 1983, for a list of various programmes and activities of BRAC).

BRAC is now recognised as one of the most comprehensive and successful of the indigenous, non-government agencies and BRAC's Executive Director was honoured by the 1980 Ramond Magsaysay Award*for community leadership. (* established in the memory of a President of the Philippines as the Asian-equivalent of the Nobel-Prize.)

BRAC initiates and implements rural development programmes which are exclusively meant for the economic and social upliftment of the poor and destitutes. Within a period of 12 years, BRAC has rapidly emerged into a highly flexible organisation capable of undertaking and implementing innovative approaches to rural development. BRAC's integrated rural development activities

under Sulla, Manikganj, Outreach, Jamalpur Women's Programme, and Rural Credit and Training Programmes directly benefit about 50,000 households. Its Oral Therapy Extension Programme has already covered 20 lakh households with a view to reduce the alarming rate of mortality and morbidity caused by diarrhoea. While a number of supporting projects like Material Development and Publication Unit, Research and Evaluation Division, Gonokendra Journal, Aarong Marketing Set-up, Textile and Design Centre, Training and Research Centre, aim at facilitating BRAC's total development activities, projects like BRAC Printers, Potato Cold Storage, etc. are creating funds and stable long term resources.

BRAC approach to development :

BRAC believes that the present development strategy has made life worse for eighty percent of Bangladesh's population, and has instead of halting, hastened the process of marginalisation and landlessness in the rural areas. Rural pauperisation has alarmingly increased over the last three decades or so. It is BRAC's view that conventional explanations like social dynamics, colonial past , or high population growth cannot adequately answer the riddle of growing pauperisation. BRAC believes that the roots on which the dismal situation is anchored in the rural areas is the unequal rural power structure and rural institutions which make the poor even poorer still. Rural realities reveal that the interests of the poor are always in conflict with those of the rich and this conflict can seldom be resolved. Therefore, right choice and policy goals necessitate value judgements about choosing the group one wishes to favour. BRAC's target population are the disadvantaged poor, who are powerless and exploited.

(see ADAP News

BRAC believes that the reason for underdevelopment lies not so much in inadequate technology, but in inappropriate institutions and poor policy. The explanation for the latter in turn lies not in the ignorance of those who govern but in the powerlessness of those who are governed. BRAC strategy, therefore is to organise and develop appropriate local level institutions in order to involve effectively the target people in mobilising available resources of the community for their own development. BRAC has been testing various approaches to reach the poor effectively and to enable them to establish thier own institutions and keep them active until they achieve the capacity to make others act in accordance with their hopes and aspirations.

In summary then, the main aim of BRAC is to assist the poorest section of the rural community to improve their standard of life. The strategy of BRAC is to develop the capacity for concerted social action by involving organised groups of disadvantaged men and women. BRAC works closely with the most disadvantaged 50% of the population. More specifically, this criterion includes landless or marginal farmers with practically no assets, fishermen with no implements, rural artisans who lack working capital or raw material, families who sell their manual labour, and poor women belonging to households of all the above groups. BRAC is involved in a multitude of activities because it aims to address itself to the totality of the problem of the disadvantaged people. Their programmes fall under the sectors of agriculture, health, family planning, nutrition, functional education, training, rural credits, economic support through income generating activities, and research and evaluation.

" In development two and two does not equal four. Development is not a simple cause and effect process. Both the problems and the solutions change over time." Administrator, BRAC Field Project.

b) Phases of BRAC's Programme

BRAC has been characterized as a learning institution. What this means quite simply is that BRAC "learns as it goes" through a responsive induction process. BRAC is not an institution setting about to prove a specific model or theory of development and its leadership has never espoused an ideology or "ism" in a dogmatic or absolutist sense. This is not to say that they are not guided by an ideology, but that they do not feel that their ideology has solutions for all the problems they are committed to tackling. They hope to find solutions as they set about tackling poverty and they recognise that the nature of both the problems and the solutions will change in the process. BRAC believes that implementation--learning--planning are mutually reinforcing and simultaneous processes. BRAC has been able to institutionalize this reciprocal process of learning and planning in large measure and is noted for its flexibility, responsiveness and learning. Marty Chen has pinpointed five phases of learning to date, and has summarized them to show the evolution of BRAC's current ideology and methodology:

The Adaptive Phase (1973)

The Experimental Phase (1974)

The Expansion Phase (1975-76)

The Reassessment Phase (1977--)

The Current Phase (1978--present)

I shall not go into the details of each phase and the development of BRAC ideology through them (for a full description, see Marty Chen 1983, pp6-17), but it is worth noting that through these phases, BRAC learned many things. Some of the most fundamental of observations were :

- that there is a very fundamental relationship between the rural power structure and the distribution of resources.
- that programmes designed for the whole community deliver most of their benefits to the rich and tend to by-pass the very poor.
- that programmes designed for the poor must address the rural power structure, which keeps not only power but also resources in the hands of a few.
- that in order to address the rural power structure, the capacities of and institutions for the poor (and powerless) must be developed.

BRAC's current assumptions about poverty and development can be summarized as follows :

- that the village is made up of groups with differing and conflicting interests;
- that these groups can be mobilized around issues perceived to be in their self-interest;
- that the rural poor do not participate adequately in or control their environment because they are socio-politically and economically powerless ; and
- that the poor through their power gained in collective economic and social action can more fully participate in and control their environment.

BRAC currently defines its target group as men and women of :

- those households who sell their manual labour to others for survival irrespective of occupation ;
- provided, they do not have political patrons among the non-target people, and
- provided, they cannot still exercise status considerations.

Currently, BRAC directs all of its support to organized groups of poor. These groups of poor are both short-term ends in themselves and long-term means for empowering the poor. In the short-run, all BRAC activities are to converge on these groups. Social services are no longer delivered village-wide, rather they are delivered by trained members from each group to the members of their respective groups. All inputs and technical services are directed to and managed by the groups. Group strength is fostered and strengthened through joint productive activities. The emphasis is on concrete productive action which necessitates daily interaction and fosters unity. In all this, BRAC professional staff, now called "organizers", develop the individual groups to the point where they can plan and implement their own social and economic activities.

In the long-run, the individual groups are to be federated to form a power base for the poor. BRAC believes the groups and the federation must be developed gradually to replace step-by-step those forces in the rural power structure which support and control the lives of the poor. That is, BRAC believes :-

- that individual behaviour does not occur in a vacuum but in the context of a series of relationships ;
- that to change an individual's behaviour in any permanent sense one must change that series of relationships ;
- that if the group is to be the key instrument of change for the poor, the group must prove a viable counter-institution to those earlier relationships ;
- that the group must, therefore, provide at a minimum what the previous relationships offered individual members (varying degrees of security, resources, employment and power) ;
- that a strength of unity among the members will develop to the degree the group is perceived to provide security, resources, employment and power ;
- that the concerted strength of an individual group can provide the degree of power required in, for example, a successful settlement of a domestic dispute but only the concerted strength of many groups can provide the broad base of power required in, for example, the negotiation of favourable wage rates or sharecropping terms, hence, the federation.

G : Women's Organisation : The BRAC Approach :

How do women fit into these key elements of BRAC's current methodology ? BRAC recognises that poor women are at once poor and women : that is, they face at one and the same time certain problems by reason of their gender and other problems by reason of their poverty. Fairly early on, when BRAC was still young, three leading women of the organisation (Kushi Kabir, Ayesha Abed, Marty Chen) outlined what seems to work or not to work, and what needs to be done for rural women.

a) What seems to work :

1. Rural women can be motivated to design and implement development activities - functional education, public health, family planning, co-operatives - both inside and outside their own villages.
2. Urban women can be motivated to design and implement development activities in villages.
3. Relatively inexperienced women, given sufficient and appropriate training, can plan, design, implement, and monitor a development programme.
4. Social constraints can be overcome if female workers work in pairs or in teams.
5. Rural women will leave their homesteads to attend certain meetings for functional education, mother's clubs, co-operatives, or whatever.
6. In such gatherings, rural women voice opinions. They are usually free, open-minded, and receptive to new ideas.

7. Rural women will join and form co-operatives. They can co-operatively accumulate a limited capital through mushti-savings (Mushti-savings are a traditional method of savings whereby women put aside and store, often secretly, a handful of rice weekly or daily from the domestic stock).
8. Rural women will travel outside their own locality to receive training they perceive to be beneficial.

b) What seems not to work :

1. Programmes that address welfare needs but offer nothing economic or tangible. Interest and motivation slacken and attendance drops in such programmes.
2. Programmes which fail to take into account the felt needs of the participants.
3. Programmes which are imported or imposed ready-made without evolving from the participants.
4. Programmes which fail to take into account problems of training, supervision, management, procurement, marketing.

c) What needs to be designed and tested :

1. Innovative ideas on ways to integrate women into development programmes and on new economic opportunities for women.
2. Ways to instill and maintain cooperative spirit.
3. Ways in which savings of cooperatives can be economically invested.
4. Ways to teach women how to do their routine work more efficiently and productively.
5. Appropriate technologies to improve the tools and techniques women use in their agricultural work.

6. Appropriate technologies that permit women to lessen the time and strain of routine chores.
7. Appropriate extension services, credit facilities, cooperative training to reach women.

Organizing the poor : Developing groups : Building a federation .
These are some of the key aims of BRAC approach to rural development.

"BRAC works in organizing and mobilizing the poor and disadvantaged sector of the population into cooperative groups who then plan, initiate, manage, and control group activities, both in social and economic fields."

BRAC project proposal.

A BRAC staff hand-out on Group Formation points out that carrying out the above actions "will lead the group to become a viable group which is the final stage of growth. We expect the following things from a 'viable' group:-

1. Unity - a growing sense of group identity and cohesiveness.
2. Leadership - strong, but not dominant or exploitative, leadership.
3. Joint action - collective production and economic activities.
4. Improved economic condition - increased production and income.
5. Critical consciousness - high awareness of social, political and economic conditions.
6. Self-reliance - ability to undertake and manage social and economic action.
7. Power and autonomy - increased control over their own destiny.
8. Federation - linkage with other groups. "

Following this approach, BRAC initially organizes men and women into separate groups in order that women can address their problems of day-to-day economic survival as members of poor households and of limited social power and autonomy as women. Over time, BRAC links the separate male and female groups into a class federation to address the long-term systemic problems of economic domination by the rich.

Through the organized groups, poor women address the problem of economic survival and begin to exercise social power and autonomy within their homes. Initially, BRAC organizes women around economic action : economic action to guarantee survival and to provide the economic base from which to exercise power and autonomy within the home. Gradually with the social power gained in group interaction and the economic power gained through joint economic action, the women begin to exert greater power and autonomy within their homes. Participation in BRAC programmes affords the women much that has previously been denied to them. Very often, BRAC meetings are their first opportunity for social contact outside of family or home and BRAC functional education classes and training their first opportunity to be educated. Moreover, BRAC's credit, training and support services are usually the first access these women have had to public resources. And the income the women earn from joint productive activities is often the first income over which these women exercise some control.

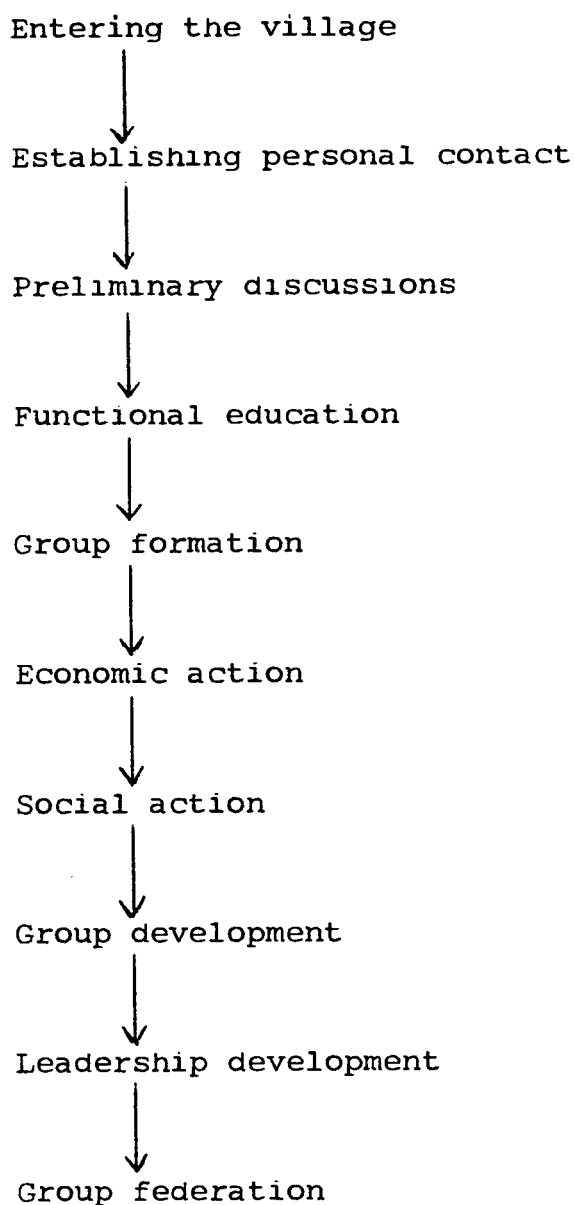
Through the federation, poor women begin to address the problem of economic domination by the rich and to exercise social power and autonomy within their villages. Representatives from both men's and women's groups attend the workshops, training, conventions and other tools of federation. Through the unity and power gained in collective social and economic bargaining with other poor, the women begin to participate in and more adequately control their village and environment.

The basic objectives (resources, power, and autonomy as women and as the poor), the basic tools of organizing (the individual groups and the class federation), and the individual strategies (collective economic and social action) of BRAC's programme are perhaps best presented in the form of a model which is presented in the next section under methods of organization.

d) Methods of organisation :

The task of organizing rests with the BRAC professional staff, each responsible for organizing the poor in six villages. The field staff live as teams in simple office-cum-dormitory complexes together with the paramedics and field accountants for that area. This is roughly the order that their approach takes :

(see Marty Chen pp 85-90 and 233-36)



What principles of organisation has BRAC learned to date ?

- people generally act on the basis of self-interest.
- the poor can, if they perceive it to be in their self-interest, be organized into groups.
- to guarantee their interest, the poor should initially be organized around immediate and tangible activities.
- in so doing, the groups of poor must increasingly take the initiative in the organization process.

- over time, as the organization of poor strengthens they can move to more complex, abstract, long-term and systemic issues.
- because theirs is the risk in such action, the poor themselves must decide which systemic issues using what tactics should be tackled when.

(for details, see Marty Chen 1983, p 92)

Given these principles, BRAC decided to organize women, at least initially, around immediate and tangible economic activities.

H : Women's Training and Work in Dhakuly Village : The BRAC Effort :

BRAC became aware from the very beginning of the limited options open to women for paid work, and of the little support offered to women in their traditional work. They also recognized that the capacity to save money among the organized groups of women was small, so that their group funds would never be sufficient to finance anything more than the most modest economic schemes. More fundamentally, BRAC knew that in launching an economic programme for women, they were up against the subsistence economy of rural Bangladesh. There was little effective demand for commercial goods and services in the villages of Bangladesh, and to identify and design viable economic projects which would ensure a reasonable return to each member of a group would be difficult, and that to do so for several thousand women in several hundred groups would be extremely difficult. On a larger scale, they recognized the need in Bangladesh for overall development with equitable distribution. From the management perspective, they knew that in order to develop economic programmes for the women, BRAC would need to develop the technical, financial and management capacities of both BRAC staff and the women.

So, from the very beginning, BRAC was forced to be realistic about the multiple constraints in the path of action. However, notwithstanding the limitations, they decided to proceed. One of the leading implementers behind the BRAC effort writes :
(Marty Chen 1983, p94)

"And so we had to proceed with the "soft-heartedness" of the voluntary sector (who came in contact with the hard realities of poverty) but also with the "hard-nosedness" of

the private sector (who understand the hard realities of the commercial world). We were committed to finding options for the women but also to meeting as many conditions of feasibility as possible before any scheme was adopted. We tried to balance the pessimism that not much could be done with the optimism that hard work could deliver some options for the women. In the final analysis, we decided no one can predict with certainty if an economic scheme for poor women will be feasible because very few have tried to reach quite the same people in quite the same way. And so we erred on the side of optimism rather than pessimism and decided to follow the women's example of faith and hard work."

BRAC thus began in a big effort to train and engage over 4,600 women in viable employment schemes in the period of 1972-1982. These schemes were classified into two broad categories :-

1. those that enhance production of what women already do ;and
2. those which expand employment from what women already do or have never done.

a) Production enhancement schemes :

In part, women's contributions have not been recognised because they produce mostly for consumption and not for the markets. This disregard has meant that women produce without the support or services offered to men in their production and that, on occasion, women's labour is displaced by machines. Believing that these trends need to be reversed in order that women are able to produce more efficiently, BRAC has undertaken schemes

which aim at the following :

- to transfer subsistence production into commercial production
- to increase output and efficiency
- to prevent or reverse displacement
- to improve terms and conditions of production.

This framework evolved as a result of thinking along the following lines.

Firstly, to transform subsistence production into commercial production does not necessarily require fixed capital, skills training, or marketing. The market for such products is generally the local markets, which the women negotiate through family members. What is needed is small amounts of working capital. BRAC has helped many women transform agricultural, horticultural, food processing, poultry, and animal husbandry production to a commercial scale with small amounts of credit (Taka 500 or under).

Secondly, women's output and efficiency could be improved if they were to receive the same package of extension services offered to men : credit, inputs, technology, training.; and BRAC field staff found that output and efficiency could be increased with any, preferably all of the following services :

- inputs
 - wholesale rates of raw materials
 - improved seed varieties
 - animal and poultry vaccines
- technologies
 - to reduce the drudgery of domestic activities
 - to increase the output of productive activities

with a U.S. voluntary agency active in improving the productivity of small farmers in Bangladesh (Mennonite Central Committee) vegetable seeds were imported and distributed each year to thousands of families and to local primary and secondary schools. Vegetables new to the area as well as traditional varieties were grown. Instructions on seed-bed preparation, transplantation and care of plants were provided by BRAC field staff. BRAC also encouraged the growing of fruit trees and regularly transported thousands of seedlings and saplings of coconut, banana, mango, papaya and guava. All of these inputs were sold at cost price to interested households. Currently, BRAC has redirected these horticultural services to more directly reach and benefit women. Women who do not possess much land or who want to pool their labour are encouraged to take up collective fruit and vegetable cultivation on leased or sharecropped plots of land. One group of women in one village, by way of example, planted 60 lemon trees (each of which cost 3 taka): a total investment of 180 taka . They harvest roughly 30 taka worth of lemons per tree per year: an annual return of 1800 taka ; or ten times their investment). Women are also organised to plant and rear seedlings and saplings for sale.

In Dakuly: No.of women engaged in horticulture: 79

Their average income per year from horticulture:

(includes consumption and sale).

From trees : Taka 1000 From vegetables : Taka 500

Animal husbandry

Animal husbandry is the preserve of women. In those households that can afford animals women tend them, but few women receive extension services in animal husbandry. Cows, goats and sheep are the three main types of animals that women keep and rear.

Current cost of these animals:

Cow = 2000 taka

Calf = purchase price(500-1000tk)
sale price (2000 tk as cow)

Goat = 250 taka

Sheep = 250 taka

Most animals are bought young and reared for a year or so, so that when they are sold they fetch a good price. The cost of rearing is almost nothing except in terms of labour. A cow is particularly useful as it can be used as a source of milk and for draft. One ser of milk can fetch 5 taka in price. A cow can produce at least 1.5 sers of milk each day, though this is a seasonal thing and cows only produce milk for six out of the twelve months.

Currently BRAC provides credit to groups of women who possess few if any animals and who wish to rear animals cooperatively. The income they make from the profit of selling is both consumed and saved: about fifty percent is deposited in the group fund.

Sometimes groups prefer to take a smaller loan and purchase only a few animals. The group then decides which members of the group have the facilities (space and feed) to rear the animals. The initial investment is made by the group and the rearing costs are

borne by the individual. The individual woman realises half of the profit and the other half is put in the group fund. If a loss is incurred, that loss is borne by the group. So the group keeps pressure on the individual woman to rear the animals properly.

It should be noted that these animal husbandry schemes are designed more to maximize a profit than to enhance production. No extension services have been offered and not much cost or effort is invested, the only BRAC inputs are credit and field staff supervision. BRAC hopes to expand its activities in animal husbandry to include training and inputs (vaccines, improved feed)to enhance production.

In Dhakuly village, as of July 1984:

No. of women rearing cows: 94

Out of these no. of women belonging to
landless or <1 acre land groups : 70

Average income earned per cow: 1200 Taka per year

No. of women rearing other animals: 17

Poultry rearing:

Most, but not all, women keep a few chickens or ducks (depending on the terrain) to scavenge around the homestead. In Dhakuly, there are mostly chickens. However, there are problems in keeping chickens: lack of skills, money, space and neighbourliness. BRAC decided that something could and should be done about these problems.

In 1976, BRAC initiated a poultry programme designed to:

- a) to expand the free-ranging/scavenging system of rearing (the alternative - poultry farms - requires procured feed and proves uneconomical in an economy where there is already tremendous demand on limited supplies of grain).
- b) to improve the quality of poultry through:
 - i) training; on improved breeds, feed, and housing; disease control and cures.
 - ii) mass vaccination (using government vaccines and BRAC designed distribution system).
 - iii) to lobby for and obtain access to government stocks of vaccine (the option to import vaccines for BRAC's purposes although tempting as a short-term solution, was rejected because it would not serve to stimulate long-term solutions to the vaccine problem).

Over the years BRAC has found there are several critical elements to a successful programme: Skills training - stock and supplies - extension - management. BRAC has been able to develop a poultry programme which includes all these elements:

skills training -- by BRAC technical trainers.

parent stock breeding -- by BRAC technical trainers at a centralized breeding farm.

vaccination drives -- by BRAC trained paravets using government vaccines (obtained by BRAC technical trainers).

extension -- by BRAC trained paravets who help to develop systems of distribution and supervision.

management -- by BRAC field staff and the paravets.

So far BRAC plays the role of broker between BRAC's poultry programme and the government. Ideally at some point, BRAC will no longer play that role and the women will procure and receive what they need directly from the local government livestock officer.

In Dhakuly village:

No. of women rearing poultry -- 89

Amount of income earned from each chicken -- 100 Taka per year

2. Employment Expansion Schemes

Almost all women in rural Bangladesh possess the skills to produce decorative and utilitarian crafts. Some women in rural Bangladesh perform paid work within their villages and a few women seek paid work outside their villages. Yet women's skills have generally been disregarded or undervalued and their employment circumscribed. There is limited effective demand for women's goods in the local markets and virtually no demand for women's labour outside the villages. This is so in large part because women have been bound by tradition to certain skills and to certain work. Moreover, women's skills and goods have not been diversified or improved upon over time. In order for women's craft production and paid work to expand, these trends need to be reversed.

BRAC has, therefore, undertaken schemes which aim:

- to commercialize traditional skills through new markets.
- to revive and adapt traditional skills and designs
- to import new skills
- to mobilize demand for women's labour.

This framework evolved as a result of thinking along the following lines:

Firstly, women process certain items for which there has been little or no effective demand in the local markets. These are items which each rural household produces for its own needs and which, until recently, even urban households prided themselves in making. But under the various pressures of urban life, many urban housewives no longer produce these items and turn to urban (and even foreign) markets for these goods. BRAC has tried to capitalize on this latent urban market for these traditional items and to develop new lines of goods based on the traditional skills.

Secondly, women (and men) produce many hand-crafted items for which Bangladesh is renowned: kantha (embroidered quilts); muslin; jamdani (figured muslin) saris; and more. However, these are no longer being produced. In an effort to find new patrons and markets, BRAC has undertaken a scheme to revive and adapt traditional skills and designs. What BRAC means by adaptation is an effort to adapt traditional skills and designs to new lines of functional, marketable items. What BRAC means by revival is the effort to revive in women (and men) the original skills, imagination and creativity to produce art in the traditional form. Agricultural skills were developed, though traditionally "male", because BRAC felt that if women could be trained in agricultural field work they would then not only have access to employment (for agricultural field operations are the single largest employer of rural labour), but would also be recognised and counted among the wage labour section.

Thirdly, However substantial the range of women's skills in Bangladesh, most generate little income and only a few can be upgraded and expanded to command a higher price or to employ significant numbers of women. Given women's need for higher incomes and expanded work opportunities, BRAC turned to many activities and skills, all of which were not necessarily traditionally "female". They believed that women could and would do any type of work provided they received the requisite training and were offered the opportunity.

And finally, BRAC set about mobilizing demand for women's labour. Even though current wisdom would have us believe that the constraints to women's employment is on the supply side : that women will not perform certain kinds of labour, BRAC experience told them that the problem is on the demand side : that employers, usually all men, do not consider women's labour.

With these ideas in view, BRAC set about setting up employment expansion skills. These skills were in the areas of food processing ; traditional craft development like grass basket/mat making, block printing, kantha revival, jamdani revival ; silk-culture ; and agriculture. Food processing scheme has only made minimal progress and was not being used in Dhakuly. Neither were the kantha and jamdani revival as the women of these villages didnot possess these traditional skills. I will therefore concentrate on the employment expansion schemes of traditional craft development involving grass basket/mat making and block printing, silk culture, and agriculture.

1. Traditional craft development scheme :

BRAC has undertaken a series of projects to increase the quality and marketability of Bangladeshi craft. They have encouraged the production of hand-crafted items by a number of women's groups : Basket makers, embroiderers, mat makers, lace makers. In 1978, BRAC and Mennonite Central Committee (MCC) opened a rural craft centre in Dhaka called AARONG, to promote traditional crafts (through its retail outlet) and to provide support services to disadvantaged artisans (through its design and outreach teams). BRAC discovered that handicrafts would secure a stable market for the producers only if they reflect indigenous design traditions and only if they are diversified over time to appeal to the changing tastes of the customers ; steps were taken to ensure this. Block printing was introduced to replicate old indigenous Bangladeshi motifs. BRAC also started a Textile Design and Service Workshop under the guidance of a foreign industrial designer. The staff of this centre were to streamline BRAC's research and documentation of traditional designs and, as importantly, to strengthen the technologies involved in Bangladeshi textiles : equipment, weaving, washing and dyeing, identify wholesale prices of various goods, record all technical and design information. They design prototypes of textile goods using traditional motifs and continue to experiment with the design, lay-outs, colour schemes, etc. of textile samples. The plan is to eventually move from Aarong as the primary outlet for markets, and go into export marketing.

In Dhakuly village : Retail and work centre = Ayesha Abed Foundation

No. of women engaged in block-printing = 2

No. of women engaged in other craft-making - 31,
(bamboo, jute, grass basket/mat making)

Income earned : Block printing = 600 Taka per year Other crafts=250 Taka per year

2. Silk culture :

Since the mid-1970s in Bangladesh, the government's silk board and several voluntary agencies have looked into the potential of different types of silk culture to generate a natural fibre for the nation's handloom sector and to generate an income for village women. Having learnt about the feasibility, cost benefits, and requirements of silk culture from the staff of the government's silk farms and of other voluntary agencies, BRAC embarked on its silk culture programme in 1977.

Initially, BRAC put an emphasis on ericulture ; the cultivation of a variety of silk worm which feeds off castor bush leaves and spins a variety of silk known locally as endi. Endi silk is reputed to be seven times as strong as cotton and less expensive than mulberry silk and to involve labour intensive technology (hand spinning) rather than a capital intensive technology (machine-reeling). Ericulture (and sericulture which is similar) thus promised to provide a steady income with a limited investment.

- little capital

 - Tk 500 for a spinning wheel

 - Tk 300 for racks and other implements

- little training

 - the skills required in cultivation, rearing, and spinning of endi silk transfer more quickly and easily than with mulberry silk.

Given its progress with ericulture, BRAC later decided to branch into the cultivation and rearing of mulberry silk also.

Over the years, BRAC has found that castor tree cultivation, endi silk rearing and spinning can provide a supplemental income to poor women who engage in silk spinning in and around other activities, or a primary income (Taka 125 per month) to women who engage in silk spinning for eight hours a day. BRAC believes that ericulture has the potential of large-scale employment for many women. It can provide a year-round income despite the seasonality of the plant and the women. The outstanding problems are : adequate supply of leaves, disease control, and improved weaving techniques. It should be noted that the collective aspect of silk culture does not centre around production, which is carried out in individual huts, but around training, credit, supply-and-delivery, all of which takes place on specified "silk" days at the service centres.

In Dhakuly village :

Service centre : Ayesha Abed Centre

No. of women engaged in spinning = 15
(ie. ericulture)

Income earned per woman = 1500 Taka per year

No. of spinning wheels in the village = 11

3. Agriculture :

In Bangladesh, agricultural field operations are the single largest employer of rural labour. Traditionally only men (not women) engage in and are employed in field operations. BRAC decided to train women in agricultural field work so that women would not only earn an income but also gain access to the rural labour market. If women were to be seen working in the fields,

they might get hired by others also as agricultural labourers. If not, women's need for wage work would continue to go unrecognized.

BRAC decided to support groups of women who wish to lease or sharecrop land to cultivate their own crops. BRAC was prepared to help them plan and manage their cultivation and provide loans for the inputs required. During some bad years (after a draught or floods) BRAC is also prepared to subsidize (with wheat payments) such agricultural schemes. During these years, group members get a double benefit : wheat as wages during cultivation and income from the crop at harvest.

In the field of agriculture, many women have now aquired the following skills :-

- a) land leasing or sharecropping : with BRAC loans and advice, women lease or sharecrop land. Initially, the women were not good judges of what quality or quantity of land to negotiate for. Now the women have gained this expertise.
- b) land preparation and ploughing : women have not undertaken ploughing but contract men (on a daily wage basis) to perform this function.
- c) cultivation : previously, women did not have the skills of transplanting/planting, weeding etc. Initially, the women contracted men to work alongside them and to train them in these operations. Within the first season, the women aquired the necessary skills.
- d) harvesting : as with cultivation, the women have had to aquire the skills and have been able to do so with relative ease.

e) marketing : the markets remain the one corner of male domain that women have not yet penetrated. Currently, women market their produce either through male members of their family, BRAC field staff, or a middleman. Some groups have been cheated by the middlemen and have had to negotiate adequate terms and prices.

In Dhakuly village :

No. of women engaged as agricultural labour = 10

Average income per woman = 1000 Taka per year

I. Strengths and Weaknesses of BRAC :

The feeling that was picked up while conducting the field survey in Dhakuly village was that the poor people had high regard for all that BRAC and its staff were doing there. The field staff themselves had a sincere and comfortable relationship with the village people which emphasised the trust and good-will between them.

However, in the academic circles of Bangladesh the radical elements went as far as to suggest that as NGOs like BRAC were wholly dependent on International Aid Agencies for funds for their own survival, they were biased towards the interests of such aid agencies. This may be true in part, but my experience in Dhakuly village showed that at least some of the BRAC effort was genuine in terms of serving the needs of the people and those of Bangladesh at large. The preceding description of the women's programme exemplifies this as the training approach implicit in that programme is geared towards improving the poor women's situation. Moreover, the poor of the village felt secure in the knowledge that given a clash of interests between the poor and the rich sections of the village, BRAC's effort would be towards avoiding further exploitation of the poor by the rich, thereby always watching the interests of the poor. In fact, this itself was often the cause of animosity between the rich and the poor, and BRAC's presence over the years has weakened considerably the traditional power-structure

dominated by the rich. (See BRAC's publication 'The NET' for details.)

Marty Chen has further pointed out the strengths and weaknesses of the BRAC programme in Bangladesh (Marty Chen 1983, Appendix III, p 263-4) :

The strengths :

1. Diagnosis of poverty in real human terms. BRAC field staff are in daily contact with the villages and with the poor. They are encouraged to learn and are required to transmit what they learn.
2. Participation of the poor. There are several mechanisms for the poor to be heard not only by the field staff but by the institution as a whole.
3. Realistic goals and objectives. At weekly and monthly project meetings, the problems and progress of the programme are discussed. The staff evaluate and discuss what worked or did not work and why. Targets and objectives are reassessed in light of these discussions.
4. Flexible plans. BRAC field staff concur that both BRAC's short-term and long-term objectives are clear. Moreover, BRAC's goals are dynamic. Goals are set and reset each month.
5. Phased planning. BRAC does not at any one time plan very far ahead. Rather, during one phase of field activities (with the help of surveys, research, observation and other tools) the next phase is discussed and planned.

6. Decentralised planning. Generally, BRAC planning is done by or in consultation with those who have responsibility for implementing the plans. Within the BRAC field project, the field staff have the discretion and are encouraged to act on their own. The field staff are able to respond to the dynamic of the problem and of the situation.

The weaknesses :

- although field staff have always been encouraged to observe and listen, only more recently have they been taught how to observe and listen.
- although the poor whom BRAC organize participate directly in the formulation of the schemes and activities of their individual groups, their voice is heard only indirectly in the larger plans of BRAC.
- although for the most part BRAC plans and goals remain flexible, the administrators in BRAC's head office occasionally stick to certain generalized orthodoxies which may not necessarily fit the realities.
- although BRAC remains flexible and learns through trial-and-error, BRAC runs the risks that every error becomes a virtue and that lessons are learned prematurely (without allowing time for the process of change to work itself out).
- although there is local discretion within the field projects, there is very little decentralisation on matters of personnel and overall directions for BRAC.

- although this centralised authority may be required by the scale and scope of BRAC's activities, it does lead to certain problems and discontent.

CHAPTER VI

POVERTY AND CATASTROPHE:

A LOOK AT THE NEED FOR PROTECTION AGAINST CATASTROPHIC
OCCURRENCES IN RURAL BANGLADESH

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A. Definition of Catastrophe and Discontinuity :

Poverty has already been elaborated upon in Chapter 1. The aim here is to highlight its aggravated problems when linked with Catastrophe.

Catastrophe can be defined as any event or series of events that might lead to discontinuity having disastrous consequences.

Discontinuity can be defined as the sudden loss of an individual, an asset, an income, or status, that might lead to insecurity and further impoverishment or general worsening of the previous situation.

Once a discontinuity takes place, certain extra resources are needed to counter the expected negative impact of discontinuity. The frequency of the catastrophe, and the extent of the damage caused determines the extent of effort needed and the chances of survival.

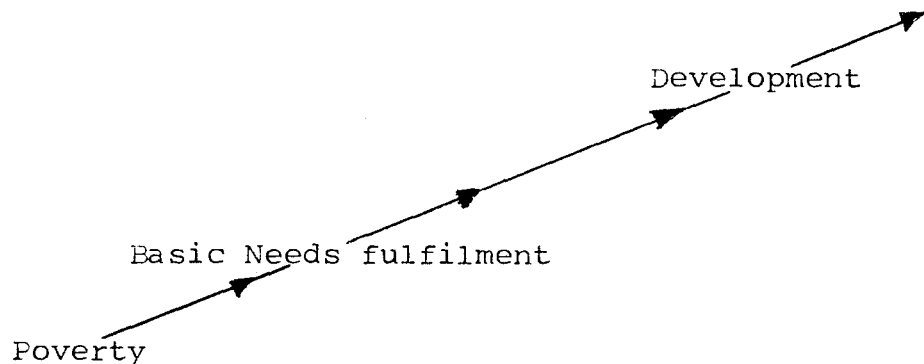
My view, of considering 'discontinuity' as the main criterion of catastrophe, is in line with the mathematical concept of catastrophe which has been recently developed by Zeeman. In essence, he asserts that "Catastrophe Theory is a new mathematical method for modelling discontinuous phenomena in nature." (1)

(1) See Professor E.C. Zeeman, 'Catastrophe Theory', Proceedings of The Royal Institution of Great Britain, Vol 49, 1976, pp 77-92.

B. What is the Justification for looking at the issue of Catastrophe in the process of Development ?

I am suggesting three reasons :-

1. Among the causes of poverty, catastrophic occurrences have a major role, especially in Bangladesh, where the frequency and predictability of catastrophic events is very high, both at the national level and at the village level.
2. It is proposed that a strategy that aims at basic needs fulfilment in the context of Bangladesh cannot be complete unless it takes full account of catastrophic occurrences and the means of protection against them.
3. Remembering our basic development model of



(See Chapter 1)

one can say that given the above two points, any prospects for development in Bangladesh will be unrealistic if this aspect is ignored.

My hypothesis goes like this :

The high incidence of catastrophic events, both at the national and at the village / household level, is a major cause of the increasing poverty and deprivation in Bangladesh.

Existing development efforts can experience, in the final analysis, only limited success in Bangladesh, because they have failed to pay the due attention to causes and effects of catastrophic events that such events deserve.

Basic needs cannot be said to be fulfilled in Bangladesh without the prevalence and knowledge of adequate means to protect against catastrophic occurrences.

Policies that aim at protection against catastrophic occurrences must include preventative, ameliorative, and insurance aspects.

Both government and non-government organizations can have a major role to play in not only minimizing the impact of a catastrophic event on the lives of the people, but also maximizing the impact, that people, through their organization, training and hard work, can have on the incidence of catastrophic events.

Women, in their primary importance in satisfying many of the basic needs, have a crucial role to play in any developmental process of Bangladesh, by participating in activities aimed at preventing, ameliorating and insuring against catastrophic occurrences.

Existing literature (Sen, Alamgir, Osmani, ILO, etc)(2), when dealing with issues of poverty, disasters and development in Bangladesh, seldom deal with 'Catastrophe' as an integrated component of development priorities. Catastrophic occurrences are certainly given a prominent place (see for example, A K Sen : 'Poverty and Famines', or Alamgir : 'Bangladesh - A Case of Below Poverty level Equilibrium Trap'), but nevertheless they are treated in an isolated way from general development policies. Relief statistics are looked at, causes are investigated, and the role of international aid is highlighted - Yet, once the nation is seen to be on the path of recovery, it is almost as if the event is forgotten and ignored and other more urgent issues of 'development' steal the show away ! What is critically missing is the incorporation of causes of catastrophic occurrences into development policy itself, and the neglect of policies to focus on strategies of action or means by which catastrophic events can be prevented, the effects of catastrophic events ameliorated, and ways in which people and other structures in society can insure against the catastrophic events. The urgent need for doing this will become even more clear as one looks at the prevalence and types of catastrophies in Bangladesh, and their implication in terms of damage caused.

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- (2) Mohiuddin Alamgir, 1978, 'Bangladesh - A Case of Below Poverty Level Equilibrium Trap', opt cit.
 S R Osmani, 1982 'Economic Inequality and Group Welfare': Theory and Application to Bangladesh', opt cit.
 ILO 1976, AR Khan : 'Poverty and Inequality in Rural Bangladesh'.
 A K Sen, 1981, 'Poverty and Famines', opt cit.

C. Prevalence and Types of Catastrophies in Bangladesh :

At the national level, floods, famine and epidemics are the major catastrophies. Cyclones and storms are also common. Among the infectious diseases, diarrhoea is the most common. In the last twelve years, the government has changed hands six times leading to much political instability.

In Dhakuly village :

At the village level, the survey of Dhakuly village shows that the main catastrophies at the household level are the death of the primary earner (usually male), the death of a cow in particular and all animals in general, or the distress sale of a household asset, for example, land, cow, sewing machine, spinning wheel, jewellery, etc.

Since the village is on the banks of the Dhaleshwari River, it is also prone to flooding periodically.

Catastrophic occurrences at the national level too, of course, affect the village.

(See Section D for details on catastrophes at the national and at the village/household level).

D. Implications of Catastrophic Occurrences - A Look at the Causes and the Damage :

The first point to mention here of course is that the damage depends on the nature and the extent of the calamity. And secondly, not all the causes and all the damages will occur at all times.

Following is a list of catastrophies that occur at both the national and the village / household level. Alongside each catastrophe I have tried to list the range of causes and damages that are generally associated with that type of calamity.

National Level:

	<u>Causes</u>	<u>Damage</u>
1. Floods	<p>Rivers : Brahmaputra Dhaleshwari Padma Bhūri Ganga</p> <p>Rain : Monsoon : July - August</p>	<p>damage to crops loss of animals damage to houses and other assets spread of water-borne diseases mobility ceased - work opportunities very much reduced</p>
2. Famine	<p>shortage of food (grain) sudden rise in prices hoarding of grain crop failure</p>	<p>shortage of food starvation and death malnutrition incapacity to work diseases</p>

	<u>Causes</u>	<u>Damage</u>
3. Epidemic	floods famine monsoon rains malnutrition poor sanitation & hygiene water pollution shortage of health services	death widespread sickness physical weakness incapacity to work insanitary conditions
4. Cyclone Storm & Tidal Wave	Natural wind movements Geographical location of the nation	damage to houses damage to crops damage to trees and animals salination of wells
5. Diarrhoea	lack of adequate drinking water low level of health & hygiene consciousness poor medical services poor sanitation	dehydration death loss of energy incapacity to work insanitary conditions loss of children
6. Political unrest	unstable government worsening of socio- economic conditions mass hunger and exploitation poor distribution of resources lust for power	assasinations instability discontinuity of policies institutional changes law and order problems insecurity set-back to economy

Village / Household Level (Dhakuly) :

	<u>Causes</u>	<u>Damage</u>
1. Death of a primary earner (usually male)	illness poor medical care personal dispute conspiracy/crime accident malnutrition and exhaustion other catastrophe	loss of income loss of other assets insecurity and helplessness shortage of food eviction and/or migration expenses of treatment and/or funeral burden of debt increased dependants
2. Death of cow or other animals	disease poor veterinary services poor quality feed dehydration killing/dispute old age and/or exhaustion other catastrophe	loss of asset loss of income loss of nutrition debt loss of draught animal loss of status personal dispute loss of trust from group
3. Distress sale (of an asset, eg. land, jewellery, sewing machine etc.)	prolonged illness sudden death of primary earner indebtedness hunger and starvation marriage of daughter harassment by the rich lack of skills, education, & training lack of job opportunities poor mortgage terms migration other catastrophe	loss of asset loss of status loss of security loss of income exploitation in terms of sale eviction and/or bondage loss of work loss of family heritage
4. Flooding, Famine, Epidemic, diarrhoea.	As at national level	As at national level

The following table (Table 6.1) shows that Bangladesh has incurred the heaviest loss of life from natural disasters between 1960-1981, as compared to other developing countries.

Table 6.1 : Deaths from Natural Disasters in Developing Countries between 1960 - 1981 :

Image redacted due to third party rights or other legal issues



Source : Anders Wijkman & Lloyd Timberlake, 'Natural Disasters - Acts of God or Acts of Man ?', An Earthscan Paperback, International Institute for Environment and Development and the Swedish Red Cross, 1984.

The cyclone of 1985 in Bangladesh is estimated to have killed

E. What are the Questions to be asked ?

In view of this grim picture, what are the questions that one is forced to ask with respect to 'development' goals and policy issues in a situation like that of Dhakuly village in a country like that of Bangladesh ?

Four obvious questions spring to mind :

1. Should 'protection' against catastrophies be included in a 'basic needs fulfilment' strategy ?
2. If yes, how can policies that aim at 'protection' against catastrophies be incorporated into the basic needs fulfilment effort ?
3. In the context of these catastrophies, what role can development efforts like BRAC have in helping towards 'protection' ?
4. What can be the role of women in these efforts ?

I have already suggested my hypothesis earlier. I will now try to elaborate on that by defining concepts and drawing on field experience and available literature to highlight the fundamental issues involved. I will then go on to finally review how far in my opinion BRAC has succeeded in incorporating 'guarding' measures into its programme, and what has been and can be the role of women in this.

F. The Basic Needs Approach to Development :

The first thing to do, since I am trying to justify the inclusion of policies that can help guard against catastrophic occurrences into a strategy that aims at Basic Needs fulfilment and hence development, is to recall what the current Basic Needs approach to development is all about. (The Basic Needs approach to development has also been discussed in Chapter 1).

'Basic Needs approach to development' has been one of the new and perhaps the most popular catchphrase in the last decade or so. The fundamental feature of a basic needs approach to development and one which is no doubt responsible for its immediate and widespread appeal is its central emphasis on meeting the basic needs of the poor masses within the shortest possible period. This objective has found a sympathetic response because of the growing disillusionment with the results of the patterns of national and international development over the past quarter of a century. As is well known, this period has been characterised by unprecedented rates of economic growth for the world economy as well as for the developing countries taken as a whole. It is, however, generally accepted that this growth has been very unevenly distributed both within and across nations. In the developing world, only a few countries have been able to pioneer a growth process which has brought substantial benefits to the poor. In the great majority of countries, not only has growth failed to bring about any tangible improvements in the living standards of the poverty groups (usually defined as the bottom 40 per cent or so), but it has even often led to their absolute impoverishment.(3)

The question that needs to be asked, and is indeed often asked, is what is the precise content of a basic needs approach to development ? The task of trying to be specific on this subject is made difficult by the fact that there is as yet no single document which is generally regarded and accepted as containing a comprehensive and definitive analysis of basic needs concept, objectives, and strategy. In the absence of such a 'standard source', I will attempt to broadly define the basic needs approach to development by drawing on several publications.(4)

Dharam Ghai in the ILO paper of 1977 has focused on the Declaration of the Cocoyoc (1974) statement (issued by a group of social scientists, natural scientists and economists at the end of a seminar organised under the joint auspices of UNCTAD and UNEP on Patterns of Resource use, Environment and Development Strategies) as one of the first leading statements to draw attention to the basic needs approach to development. The Declaration states, he quotes (p 6) :

" Our first concern is to redefine the whole purpose of development. This should not be to develop things but to develop man. Human beings have basic needs : food, shelter,

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- (3) For Bangladesh statistics - see World Bank 1984, Statistical Year Book of Bangladesh, and BIDS statistics.
For general evidence - see Khan and Griffin, ILO, 1972
 - (4) ILO, 1977, 'The Basic-Needs Approach to Development'
World Bank, 1980, 'Meeting Basic Needs : An Overview'
Coombs and Ahmed, ed. 1980, 'Meeting Basic Needs of the Rural Poor - An Integrated Community-based Approach.'
Dag Hammarskjöld Report, 1975, 'What Now - Another Development'
ILO, 1976, 'Employment, Growth and Basic Needs : One World Problem'
World Bank, 1977, Paul Streeten : 'Basic Needs : An Issues Paper'

clothing, health, education. Any process of growth that does not lead to their fulfilment - or, even worse, disrupts them - is a travesty of the idea of development."

And further,

"Development should not be limited to the satisfaction of basic needs. There are other needs, other goals, and other values. Development includes freedom of expression and impression, the right to give and to receive ideas and stimulus. There is a deep social need to participate in shaping the basis of one's own existence, and to make some contribution to the fashioning of the world's future. Above all, development includes the right to work, by which is meant not simply having a job but finding self-realisation in work, the right not to be alienated through production processes that use human beings simply as tools."

The World Bank (1980) states that "the only way that absolute poverty can be eliminated permanently is by increasing the productivity of the poor." However, it continues to state that "But this concern with the productivity of the poor needs to be supplemented, for at least five reasons :(p 2)

- First, in addition to machines, land and credit, the contribution of education and health are essential to the achievement of a higher level of productivity. Most poor people have only limited access to such public services that they need if they are to break out of the vicious circle of low productivity and poverty.

- Second, many poor people have no physical assets - neither small farms nor small industries. They are the landless or urban poor. Their only assets are their own hands and their willingness to work. In such a situation, the development of human resources through education and health programmes is essential if the productivity of these people is to be increased.

- Thirdly, it is not enough to enable the poor to earn a reasonable income; they also need goods and services on which to spend it. The market does not always supply wage goods, particularly public services. Expansion and redistribution of public services becomes essential if basic needs are to be met.

- Fourthly, it may take a long time to increase the productivity of the absolute poor to a level at which they can afford at least minimum satisfaction of their basic needs. In the meantime, some income-groups - particularly the poorest 10 percent to 20 percent - may need short-term subsidy programmes.

- Finally, it is necessary to prevent expropriation of commodities produced by the poor.

'What Now - Another Development' (1975) addresses itself to wide-ranging issues in national and international development. The report argues the satisfying basic needs of the poor, identified to include food, habitat, health and education, should be at the core of the development process. The report spells out in broad terms the kinds of changes called for in policies relating to the four needs identified above. The report stresses "endogenous and self-reliant growth" as a key element in "another development". The report then goes on to argue that "another development requires structural transformations". To quote the report:

"At the socio-economic level the reform implies ownership or control by the producers - through various institutional forms - of the means of production ie. the land, water, mines, infrastructure and factories which supply the necessary goods for production and consumption. Commercial and financial structures must equally be changed in such a manner as to prevent the appropriation of the economic surplus by a minority. At the political level, the reform of structures means the democratisation of power. It may be necessary first to guarantee concretely the exercise of fundamental rights, in particular the right to express oneself, and the abolition of repression and torture. This is only possible through a thoroughgoing decentralisation, aiming at allowing all those concerned, at every level of society, to exercise all the power of which they are capable."

ILO, 1976, defines basic needs to include the following several elements :

"First, they include certain minimum requirements of a family for private consumption : adequate food, shelter and clothing are obviously included, as would be certain household equipment and furniture.

Second, they include essential services provided by and for the community at large, such as safe drinking water, sanitation, public transport, and health and educational facilities.

A basic-needs oriented policy implies the participation of the people in making the decisions which effect them. Participation interacts with the two main elements of a basic-needs

strategy. For example, education and good health will facilitate participation, and participation in turn will strengthen the claim of the material basic needs. The satisfaction of an absolute level of basic needs as so defined should be placed within a broader framework - namely, the fulfilment of basic human rights, which are not only ends in themselves but also contribute to the attainment of other goals.

In all countries employment enters into a basic-needs strategy both as a means and as an end. Employment yields an output. It provides an income to the employed. And it gives a person the recognition of being engaged in something which is worth his while."

Dharam Ghai, in his critical analysis of a Basic Needs approach, (p 14, 1977, ILO) has put forward some common features of the various writings on this subject. He writes :

"There is general agreement that the meeting of basic needs of the poor should become the core of development planning and policy. Secondly, basic needs are not confined to only material needs but embrace other dimensions such as fundamental human rights and freedoms, participation, self-reliance, etc. Thirdly, basic needs are not presented in a static manner to be frozen once and for all at fixed levels but as evolving over time in line with the growth of the economy and the aspirations of the people. Fourthly, there is a general consensus that the core material needs should consist of food, education, health and housing and sanitation. Fifthly, there is no single royal road to achieving basic needs objectives. The emphasis

is rather on diversity and forging of new processes and institutions in accordance with differing cultural traditions and other circumstances of individual countries and regions. Sixthly, all documents stress in varying degrees the need for "structural transformation", with emphasis especially on redistribution of assets and incomes. Lastly, they all recognise distribution of political power as the central factor in determining the prospects for the initiation and implementation of basic needs strategies."

Another criticism of the basic needs approach is that it can be seen as a device to help the rich to continue to exploit the poor by expropriating the product of the poor beyond the basic needs margin. This is an argument often used in Bangladesh by the radical thinkers who believe that the basic needs strategy is only a mechanism for delaying the revolution of the poor against the rich. In other words, by satisfying the basic needs of the poor, the system is pacifying them. This type of argument, however, does not take full consideration of the extent of mass starvation and deprivation and my view is that such urgent problems cannot be overlooked merely in the hope of a future revolution that will emerge from further deprivation.

The next question to ask is, why stress catastrophic occurrences in the context of basic needs fulfilment ? I will now attempt to answer this question for Bangladesh, by pin-pointing catastrophies and their importance in the lives of the poor, as perceived by them and by other notable writers. For this purpose, I will refer to the following set of writings :

My personal interviews;

BRAC material, including interviews conducted by their staff;

A K Sen, 1981, 'Poverty and Famines', opt cit.;

Mohiuddin Alamgir, 1978, 'Bangladesh: A Case of Below Poverty Level Equilibrium Trap', opt.cit.;

Osmani, 1982, 'Economic Inequality and Group Welfare', opt cit.

The first point to mention, however, before I begin, is that I am suggesting that the above mentioned conventional approaches to basic needs fulfilment do not adequately fulfil the requirements for such an approach in a situation like that of Bangladesh.

Bangladesh is unique in many ways, especially due to the high incidence of national level catastrophies there. In the incidence of catastrophic occurrences at the village / household level it is perhaps not so unique. It is nevertheless felt that some catastrophic occurrences take place in all poor societies, though their nature and extent of impact may differ. It is in this context that it is felt that current approaches to basic needs fulfilment are incomplete as they do not adequately deal with aspects of safeguarding against catastrophe events.

G. Some enlightening remarks :

BRAC, 1979, 'Peasant Perceptions : Famine' (Introduction) :-

"Famine is a phenomenon that is never too far away from the consciousness of the vast majority of the population of Bangladesh - the rural based population that often has no resources at its disposal other than the labour it can sell. For these people, the condition of famine is one that lurks menacingly in the background at all times and, every few years, comes sweeping across, leaving a trail of destruction and dislocation in its wake. Precarious survival strategies are mapped out in the quiet intervals, meager resources are garnered, dependency relationships are set up, some sort of community web is created to ensure the flow of basic needs. Then famine strikes again carrying its way through all savings and potentialities that have so painstakingly been built up. This condition is a stark reality faced repeatedly by the landless and near-landless peasants of Bangladesh - perhaps half of the entire population. Very few have the sort of land-holdings

or income to survive these conditions relatively unscathed. Most are simply mauled and tossed asunder by the whims of fortune and weather."

Etienne (1977) describes the 1974 floods thus (as cited in Sen p 131):

"The floods of 1974 caused severe damage to the Northern districts.

In normal years, the Brahmaputra encroaches on its western bank

by 30-60 m. during peak floods. In 1974, over a distance of

100 km., it flooded land on a strip 300 m. wide in areas having a

density of 800 per sq.km. 24,000 people suffered heavy losses.

Moreover, alluvial deposits, while fertile land in some places,

have such a high sand content in others that they are sterile ...

Severe floods occurred at the end of June, taking away part of the

aus (rice crop harvested in July-August). A fortnight later the

Brahmaputra again crossed the danger level just at the time of aus

harvesting. After another fortnight the level of river rose again

and seedlings of aman (rice crop transplanted in July-September

and harvested in November-January) in their nurseries were in

danger. Then, by the middle of August, floods reached their

maximum for the year, affecting recently transplanted aman. It

was not the end. At the beginning of September the Brahmaputra

again crossed the danger line, hitting once more what was left of

paddy which had been transplanted after the previous floods."

Sen comments (p131-4) : "First the floods ; then the famine.

So runs the capsule story of Bangladesh famine of 1974 ... Reports

of starvation could be heard immediately following the flood, and

grew in severity. The government of Bangladesh officially declared

famine in late September ... At one stage nearly six thousand 'langarkhanas' were providing cooked food relief to 4.35 million people - more than 6 per cent of the total population of the country ... Mortality estimates vary widely. The official figure of death due to the famine is 26,000 (Alamgir, 1978). Other estimates indicate much higher mortality, including the estimation that in Rangpur district alone '80 to 100 thousand persons died of starvation and malnutrition in 2-3 months'. (Haque, Mehta, Rehman, Wignaraja 1975, Alamgir 1978)

Who were the famine victims ? Sen has elaborated on this (p 141-45), and has pointed out that they were labourers (45%), followed closely by farmers (39%). Of the victims, calculated by looking at 'langarkhana' inmate households, 32% owned no land at all ; and 81% owned less than half an acre of land if they owned any land at all. This compares with 56% of rural households owning half an acre or less of land in village survey of Dhakuly (and indeed in the villages surveyed by BIDS). Sen observes, " The average chance of ending up in 'langarkhanas' for those with less than half an acre of land was 4½ times that of those owning between half an acre and one acre of land, and 165 times that of those with five acres or more."

Sen continues to point out (p 146-150) that "... the three famine districts also turn out to be precisely the three top ranked districts in terms of decline in the rice-entitlement of wages (5) (see table 9.13 on p 146 of Sen opt cit.). The entitlement ratio

(5) for explanation on the Entitlement approach see Chapter 1, or Sen, 1981, opt. cit. Chapter 5.

fell by 58% in Rangpur and Sylhet and by 70% in Mymensingh, and with that kind of decline in the entitlement to rice, labourers would be pushed firmly towards starvation and death."

Sen goes on to say (p 147) that "The decline in terms of trade of labour power vis-a-vis rice was clearly reinforced by a decline in employment opportunities in the famine year. (Rahman 1974, 1978 ; Alamgir 1978, 1980 ; among others). Here the floods played a part ... the decline in employment opportunities was immediate. The 'derived destitution' in the form of reduced demand for rural services and crafts leading to reduction of exchange entitlements of the related occupations was also immediate ... The decline in the rice-entitlement of wage was thus compounded by the fall in the employment opportunity - a vital determinant of exchange entitlement of labour power."

On the issue of rising incidence of landlessness in Bangladesh due to distress sales, Sen writes (p 150, 1981) :

"The process of sale of land by small peasants cuts down not only the peasant's normal income, but also the stability of his earnings - making him more vulnerable to exchange rate shifts. (see table 9.16 p 151) ... One sees a clear bias towards land alienation on the part of the smaller landholders. (see also, Rahman 1974, 1978 ; Khan 1977 ; Abdullah 1976 ; Hartman and Boyce 1979). The development not merely generally impoverished the group of small peasants, it also increased the ease with which members of the class could sink into starvation even in a year of relative plenty (1974) as a result of shifts in rice-entitlement of labour power."

Osmani, in a personal discussion in Dhaka in June 1984, suggested :
"Despite the high demand for land, the small landholders will never sell their land except as a distress sale. They value their assets very highly, especially land and jewellery, and these two items in particular are sold only as the last resort. Hence, the fact that the incidence of landlessness is rising in Bangladesh, implies that people are falling into greater distress."

Alamgir (1978, p 102) has presented another case for increasing landlessness due to what he calls the "below poverty level equilibrium trap". Drawing on that analysis, he writes :
"Truly one has to fall back on the earlier analysis of the 'Below Poverty Level Equilibrium Trap' in a historical perspective in order to understand the process of increasing landlessness in Bangladesh. It should be noted here that landlessness, giving rise to loss of staying power, makes rural households susceptible to pressure from exploitative forces in the society. Under the semi-fuedal mode of production, as explained before, there are many instruments through which the dominant groups extract surplus from the peasants and landless labourers. To the extent that these groups are tied to agriculture, their position becomes very vulnerable, more so under a generally unfavourable socio-economic and political environment ... During (the period following the liberation of Bangladesh), a drastic fall in the purchasing power, and increasing indebtedness seem to have induced marginal families to sell their land and other assets, thus accelerating the process of landlessness."

On the subject of distress sales, Alamgir writes (p 105) :

"Distress sale of assets was found to have increased during the post liberation period. It is defined here as the sale effected for consumption and / or repayment of debt. Data from BIDS survey indicate that of the total number of households, approximately 44% sold some type of assets in 1974, including 37% reporting distress sale."

A R Khan (p 158, ILO 1977), in talking about poverty and inequality in Bangladesh comments "In order to survive, most of the small farmers (perhaps up to 50 per cent of the total if 2 acres is accepted as the limit for self-sufficiency), must have been forced to borrow and to sell assets. Since most of them already were heavily indebted, distress sales of assets (including land) must have occurred very frequently."

BRAC executive director, Mr Abed, writes about the Sulla region :
 "Right after the war of liberation, 10 million refugees started trekking back home to Bangladesh from India. We followed a large party of them from Meghalaya in India to the Sulla region of Bangladesh and found village after village completely destroyed. Houses - with utensils, tools and implements left behind in terror - had been burnt to the ground, the livestock killed and eaten. We felt the great suffering of the people of this region."

Women at a BRAC-organised workshop describe their downward spiral :
 (source : Marty Chen, 1983 opt cit)

"During a drought, a flood or etc when the poor have no work, they have to go to the rich for loans which are given at a very

exorbitant rate. Afterwards, they can only repay such loans by selling their homesteads and whatever household articles they possess. If they do not repay the loans through these measures, they are forced to work as labourers in the homes of the rich throughout the year for which they do not get fair wages. In addition, they have to go to the rich for money in the event of illness, death of a family member, or during the marriage of their daughters. The rich take advantage of these opportunities to cheat the poor and make fortunes for themselves...."

Take the case of this woman, a member of a BRAC-organised group :
(source : BRAC material)

"My husband was a rickshaw puller. He fell ill. Then I sold our land for 2,500 takas to have him treated. The balance of the money was spent on family expenses. My husband died. Then, I fell into hardship. No one gave me a loan. They said : "She has not got a husband, if we give her a loan how will she repay the loan ? She should not be given any loan." Villagers were harvesting pulses. I went and worked with them. Some of them gave me cooked rice. I brought the rice home and ate it with my five children. I had 15 bricks. I sold them. I had a bamboo bush. I sold that for 30 takas. I sold the branches of trees for 40 takas. I started a small business. I went to the house of a rich man where I used to work. I bought one maund of paddy. (One maund equals 82 pounds). I told them : "Before your eyes we are dying for lack of food." They gave me one maund of paddy. With this and the other 70 takas I started a paddy-husking business ... A few days passed with great difficulty..."

Dr Yunus, director of the Grameen Bank in Bangladesh observes :

"It is often the case that a poor peasant will pool in all his resources to purchase a cow. If by misfortune this cow dies, it is indeed a grave situation for that poor peasant. It will often throw him into serious debt and will also take away a major source of his income. Sitting in the cities one might not realise, but the cow is a major asset for the poor landless farmer."

Take the case of this woman, a member of a BRAC-organised group in Manikganj : (source : personal interview and discussion) :

"Life was very hard before. Now it is a little better because of BRAC. I am not so helpless. I had a cow before, that my husband had got on sharecropping. I looked after that cow for many years. It used to give milk that we used to share. It was not much but it was something. Then suddenly the cow fell ill. I tried to get some help. People were saying "What will she do now ? She will have to pay the rich man somehow. How will she pay ?" Then the cow died. Whatever savings we had that was spent. We had some utensils that I sold. I sold everything. At last I also sold the sewing machine. I tried to get loan to pay back for the cow. But nobody would give us loan. In those days there was no BRAC, so we had to pay the price ourselves. We had to work very hard. There was also my four children, my husband and myself I had to feed. We had many bad days then. We used to eat only rice or pumpkin, when we could find some. Sometimes I didnot eat at all. The rich man was going to throw us out of the house. But we pleaded with him. We had many difficulties then. Now things are a little better. We have another cow now that the group has purchased."

H. Protection against Catastrophe :

I have defined protection against catastrophe in terms of protection, amelioration, and insurance. In other words, protection against catastrophe is the means by which one reduces the chances of occurrence of, and the impact of the catastrophies, and is able to carry on with reasonable security beyond the catastrophic event. This will include elements of :

1. Life insurance
2. Money insurance
3. Group insurance
4. Crop insurance
5. Adequate housing / shelter
6. Adequate animal protection
7. Adequate education and training
8. Minimum employment guarantee scheme

In the context of catastrophic occurrences, I view assets and structures as 'perishables' and 'non - perishables'. Perishables are all those elements that break down or are wiped out by the occurrence of a catastrophic event, eg. productive assets including cattle and trees, houses, life, and most importantly family ties and kinship relationships. Marty Chen writes, "...poverty erodes the traditional kinship and family support systems. The first victim is the ties of the extended family and the kin. The next victim is the ties and support of the immediate family."

Non-perishables, on the other hand, are all those elements that stand firm despite the catastrophic event, provided there is life and health

to utilize them ; and moreover, are elements and structures that will act as props and means by which one will be carried over beyond the catastrophic event to a position of regained security. These include assets like land, savings, credit, skills and training, health, and above all the security of a 'group' that will work in one's interest. Organisation of the poor into 'groups' is seen as the basis for fulfilling the above mentioned eight elements of protection against catastrophe. In this way, the 'group' will be the source of security, resources, employment, services and power - key instruments of change and progress for the poor. To come back to the earlier mentioned eight elements, this is what they should perhaps contain in order to fulfil this objective :

1. Life insurance : good health and nutrition
 availability of health services
 protection against common water-borne diseases
2. Money insurance : monetary resources for the destitute
 availability of credit
 group savings fund
3. Group insurance : security - financial & emotional
 ability to protect people's assets, including
 land, jewellery, and other productive assets
 ability to exert power and influence
4. Crop insurance : a guarantee scheme, backed by the govern-
 ment, to make up for loss or damage due to
 catastrophies
5. Adequate housing/
 shelter : good construction of homes
 high location of houses
 provision of tin roofs for houses
 protection of trees and vegetables

6. Adequate animal : provision of veterinary services
protection
provision of good feed
provision of animal houses
7. Adequate education: development of organisational skills
and training
development of vocational skills
health education, including family planning
literacy
nurturing self-confidence and self-reliance
8. Minimum employment: guaranteed wages, preferably in kind
guarantee scheme
income-earning opportunities
construction of community assets eg, road,
flood protection embankment, etc.

It is felt that these provisions will act as 'non-perishables' and will thus help in protecting against catastrophies in a rural situation like that of Dhakuly village in Bangladesh, In this capacity, they should be part and parcel of any basic needs programme that aims to combat poverty and destitution to put people on the path of recovery and self-reliance.

I. What has been the role of BRAC in guarding against catastrophic occurrences :

One is inclined to ask the above question out of curiosity, but mostly out of a desire to view a 'successful' organisation like BRAC in the light of this new approach to basic needs fulfilment. Briefly, then, to review BRAC's progress against these eight main objectives :

- | | | |
|----------------------|---|--------------|
| 1. Life insurance | : good health and nutrition | - effort |
| | availability of health services | - effort |
| | protection against water-borne diseases | - effort |
| 2. Money insurance | : monetary resources for destitute | - not really |
| | availability of credit | - yes |
| | group savings fund | - yes |
| 3. Group insurance | : security | - yes |
| | ability to protect assets | - not really |
| | ability to exert power & influence | - effort |
| 4. Crop insurance | : - | - no |
| 5. Housing/shelter | : good construction of homes | - no |
| | high location of homes | - effort |
| | provision of tin roofs | - no |
| | protection of trees & vegetables | - effort |
| 6. Animal protection | : provision of veterinary services | - effort |
| | provision of good feed | - no |
| | provision of animal houses | - effort |

7. Education & training : organisational skills - effort
- vocational skills - effort
- health education - effort
- literacy - effort
- self-confidence - yes
- self-reliance - effort
8. Employment guarantee : guaranteed wages - yes
- scheme
- income-earning opportunities - yes
- construction of community asset - sometimes
- (in spite of these provisions, Brac is
- not catering for minimum employment
- guarantee)

In summary, then, and in conclusion, I have attempted to show in this chapter that in the situation of Bangladesh, poverty analysis should be integrated with catastrophic analysis, in order to appreciate fully the real life problems. The same statement can be made about the direction of future methodological research. Current theories in the field of poverty and rural development would become more realistic if they are integrated with the Catastrophe theory. So far, the two have been developed separately ; development theories have ignored catastrophe, while Catastrophe Theory has not been adapted for application to rural development. An integration of the two should bring about greater realism in the formulation of the most effective strategy for rural development in the face of poverty and catastrophe.

CHAPTER VII

A NEW APPROACH TO MEASUREMENT :
THE ECONOMIC VIABILITY APPROACH

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One hopes that in the previous chapter, one thing in particular has been established : that is, in the context of Bangladesh, any programme that aims at the fulfilment of basic needs cannot be considered 'sufficient' unless it takes account also of the nature of and the effects of 'catastrophic events', both at the national and at the village/household level. This understanding was one of the reasons why a need was felt for a 'new' approach which might help integrate the catastrophe-related measures with those currently in use, or in other words, it was felt that existing methodologies for measurement (as discussed in Chapter 3) were inadequate in terms of either measuring women's work, or providing a measure for the household's ability (of which, no doubt, women's work is a major contribution) to safeguard against catastrophe, or both.

Another reason for the need for a new approach to measurement arises out of a dis-satisfaction with income as a comprehensive measure of economic viability. It is felt strongly that economic viability of a household is a function of a combination of factors, only one of which is income. No doubt, income is regarded as a major determinant/correlate in calculations of viability, and is itself a function of more than one factor, but, nevertheless, income data in its usual form is seldom comprehensive enough to take account of all the factors that determine such viability. I would like to discuss these slippery issues in brief before elaborating on the 'new' approach to measurement which I have proposed.

I. Why not Income ?

Let us tackle the issue of income first. Elsewhere in this thesis I have stressed strongly the need for an 'income-oriented' approach to combating poverty and fulfilling basic needs for the rural poor, especially when we are trying to increase and make more efficient women's contribution towards achieving this primary objective. In particular, the need for income-generating activities has been stressed, the argument being that unless the 'income' of the rural poor can be increased, they will not get closer to overcoming their desperate poverty, inspite of efforts that may be made in the direction of education or health, etc.

I am now suggesting something quite different, and that is that the 'income approach' alone cannot provide a satisfactory measure of women's contribution to combating poverty, fulfilling basic needs, and safeguarding against catastrophe. This is not to say that income is not important - which indeed it is - but it is to say that just by measuring a household's income one cannot determine adequately the four things mentioned above, ie women's contribution to combating poverty, fulfilling basic needs, and safeguarding against catastrophe. Following are some of the reasons why not :-

a) Income and women's contribution :-

Three obvious reasons spring to mind here : Firstly, women's contribution to household income includes income-in-kind which is difficult to measure. Income-in-kind includes payments made in the form of meals, exchange of goods or labour, etc.

Secondly, it is difficult to obtain measures of home production in the form of income ; and this point is related to the previous one. Elusive income obtained from home production can include home grown fruits and vegetables, milk, eggs ; child care ; maintenance of the home including washing, cleaning and repairs; etc. And thirdly, the nature of most aspects of rural life is seasonal. Seasonality of activities like agriculture, wage labour, horticulture, animal husbandary, poultry farming, etc. affect household income - especially when trying to establish women's contribution to it. All of these three reasons make it necessary to collect other information than just 'income' as such when conducting a village survey. For example, one needs to ask about kind of occupation ; ownership of productive assets eg. trees, cows, other animals, chicken; type of house ; family size ; ages of members of family ; level of literacy/education ; type of training/skill ; possibility of credit availability ; etc. All these factors influence the women's contribution to the economic viability of their households, and only some of these lead to 'income' as such.

b) Income and poverty :-

Income-based measures have always been used when establishing the extent of poverty - cf. poverty line. Nevertheless, they have always, also, suffered from the problem of reliability. By reliability, one means two things : Firstly, one cannot be sure that the income people tell you they earn through direct inquiry for example, is accurate, or if it is calculated through correlates it can also be accurate . And secondly, fluctuations, both seasonal and over time make income calculations unreliable.

It is for this reason that it was felt that a measure of poverty could perhaps be made more reliable if the emphasis was not on income but on earning capability, ie the potential for income. Such a measure for earning capability would include information on assets including productive assets, household composition by age and sex, types of skill/training/literacy/schooling of members of household, access to credit, access to other services including health, water, transport, etc. It is proposed that a measure that took account of all these factors would not only provide a more reliable indication of poverty of the given household, but would also give an indication of the household's achievement in fulfilling its basic needs and safeguarding against catastrophic occurrences.

c) Income and basic needs :-

The tenuous link between income and basic needs is fairly straightforward, and that is that any indication of basic needs fulfilment for any given household or community has to be gauged through more than just income. 'Basic needs fulfilment' indicators include both tangible aspects of housing, social services and amenities, education, etc, and more elusive aspects of health, social awareness, attitudes, decision-making, etc. Any measure of basic needs fulfilment that relies only on income as a measure has to be questioned and regarded as inadequate.

d) Income and catastrophe :-

Income as a measure of ability to safeguard against catastrophe is inadequate when referring to the rural poor. Not only is the income of rural poor irregular and dependant on factors

often beyond their control eg seasons, patrons, location, etc, but their ability to withstand and safeguard against catastrophic occurrences is dependant upon more than just income. These factors include non-perishable assets eg land, other productive assets eg animals, equipment etc, ability to obtain credit/loan, etc. 'Credit - worthiness' is perhaps largely linked with ownership of assets including productive assets and group/membership security, and the role of income becomes secondary here. It is not income earned as such but the ability to command income, among other things, that can help determine more adequately a household's potential for withstanding and safeguarding against catastrophe.

II. Why Catastrophe ?

What is the need for an approach to measurement that can gauge an individual/household's ability to withstand and safeguard against catastrophe ? An attempt has already been made in the previous chapter to answer such a question. The basic argument is that most poor societies, and especially poor rural Bangladesh is prone to catastrophic occurrences both at the national and at the village/household level. Such catastrophic occurrences can greatly undermine any progress that village/households may have made towards combating poverty and fulfilling its basic needs, thereby rendering the whole idea of 'development' meaningless in that context. It is for this reason that a view is proposed whereby 'development' programmes are urged to incorporate not only a significant element of awareness of catastrophe, but also certain steps towards 'protection' from

catastrophic events. In the light of such a proposal, it becomes essential that a measurement device be developed which can gauge a household's potential for not only combating poverty, but also its ability to survive through catastrophe.

III. Need for a New and Better Measure :-

It is for all these several reasons mentioned above that a need was felt for a new and better measure than 'income' to provide more satisfactory indicators of four basic things :-

1. Women's contribution to the economic viability of the household
2. Poverty level of the households
3. The household's progress towards fulfilling basic needs
4. The household's ability to 'protect' against catastrophe

Such a new and better measure will be a combination of two main indicators , namely

1. Productive assets, and
2. Earning capability

Productive assets are clear enough. But perhaps 'earning capability' requires clarification. In the new approach, earning capability is determined through four main components, namely, age of individual, their type of occupation/sector/status, their level of training/membership, and their education/literacy. For women, the composite value is adjusted for child-care. The idea is that the capability for earning of any individual is determined through all these factors at various degrees. For example, in rural societies, all individuals aged 10 and

above are 'working' members ; however individuals between ages of 10 and 19 and 60 and above, or women with children of ages below five, can be seen as working not for long and strenuous hours and perhaps also not at the same kind of work as those of 'prime age' ie 20-59, unless of course they are disabled in any way; Different types of occupations, having varied status and belonging to different sectors command different types of wages/salaries ; the type and period of training received, as well as membership and periods of membership of an organisation like BRAC can further influence the potential not only for earning but also for ability to obtain credit ; and the links between level of literacy/education and income are well known. In the new approach to measurement which is proposed later in this chapter, an attempt has been made to incorporate all these factors into the final measure for each household.

Health of individuals is also an important determinant of earning capability. However, I have been unable to include it into my measurement device. This was mainly due to the problem of data collection whereby an accurate judgement could have been made regarding the health of each individual. Such an exercise would not only have been time consuming but also perhaps unreliable without the help of a doctor and without being able to gather information over time.

IV. The Economic Viability Approach to Measurement :-

Having established the need for a new approach to measurement, I can now move on to developing such an approach. Three things need further emphasis here :-

1. The new approach will measure the household's potential as a whole
2. It will examine the women's contribution to that potential, and
3. The potential is the measure of the household's ability to combat poverty, to fulfill its basic needs, and to 'protect' itself from catastrophe.

I have called the new approach 'Economic Viability Approach'. By economic viability I mean the ability of the household for survival and development in spite of deprivation, exploitation, and disaster, and its potential for sustaining such a survival beyond the help of organisations like ERAC.

a) Determinants of Economic Viability :-

The importance of productive assets and of the female and male earners has already been stressed in determining the economic strength of households. Some additional factors also need to be taken into account, for example, it is recognised that a household headed by a widow usually faces difficulty in obtaining credit. Household characteristics are thus relevant in determining the economic situation. Similarly, the degree of access to services like drinking water, health care, schools and training centres, marketing facilities, etc is also an important consideration.

Finally, the size of a household deserves special mention. This arises, for example, from the need for standardisation of all other factors by looking at 'per capita' values rather than 'per household' values. Per capita income and per capita consumption are better measures of family welfare than total household income and total household consumption. This can be supported by 'Social Policy and Distribution of Income in the Nation', United Nations, New York 1969 (p 19), which says that if there are two households having same income level but with different household sizes, then the household with lower per capita income is worse off than the household with higher per capita income.

From the above it does not follow that, in general, households of smaller size are better off than those of bigger one, because the size is only one of the factors influencing economic strength. In fact, in rural Bangladesh, richer households are generally bigger in size because they retain the tradition of extended family. My argument only is that, other things being equal, the size by itself has a negative effect on the economic viability. This is the basis of the family planning programme which is trying to encourage poor households to increase their welfare by controlling their size.

Therefore, in considerations of poverty and its alleviation, comparisons between per capita values becomes crucial. Even though it requires additional time and effort, it is considered worthwhile for accurate perception and understanding. With each determinant a scoring device will need to be developed.

In the light of the above, the determinants of economic viability can be listed as follows :-

- I. Ownership of productive assets
- II. Number of male earners and their earning capabilities
- III. Number of female earners and their earning capabilities
- IV. Household characteristics, access to services, and other relevant factors
- V. Household size

b) Components of the PACE-Score :-

A short name for the final score for each household has been given, namely the PACE-Score (ie. Productive Assets and Capability of Earning Score). Its components are as listed below :-

I. Ownership of productive assets :

- 1. Value of owned arable land (Taka)
- 2. Value of owned homestead (Taka)
- 3. Value of owned other assets (Taka)

II. Number of male earners and their earning capabilities :

- 4. Number of male earners by age
- 5. Male earners by Literacy, schooling, training and access to credit
- 6. Male earners by Occupation, Sector and Status

III. Number of female earners and their earning capabilities :

- 7. Number of female earners by age and child-care responsibilities
- 8. Female earners by Literacy, Schooling, Training and Access to Credit
- 9. Female earners by Occupation, Sector and Status

IV. Household characteristics, access to services, and other relevant factors :

- 10. Combination of variables to be discussed later

Besides these 10 components, it is not necessary to mention household size as such since its effect is incorporated by taking per capita values for each component.

c) General method for calculating the PACE-Score :-

Before giving a step-wise description of the method for calculating the PACE-Score, there is one important point to be mentioned for the benefit of the reader. The PACE-Score is essentially a device for reducing the scale of the observed values of the different components and at the same time maintaining the rank of each household in the original observation. This became necessary because the observed values for different households varied over wide ranges which differed from component to component, and it was not possible to pool such observations together in any meaningful way without reducing the range to one that was both manageable and similar to each other in order to be able to compare them with one another. For example, expressed even more simply, this means that the distribution of land, say, ranged from 0 to 2900 decimals, while that for female earners by age ranged from 0 to 6 persons ranging from the ages of 10 to 70. It was felt that one way of combining these various types of observations in order to assess the socio-economic composition of the household was to reduce all these ranges to 0 to 10 each. Once all the components were thus reduced to a similar scale, they could then be added up to give a figure ranging from 0 to 100 which could then be compared to similar figures

for each other household of the village. Very crudely speaking, the higher the total value between 0 and 100, the better off the household.

The reader will observe below that a multiplier was used to facilitate reducing the observations to the range of 0 to 10. The multiplier is derived from a ratio which would reduce the observed value of the average household to approximately the average of the range 0 to 10. This average value will not necessarily be 5 because of the non-symmetrical nature of the distribution of the original values as well as of the reduced values. Since the idea is to maintain the same ranking of the households for each component, the households are arranged in ascending order of per capita values. From such an arrangement, it becomes easy to see at a glance what percentage of the households are below the average for each component. A knowledge of this percentage is important because in the reduced scale also an equal percentage of households should be below the average. In fact the average of the original values is to be transformed to the average of the reduced values. This type of transformation is achieved by multiplying the per capita observed value for each component for each household by a multiplier which transforms the original per capita value to one that falls between 0 and 10. Because the original per capita value is transformed to the range of 0 to 10, and because the percentage of households below the average per capita value is placed in the numerator, therefore the average per capita value for

all households multiplied by 10 is placed in the denominator. This division will then give us the multiplier for each component. If 10 is not placed in the denominator, then the range of the reduced values will be 0 to 100.

A short step-wise description for the method for calculating the PACE-Score is given here, and further details on component-wise description for such calculation follows later.

Step-wise description :

1. Listing of components.
2. For each component, value at household level is calculated. Wherever the value is dependent on variables eg age, occupation, etc, a weighted value has been given (described later under each component).
3. Converting this value into per capita terms.
4. Arranging it in ascending order of per capita values to facilitate the next step ie. counting of households below the average value.
5. Calculating average of per capita values for all households for that component, ie

$$\frac{\text{Sum of all per capita values}}{\text{Total number of households}}$$

6. Calculating the multiplier for that component (detailed illustration given in Appendix 3). Briefly,

$$\frac{\text{Number of households below average}}{\text{Total number of households}} \times 100 = \begin{matrix} \% \text{ of house-} \\ \text{holds below} \\ \text{average} \end{matrix}$$

$$\frac{\% \text{ of households below average}}{\text{Average per capita value} \times 10} = \text{multiplier}$$

(10 was used in the denominator so that average score is below 10 ; because there are 10 components, and the total of

the 10 is 100. Reasons for the multiplier are given later.) It is clear from this that the multiplier will be different for each component.

7. Multiply each per capita value with the multiplier.
8. This gives the per capita score of the component for each household.
9. Take the sum of the components,
10. This gives the total score for each household for all the components.
11. Three of the components are female scores.
12. $\frac{\text{Sum of these three components}}{\text{Total score}} \times 100$ gives the estimate of female capability of contribution to economic viability of the household in percentage terms.

Assumptions underlying the Economic Viability Approach :

- Economic viability depends on a combination of factors.
- Policy decisions to increase economic viability of women alone without looking at the contribution of other factors should be made with caution.

d) Use of Multiplier and the Spillover effect :

There are three main reasons :

1. The multiplier reduces large values to the scale of 0-10, which fits into the general scheme of 10 components, having a maximum score of 10 each, adding up to 100. This adds to the simplicity and hence the appeal for such a measurement device.

2. As all values are reduced to a similar scale of 0-10, one can easily compare the relative influence of each component on the total score.
3. Because the values have been limited to a maximum value of 10, this automatically eliminates values that go beyond 10. The values that go beyond 10 belong to the few richest households, in calculation of their assets. The main interest of the PACE-Score is to provide a comparative measure of economic viability for the poorer households, and the role of women in it. Hence, the values belonging to the few richest households are largely irrelevant beyond a certain point. Nevertheless, they have been included in what has been called the 'spillover effect', ie values that go beyond 10 have been retained - this is primarily because when plotting a graph, the higher values are important for graphic details of general trends.

Details on calculation of the multiplier are given in Appendix 3; the questionnaire is given in Appendix 5.

e) A comment on the weights used :

The reader will notice that many weights have been assigned to various factors eg. age, schooling, training, access to credit, etc. for the calculation of the PACE-Score. These weights have been derived in a somewhat crude and arbitrary manner, though based on general observations of the market forces and the NGO preference. Earlier through the thesis, income as the primary indicator of household welfare has been criticised for its limitations in the following ways :

- i) not only is it unreliable, but seasonality makes it particularly so ;
- ii) it is difficult to use when assessing the contribution of women whose so-called income is often 'invisible' ;
- iii) it does not adequately assess the potential of a household to withstand and overcome catastrophe, where knowledge of a range of basic needs including shelter, training, assets, etc is needed.

Notwithstanding such limitations, incomes of various occupations still represent the market forces in a way that other indicators do not. Furthermore, since the market forces ultimately determine social welfare, one cannot afford to ignore them. The suggestion put forward in the thesis is not thus one for total rejection of income but one of making other observations alongside income due to its limitations.

If the weights were to be totally reflective of the actual situation then it would have been necessary to make detailed surveys on various occupations and factors like age, sex, credit, etc. and then to cross-check such observations

with the findings of other research analysts. It is sure that the general trend would still emerge the same, ie lower income for illiterate and low-skilled workers whereas higher for higher-educated persons, lower wages for sub-adult and those approaching retirement than for those in their prime working years, etc. To derive the exact weights however for such differences would certainly be preferable though difficult for a single researcher. Such an exercise would have been even more difficult in the present context which uses as many as ten components. The market forces usually reflect a composite measure of relative weights and can rarely put separate weightage to different aspects of an individual or household ie his/her age, schooling, training, occupation, housing, assets, etc. Since the PACE-Score does attempt to divide the characteristics of the household into ten components, it is faced with the task of assigning separate weights reflecting the market forces for each of the components. For this reason, the weights could not be taken strictly from the market except in a general sense depicting the overall trend. This may seem unsatisfactory as a standardised method, but the intention is more illustrative and conceptual rather than definitive.

One method of attempting to standardise the weights would be to do a sensitivity analysis using various sets of weights to observe the difference such changes would make. Such a calculation would however require a computer and special expertise which was beyond the scope of this thesis. Having not done such an elaborate analysis, I have however exposed the PACE-Score to further critical examining by someone attempting to standardise it for wider application.

V. Component-wise description of the PACE-Score :-

This description is not in the strict numerical order : this is to facilitate the presentation of the male and female components together. Order of presentation :-

Components 1 - 3

Components 4 & 7

Components 5 & 8

Components 6 & 9

Component 10

Component 1 : Land :-

a) General details of land distribution in Dhakuly (for details see Table 8.9 in Chapter 8) :

- Amount of total land - 222 acres
- Amount of total arable land - 222 acres
- Irrigated or adequate rainfall - 222 acres
- Unirrigated - none
- Total number of households - 155
- 42.6% of households own no land (ie 66 households out of 155)
- 2.6% of households own 35% of total land (ie 4 households out of 155)

Gini ratio of land by size of land owned by each household = 0.76

Gini ratio of land by per capita value of land = 0.72

(See Table 8.10 in Chapter 8.)

Given this situation of land distribution in Dhakuly village, the following scoring device was used :-

b) Scoring device for Land :-

Value of land per capita was used for scoring purposes for each household, and the multiplier was calculated as shown in Appendix 3.

Calculations for the final PACE-Score for land are also shown in Appendix 3.

Final PACE-Score for land = Per capita value of land x the multiplier
per household

Component 2 : Homestead :-

a) General details :-

General details of homestead distribution in Dhakuly are given in Chapter 8 (Tables 8.11 and 8.12). In brief :

- Total number of homesteads - 128
- Families without homesteads - 27

Gini ratio of homesteads by size of homestead per household - 0.44

Gini ratio of homesteads per capita = 0.40

b) Scoring device for homestead :-

Value of homestead per capita was used for scoring purposes for each household and a multiplier was calculated.

Final PACE-Score for homestead = Per capita value of home- x multiplier
stead per household

Component 3 : Other Assets (other than land & homestead) :-

a) Description:-

- there is a great degree of variety in assets other than land and homestead (see list below)
- in a situation of landlessness and poor housing, the emphasis of development programmes is mainly on those other assets
- these other assets are mainly in the household sector and activities related to them are largely done by women and children for home production.

List of other productive assets (other than land & homestead) :-

- | | |
|--------------------|--------------------------|
| 1. Cow/buffalo | 2. Calf |
| 3. Goat/sheep | 4. Chicken/duck |
| 5. Plough | 6. Spade |
| 7. Grass scissors | 8. Dheki |
| 9. Jackfruit tree | 10. Bamboo tree |
| 11. Mango tree | 12. Papaya tree |
| 13. Banana tree | 14. Date-palm tree |
| 15. Coconut tree | 16. Beetlenut tree |
| 17. Lemon tree | 18. Guava tree |
| 19. Spinning wheel | 20. Embroidery equipment |
| 21. Tea shop | 22. Rickshaw |

Gini ratio for other assets by value per household = 0.45

(See Table 8.13 in Chapter 8)

Gini ratio for other assets by per capita value = 0.38

(See Table 8.14 in Chapter 8)

b) Scoring device :-

Value of other assets per capita was used for scoring purposes for each household and a multiplier was calculated.

Final PACE-Score for other assets = $\frac{\text{Per capita value of other assets per household} \times \text{multiplier}}{\text{household}}$

Component 4 : Male Earners (by age) :-

a) Description :-

These include practically all the males aged 10 years and over except those who are very old and invalid.

Total number of males = 440

Number of male earners = 271

(See Table 8.3 in Chapter 8)

However, the prime age for male economic activity is taken to be 20 - 50 years. Therefore those males belonging to this age bracket have been assigned a weight of 2 as compared to other male earners who have been assigned a weight of 1.

b) Scoring device :-

Weighted sum of male earners in each household is divided by the household size to obtain per capita values.

The rest of the calculation is as explained in general methods.

The final PACE-Score - Per capita value of each x multiplier
household

Component 7 : Female Earners (by age and child-care responsibilities):-

a) Description :-

These include practically all the females aged 10 years and over, except those who are very old and invalid.

Total number of females - 430

Number of female earners - 237

(See Table 8.3 in Chapter 8)

Similar to males, the prime age of female economic activity is taken to be 20 - 50 years.

All females belonging to this age bracket have been assigned a weight equal to 2, as compared with other female earners (ie those below 20 or above 50), who have been assigned a weight of 1. However, a negative score has also been introduced. Any woman having child-care responsibilities is assumed to not have equal capacity to participate in economic production, and therefore a small score has been subtracted from the total value of that household, ie

In households where there is 1 child below 5 years of age, a score of 1 has been subtracted ; and

In households where there are 2 or more children below 5 years of age, a score of 1 has been subtracted.

It is observed that children aged 5 - 10 either tend to accompany their mothers to work, or they look after each other at home.

b) Scoring device :-

- the weighted sum for female earners in each household is added ;
- the minus scores are deducted from this value to adjust for child-care responsibilities of children below 5 years of age ;
- this value is divided by size of household to obtain per capita values ;
- the rest of the calculation is as explained in general methods.

The final PACE-Score = Per capita value for each x multiplier
household

Components 5 & 8 : Male and Female earners by Literacy, Schooling, Training and Credit :-

a) Description :-

This includes all male and female earners (ie those included in the two components previously - components 4 & 7) who have received some kind of Literacy, schooling, training, or have access to credit.

Literacy, schooling and training have been determined by mapping out 6 categories (shown below) and by giving different weights in rank order to each category according to the economic value

of each category, ie the ability to earn income after having acquired that particular level of literacy, schooling or training.

Weighting of Literacy, Schooling & Training

Illiterate -----	= 0
Functionally literate -----	= 1
Primary schooling & functionally literate -----	= 2
Household sector on-the-job trained*-----	= 3
Middle or lower secondary schooling / Informal sector on-the-job trained*-----	= 4
Secondary schoolin and above / Modern sector*-----	= 5

* Scores for on-the-job training for males are determined according to size of land owned which correspond to the household, informal and modern sectors (for details see components 6 & 9). Scores for on-the-job training for females are determined according to sector trained by looking at type of occupation, instead of looking at the size of land (see components 6 & 9 for details of occupations and corresponding sectors).

Higher weights are assigned to higher levels of education due to the higher rates of return associated with them. This is supported by many writers, one of whom has especially gone into the cost-benefit analysis of rural education in South Asia (cf. D P Choudhri, ILO 1979, 'Education, Innovations and Agricultural Development', Chapter 7 pp 68 - 77).

Access to credit is determined through two sources :

- a) either through years of membership with BRAC,
- b) or through size of arable land owned.

These are based on the observation that the longer the membership with an NGO like BRAC, the higher the capacity to receive credit,

and the larger the size of land, the more access to credit.

While land ownership provides adequate security for the household, those owning no land or owning land less than 1 acre are provided group security through BRAC membership (see Chapter 5).

Weights are assigned according to the following :-

Membership with BRAC

5 years or more -----	= 5
4 years -----	= 4
3 years -----	= 3
2 years -----	= 2
1 year -----	= 1

Land credit

4.01 acres and above -----	= 5
3.01 acres - 4.00 acres --	= 4
2.01 " - 3.00 " --	= 3
1.51 " - 2.00 " --	= 2
1.01 " - 1.50 " --	= 1
Less than 1 acre -----	= 0

b) Scoring device :-

- weights are assigned to each earner (males and females females separately) according to their literacy, schooling or training ;
- weights are assigned to each earner (males and females separately) who is also a member of BRAC which determines their 'credit-worthiness';
- weights are also assigned collectively to the household according to the size of land owned, which further determines 'credit-worthiness' ;

- all these values are then added up for each household and divided by the household size to obtain per capita values;
- the rest of the calculation is as explained in general methods.

The final PACE-Score = Per capita value for each x multiplier household

Components 6 & 9 : Male and female earners by Occupation, Sector and Status :-

a) Description :-

This relates to all male and female earners (included previously by age) according to their different occupations, their sectors and their status as described below :-

<u>Sector</u>	<u>Status</u>	<u>Occupation</u>
I. Modern sector	1. Employer	Large farm (4 acres & more)
	2. Salaried employees	Teacher
		Village police
		Survey worker
		Water pump operator/ mechanic
		other salaried employment
II. Informal sector	3. Regular wage employee	Day labour
		Coolie
		Rickshaw puller
		Maid/cook
	4. Seasonal wage employee	Food for work Boatman

cont..

<u>Sector</u>	<u>Status</u>	<u>Occupation</u>
II. Informal sector (cont.)	5. Own-account worker (full- time)	Medium farm (1-4 acres) Trade (chira, muri making/ selling) Shop (tea) Carpenter/Blacksmith/Barber/ Shoemaker/Potter/Mason
	6. Own-account worker (part- time)	Health worker/dai Veterinary worker Traditional village doctor Sericulture/Spinning/Block- printing/Tailoring/Knitting/ Embroidery/Weaving
III. Household Sector	7. Regular unpaid family worker	Small farm/agriculture labour (1 acre or less) Vegetable growing/horticulture Fruit/trees Plant/nursery Fishing Pasture boy Milk selling Cow-dung cake making Poultry/egg Goat/sheep rearing Cow/buffalo rearing Jute/cane/bamboo work Grass basket/mat/fan making Net making/other handicraft Repair of homestead
	8. Seasonal unpaid family worker	Paddy husking Bee keeping

The following points need emphasising here :-

1. Three sectors have been defined as opposed to the two most commonly used. Ususally, only the modern and the informal sectors are considered in development literature ; however, the household sector has been introduced due to its particular significance for the small farmer (ie those owning less than 1 acre of land) and for women.
2. Distinction has been made between full-time and part-time work, and between regular and seasonal work. The importance of such details have been highlighted throughout the thesis, particularly with reference to the inadequacy of income as a reliable measure (see beginning of this chapter). This is particularly relevant for assessing women's contribution.
3. The field survey revealed nearly 40 occupations which have been categorised according to sector and status. These occupations refer to both men and women.

Having ascertained which occupation, status and sector each earner belongs to, weights are assigned to each type of activity according to the following description adjusting for age as above, ie those earners belonging to prime age (20-50) were assigned the whole weight, while those belonging to below prime (10-19) or above prime (51-65) age were assigned only half the weight.

Weights assigned to sectors by status and occupation

Household sector (includes status 7&8 & occupations	= 3	} adjust for age for each earner
Combination of household and informal sectors	= 4	
Informal sector (includes status 3-6 & occupations	= 5	
Combination of informal and modern sectors	= 8	
Modern sector (includes status 1-2 & occupations)	= 10	

The difference between the weights is not equal because the capacity to earn is believed to escalate sharply between the Informal and the Modern sectors.

b) Scoring device :-

- weights are assigned to each earner (males and females separately) according to the above description as regards their type of occupation, their status and their sectors;
- the sum of these values for each earner (male and female separately) of the household is then divided by the household size to obtain per capita values ;
- for females, per capita values are further adjusted for child-care responsibilities as described under component 7 ;
- per capita values are used as explained in general methods to calculate the multiplier.

Final PACE-Score - Per capita value for each household x multiplier

Component 10 : Other determinants of Economic Viability :-

a) Description :-

All the other factors that influence economic viability of households have been listed below. The weights assigned to each determinant are discussed side by side :

1. Nearness to town/market/employment & training/project/road.
Weight is +1 for Dhakuly village on account of its proximity to such services.
2. Access to drinking water/health care,
Weight = +1 for Dhakuly as there are 11 tubewells, 8 health workers, and 1 health centre in the village.
3. Number of non-earner males of all ages attending or having attended school per capita.

This is calculated by following calculations :

weights given according to schooling -

primary schooling = 1

middle schooling = 2

secondary schooling = 3

$\frac{\text{value according to persons}}{\text{household size}} \times \text{average household size}^*$

* average household size in Dhakuly = 5.6 ; it is multiplied by average household size in order to make the value comparable to other values of the items of the same component.

4. Number of non-earner females of all ages attending or having attended school per capita ; same calculations as in 3 above.

5. Head of household :

Earner = 1 weight

Non- earner = 0 weight

6. Age of head of household.

19 and below = 0

20 - 50 years = 1 weight

51 and above = 0

7. Marital status of head of household .

Widow = 0

Widower = 0

Married = 1 weight

Unmarried = 0

8. Family nuclear = 0 ; extended = 1

9. Acceptance of family planning by currently married women aged

20 - 50 = 1 ; non-acceptance = 0

10. Remittance received = 1

Not received = 0

So far, these are all plus scores as the existence of these factors enhance or certainly influence economic viability in some way, though for some, not too much.

There is one negative score, in that, where there is an invalid dependant in the household, the value of 1 is deducted from the final score/value.

b) Scoring device :-

As the above weights have been assigned at the household level, and the two regarding non-earner males and non-earner females have already been made per capita, there is no need now to convert the sum of these values to per capita.

Having derived thus, the household-wise values, which are weighted values per capita, there is no need to calculate a multiplier as the values fall between 0 - 10.

VI. The Total PACE-Score (Productive Assets and Capability of Earning Score) :-

Having derived the final scores for each household for each component, this PACE Score is tabulated for each component for each household;

These final PACE-Scores for the 10 components are then added up to derive the Total PACE-Score for each household ;

Three of the components (number 7,8 & 9) are female scores.

Therefore, $\frac{\text{sum of these three components}}{\text{total score}} \times 100$ gives the

estimate of female capability of contribution to economic viability of the household in percentage terms.

The results and analysis based on the PACE-Score for Dhakuly village are presented in the next chapter. It should be mentioned, however, that the measurement device and the weights used reflect the situation in the village as of 1984. It goes without saying that a more complete standardisation of concepts, methods and weights can be achieved through a series of similar village studies conducted over a period of time.

CHAPTER VIII

APPLICATIONS OF THE NEW APPROACH, RESULTS OF THE
FIELD SURVEY, AND MAIN CONCLUSIONS

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I. Demographic Particulars of Dhakuly Village :

At the time of this survey in 1984 the total population of Dhakuly village was 870 of whom 440 were males and 430 were females.

a) Four Sub-groups of Households :-

Dhakuly village consists of 155 households. For comparative purposes and to ease analysis, these 155 households were divided into four sub-groups :-

1. All those households with female members as members of BRAC. Majority of these households, however, also have their Male members as members of BRAC. (Abbreviated as Female / Male BRAC).
2. All those households in which only Male members were members of BRAC (Abbreviated as Male BRAC).
3. All those households in which there were no members who were members of BRAC but the household owned land less than or equal to one acre (Abbreviated as Non BRAC \leq 1 acre).
4. All those households in which there were no members who were members of BRAC but the household owned land greater than one acre (Abbreviated as Non BRAC $>$ 1 acre, or 'richer' households).

Hence the following table (Table 8.1), using the abbreviated names of each sub-group :-

Table 8.1 : Sub-groups by number of households and the smallest and the largest plot of land owned by them

Sub-groups	Number of households in each sub-group	Land owned by households in each sub-group	
		Smallest plot (in decimals)*	Largest plot (in decimals)*
Female/ Male BRAC	40	0	110
Male BRAC	35	0	118
Non BRAC <= 1 acre	33	0	100
Non BRAC > 1 acre	47	120	2900
TOTAL	155**	0	2900

* 1 acre = 100 decimals

**Of this total number of households in Dhakuly village, 11 have female heads of household

b) Distribution of Population in each Sub-group by Sex :

Table 8.2 below shows the male and female population in each sub-group.

Table 8.2 : Sex Distribution of Population of Dhakuly Village :

Sub-groups	Number of households in each sub-group (average household size in brackets)	Population			Male/Female Ratio
		Male & Female	Male	Female	
Female/ Male BRAC	40 (5.5)	222	113	109	1.09
Male BRAC	35 (5.7)	199	101	98	1.04
Non-BRAC <= 1 acre	33 (4.6)	152	78	74	1.05
Non-BRAC > 1 acre	47 (6.3)	297	148	149	1.00
TOTAL	155 (5.6)	870	440	430	1.02

One can see the following things from the table :

1. Average household size for the village is 5.6.
2. Richer households (Non BRAC>1 acre) are relatively bigger in size.
This can be explained by the prevalence of extended family system which is more common in richer households.
3. The Male-Female ratio for the village is 1.02.

c) Age Distribution of Population :

Table 8.3 gives the age distribution of the male and female population in Dhakuly village.

Table 8.3 : Age distribution of Population

<u>Age group (in years)</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
0-4	71	76	147
5-9	70	64	134
10-14	57	57	114
15-19	41	32	73
20-29	54	77	131
30-39	56	46	102
40-49	39	31	70
50-59	23	22	45
60 & over	29	25	54
TOTAL	440	430	870

The above table (Table 8.3) shows the following :-

1. 32.3 % of the population is below 10 years of age. For females this percentage is 32.6 % (This was called the residual in Table 3.1).
2. 6.2 % of the population is 60 years and over.
3. 48.4 % of the population is of 'prime' working age, ie years 20 - 59.
4. If one includes all of the population between 10 - 59 years of age, then 65 % of the population can be seen to be 'economically active', and with the inclusion of those 60 and over, we get the figure of 67.7 % of 'economically active' persons out of the entire population of the village. 67.4 % of the 'economically active population is women (including all women aged 10 - 60 & over).

II. PACE-Score as the Main Source of Survey Results :-

As explained in the previous chapter, I have substituted the income of households by the PACE-Score as a better measure. Not only was income data unreliable, along with other drawbacks (as discussed in the previous chapter), but the PACE-Score was considered a better and more adequate measure of all of the following :-

1. Women's contribution to economic viability of households
2. Prevalence of poverty in households
3. The household's progress towards fulfilling its basic needs
4. The household's ability to 'protect' itself from catastrophic occurrences.

The PACE-Score was perceived to be a better measure than income because it was a measure of the household's potential for income, measured through ten sets of variables. These ten sets of variables together measure the productive assets and the capability of earning of each household, hence the PACE-Score. These ten variables include :-

- | | | |
|---|---|--|
| 1. Ownership of land | } | ownership of productive assets
(abbreviated to 'asset score') |
| 2. Ownership of homestead | | |
| 3. Ownership of other productive assets | | |
| 4. Number of male earners by age | } | number of male earners and their earning capabilities
(abbreviated to 'male score') |
| 5. Male earners by literacy, schooling, training and access to credit | | |
| 6. Male earners by occupation, sector, and status | | |
| 7. Number of female earners by age and child-care responsibilities | } | number of female earners and their earning capabilities
(abbreviated to 'female score') |
| 8. Female earners by literacy, schooling, training and access to credit | | |
| 9. Female earners by occupation, sector, and status | | |

10. Other household characteristics including a set of variables discussed in the previous chapter (abbreviated name 'score for other variables').

In the rest of this chapter, I have presented the main tables and argument relating to the PACE-Score and the concept of the 'security line' which is developed later. It will become apparent from the following applications of the PACE-Score that it is a more powerful tool of analysis than income.

III. PACE-Score and its components in the sub-groups :-

The next table (Table 8.4) summarizes the distribution of PACE-Score in Dhakuly village by components and sub-groups of households. (The discussion on the derivation of the PACE-Score has already been given in the previous chapter).

Before discussing the results presented in this table (Table 8.), a few observations of the sub-group Female/Male BRAC need to be recalled.

All households of this sub-group belong to the 'target-group' as defined by BRAC (see Chapter 5) ; belonging to the target-group means that these families were/are landless or near-landless, and generally belong to the weakest section of the village. It is due to their weak position that the women of these families have crossed cultural barriers to join the BRAC-organised group.

Although no quantitative data are available about the condition of these families before BRAC intervention, it would be safe to assume that they would be the poorest families of Dhakuly village.

Table 8.4 : Distribution of PACE-Score in Dhakuly village by Components and Sub-groups

Sub-groups	Number of Households	Average Asset Score	Average Male Score	Average Female Score	Average Score for Other Variables	Average Total Score	Gini-** Ratio of PACE-Score
Female/ Male BRAC	40	9.0	12.6	18.0	5.9	45.5	0.10
Male BRAC	35	8.7	15.9	12.8	5.7	43.1	0.18
Non-BRAC <= 1 acre	33	10.3	11.1	15.7	5.2	42.3	0.18
Non-BRAC > 1 acre	47	34.6*	19.4	8.8	6.0	68.8	0.12
TOTAL	155	17.0	15.1	13.5	5.7	51.3	0.19

* The asset score exceeded 30 for richer households, and this has been incorporated in the spill-over effect as described in Chapter 7.

** See Appendix 4 for details of derivation of Gini ratio.

BRAC intervention has influenced the women's contribution in three major ways:

- Firstly, the women's work has become more 'visible';
- Secondly, the women's work has become more regular;
- Thirdly, the women's work has become relatively more remunerative.

Table 8.4 shows the following :

1. The first point of significance to be noted from Table 8.4 above is that at the time of the survey, despite the facts mentioned above about the relatively weaker position of the Female/Male BRAC group before BRAC intervention, their overall situation now seems vastly improved. One can see this by comparing the Total average PACE-Score of this group with the corresponding value for the other two weaker sub-groups, namely Male BRAC and Non-BRAC \leq 1 acre. Not only is their score comparable to the other two, but it is also marginally better. Even more significantly, perhaps, the major contribution towards this final score is that of women, which is almost 40%. (i.e. 18.0 out of the 45.5 for the Female/Male BRAC sub-group).
2. The second point of significance about the Table 8.4 is related to the sub-group Non-BRAC $>$ 1 acre. This is the richest group of the village, and one can see from the distribution of its PACE-Score that not only is its total average score the highest amongst the four groups, but that 'Assets' are the factor largely responsible for its strength; assets are responsible for nearly half the total average score.

3. The high level of 'assets' owned by the households in the fourth sub-group (Non-BRAC > 1 acre) do require a large labour input. However, their own female score is very low - this supports the earlier contention (see Chapter 5) that high-status women work less than those from poorer families. The labour required in addition to the family labour is hired by this sub-group which is both male and female of the other three sub-groups.

4. The Gini ratio is low for the PACE-Score for all the groups separately as well as for the village as a whole. The four sub-groups are fairly homogenous, hence the Gini ratio for each of them fits in with the expectation. However, the low Gini ratio for the village as a whole may be puzzling : the reason for it may largely be due to the fact that the total score of the richest families of the fourth sub-group were cut-off at 100, thereby lessening their effect on the dispersion. In any case, the emphasis throughout this thesis has been on the poorer households, and once households have crossed a level of security (to be defined later), they are largely irrelevant to the analysis here.

Before moving on to the next set of results and observations, one table is of particular importance here, and that is Table 8.5 showing the female participation in different types of economic activities in Dhakuly village.

Table 8.5 : Female participation in economic activities :

Economic activities		Number of households in sub-groups				Village as a whole
		Female/ Male BRAC	Male BRAC	Non-BRAC <=1 acre	Non-BRAC > 1 acre	
Horticulture	Trees	19	19	15	18	71
	Vegetables	3	3	1	1	8
Animal Husbandary	Cows	30	22	18	24	94
	Goat/ Sheep	3	1	3	-	7
Poultry rearing		30	19	18	22	89
Block printing		2	-	-	-	2
Grass/basket/mat making		10	5	8	6	29
Embroidery/Sewing		2	-	-	-	2
Silk culture/spinning		15	-	-	-	15
Wage labour/Agriculture		4	6	-	-	10
Teacher/Adult education teacher		2	-	-	-	2
Health worker/dai		4	-	-	-	4
Veterinary worker		2	-	-	-	2
Maid		-	1	-	-	1
Other (Paddy husking, chira-muri making, bee keeping)		5	4	8	23	50

As is clear from the table (Table 8.5), the total number of households from which women are engaged in the above activities exceeds 155 which is the total number of households in Dhakuly. This is because women from many households are engaged in more than one activity simultaneously. The most popular activities are animal husbandry, poultry rearing and horticulture.

IV. PACE-Scores in ascending order of the Total score :-

For this part of the analysis I shall look at all the households of the village by arranging them in an ascending order of their total score. By so doing I shall be able to highlight the role of Assets, Men and Women in achieving a steady increase in the total score for their respective families. The following observations can be made from Table 8.6 and Graph no 1 :-

Table 8.6 : Total PACE-Score in Ascending order and the contribution of Assets, Males, and Females to it: both in absolute and percentage terms.

Average Total Score	Number of Households	Average Asset Scores	As % of Total Score	Average Male Scores	As % of Total Score	Average Female Scores	As % of Total Score
18.5	10	2.3	12.4	9.2	49.7	4.9	26.5
31.1	10	5.4	17.4	10.0	32.2	12.3	39.5
34.7	10	3.6	10.4	11.8	34.0	14.0	40.3
37.9	10	6.5	17.2	11.4	30.1	14.4	38.0
41.4	10	6.3	15.2	15.2	36.7	14.1	34.1
44.0	10	8.9	20.2	13.1	29.8	16.0	36.4
46.6	10	11.0	23.6	13.5	29.0	16.8	36.1
49.9	10	13.0	26.1	13.2	26.5	17.5	35.1
51.7	10	16.5	31.9	15.0	29.0	15.0	29.0
53.2	10	14.3	26.9	17.7	33.3	15.5	29.1
55.7	10	17.6	31.6	13.3	23.9	16.6	29.8
60.0	10	25.6	42.7	17.8	29.7	11.5	19.2
64.5	10	28.2	43.7	16.1	25.0	16.9	26.2
69.3	10	31.1*	44.9	18.9	27.3	13.9	20.1
83.7	10	48.5*	57.9	19.3	23.1	7.4	8.8
100	5	60.0*	30.0	30.0	3.5	3.5	3.5

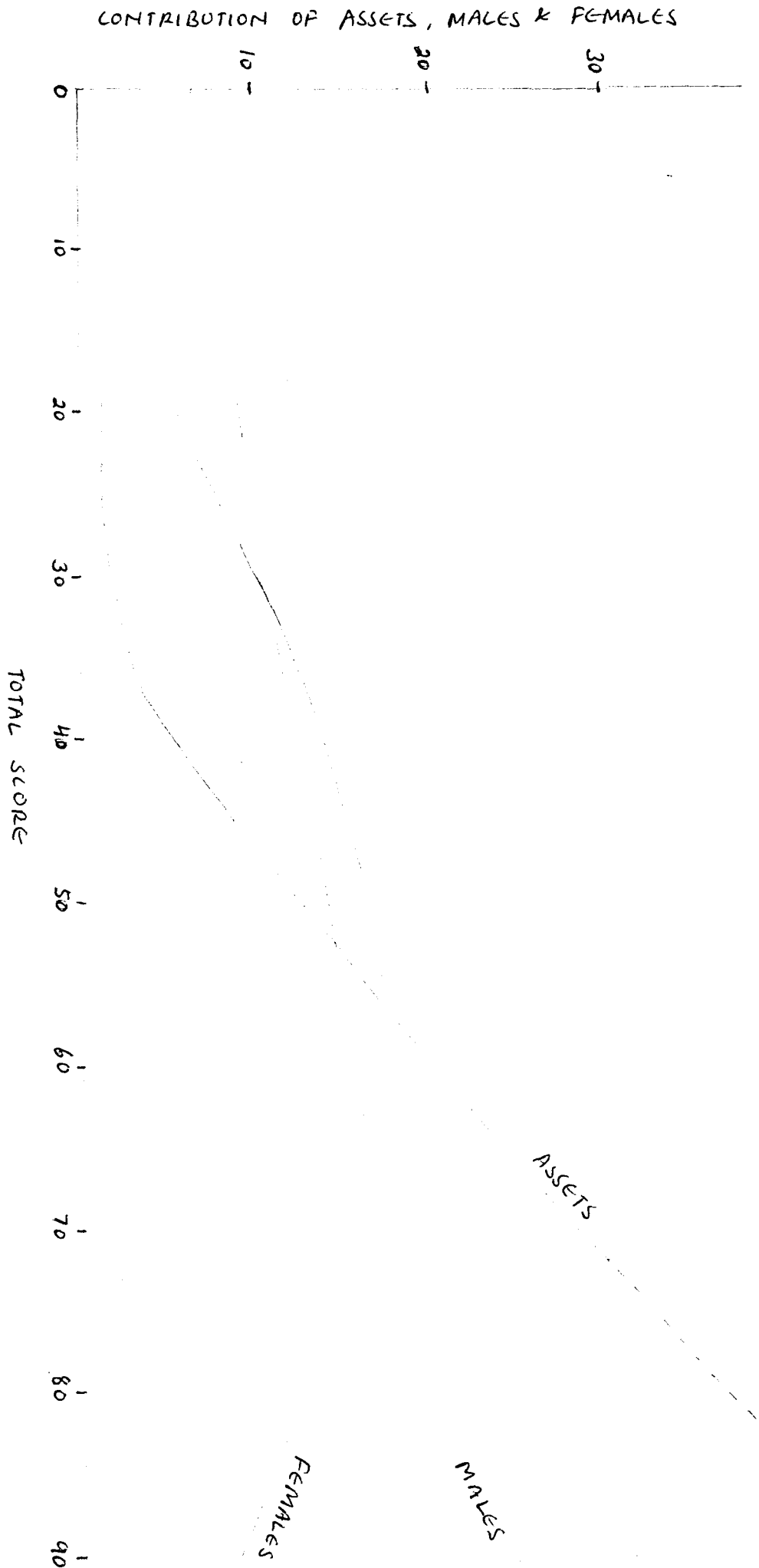
Note: See graph 1 for absolute contribution and graph 2 for percentage.

* The Asset score exceeded 30 for richer households , and this has been incorporated in the spill-over effect as described in Chapter 7.

Graph No. 1:

Total PACE-Score in Ascending order and the contribution of Assets, Males, and

Females to it: in absolute terms:-



Observations from Graph no. 1 :

1. Low total scores are characterised by very low asset scores.
2. The male scores show a steady but no steep increase, except for the richest households. This shows that men are contributing to their near-maximum capacity for all sub-groups ; and that men belonging to the richest families are better educated and better-skilled than the others, thereby increasing their score significantly.
3. The changes in the female score are the most revealing. For poorer families, their contribution to total score increases to a higher level than that for men or assets. However, it starts to decline as the families get richer. This can be explained by what has been mentioned before about the role of hired labour, and status-considerations in richer families.
4. Assets become the major contributors to high values of total score and are largely responsible for their strong position.

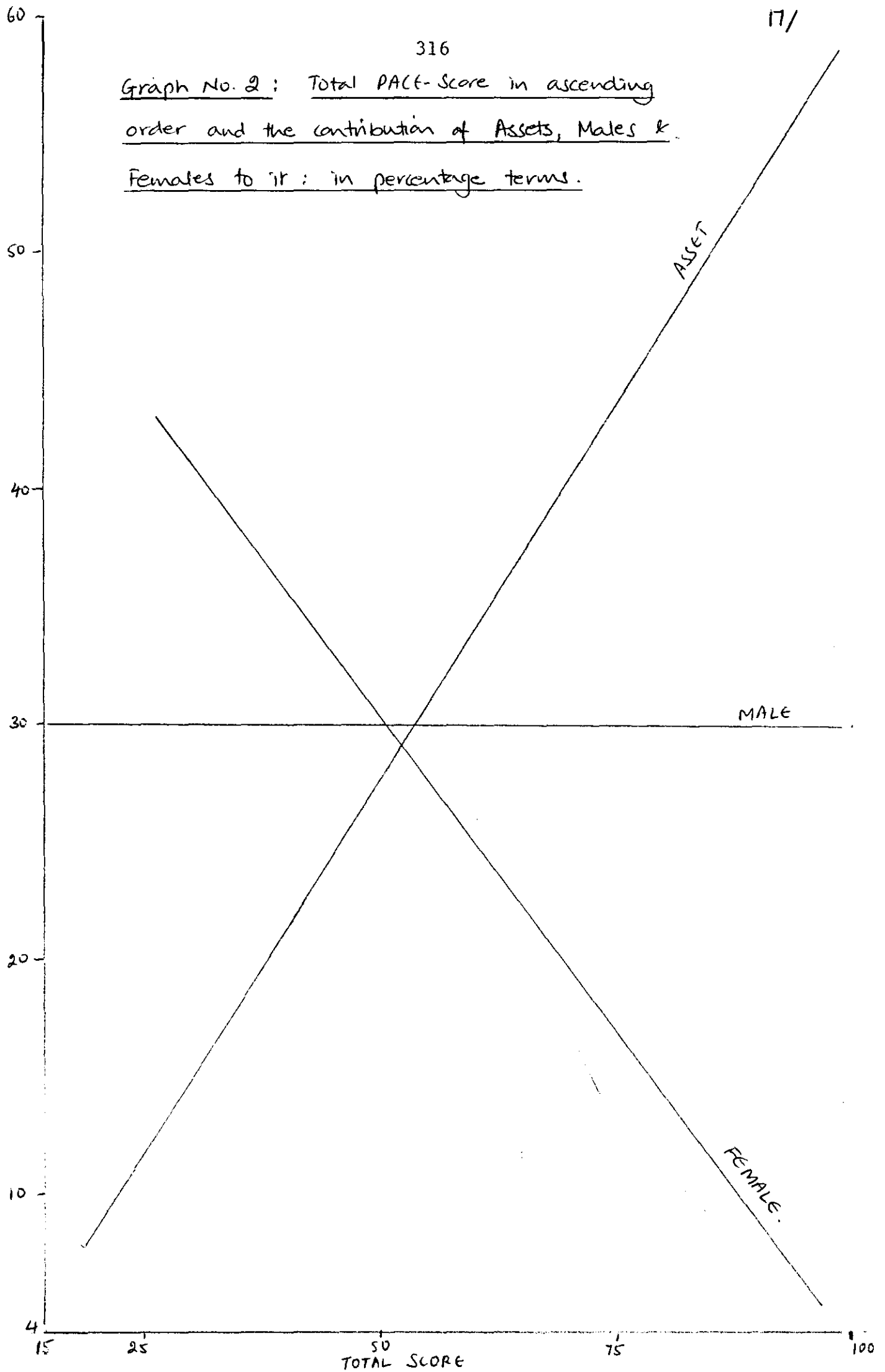
Observations from Graph no 2 :-

The main observation from Graph no 2 is that by transferring the contribution of Assets, Males and Females into percentage terms, one gets a clearer idea of the general direction of the contribution of each of them ; that is, the female contribution is coming down, assets are going up, and male contribution remains steady.

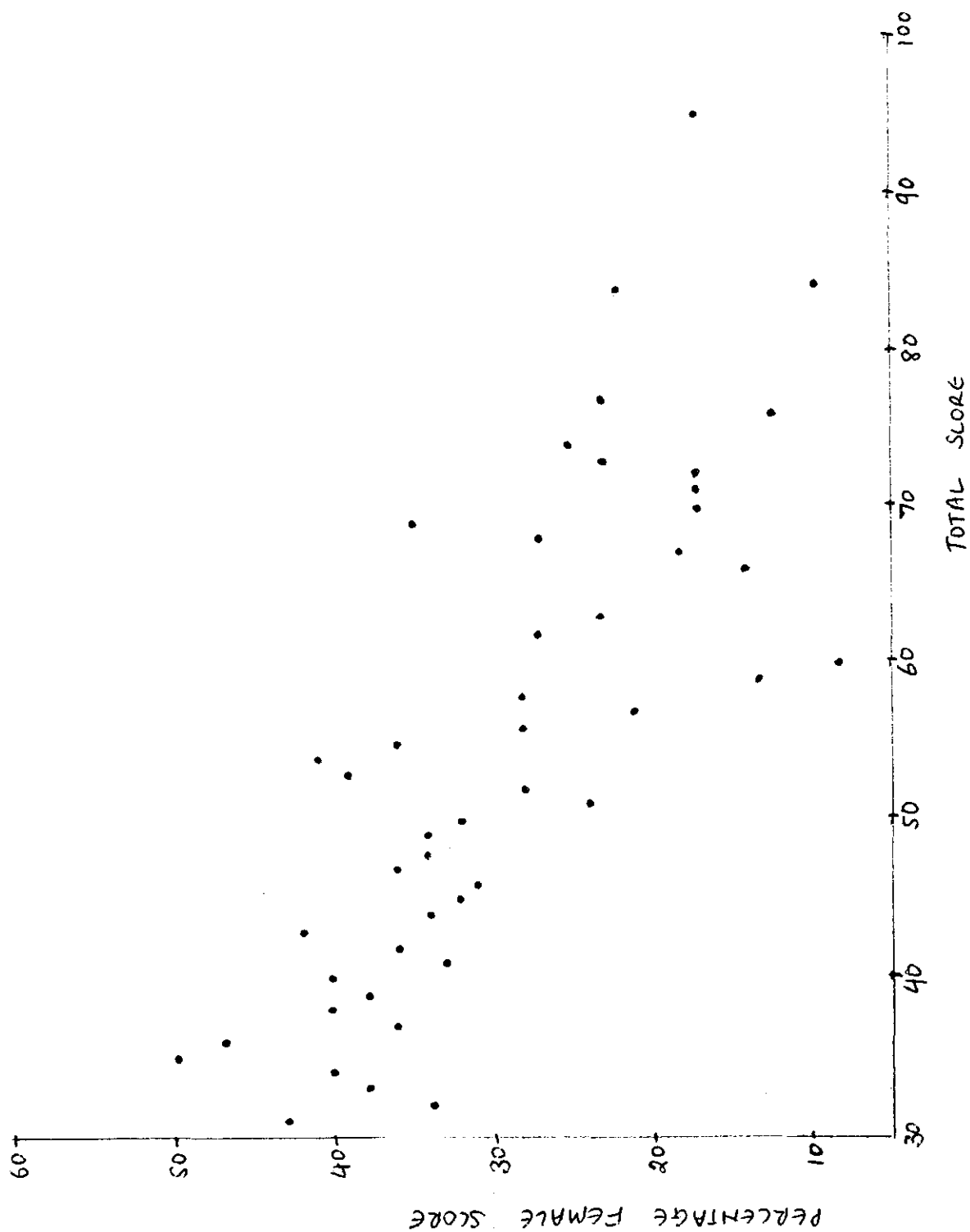
See also the three scatter diagrams showing this phenomenon in greater detail. (Scatter diagrams 1,2 & 3).

Graph No. 2 : Total PACT-Score in ascending order and the contribution of Assets, Males & Females to it : in percentage terms.

PERCENTAGE CONTRIBUTION OF ASSETS, MALES & FEMALES.

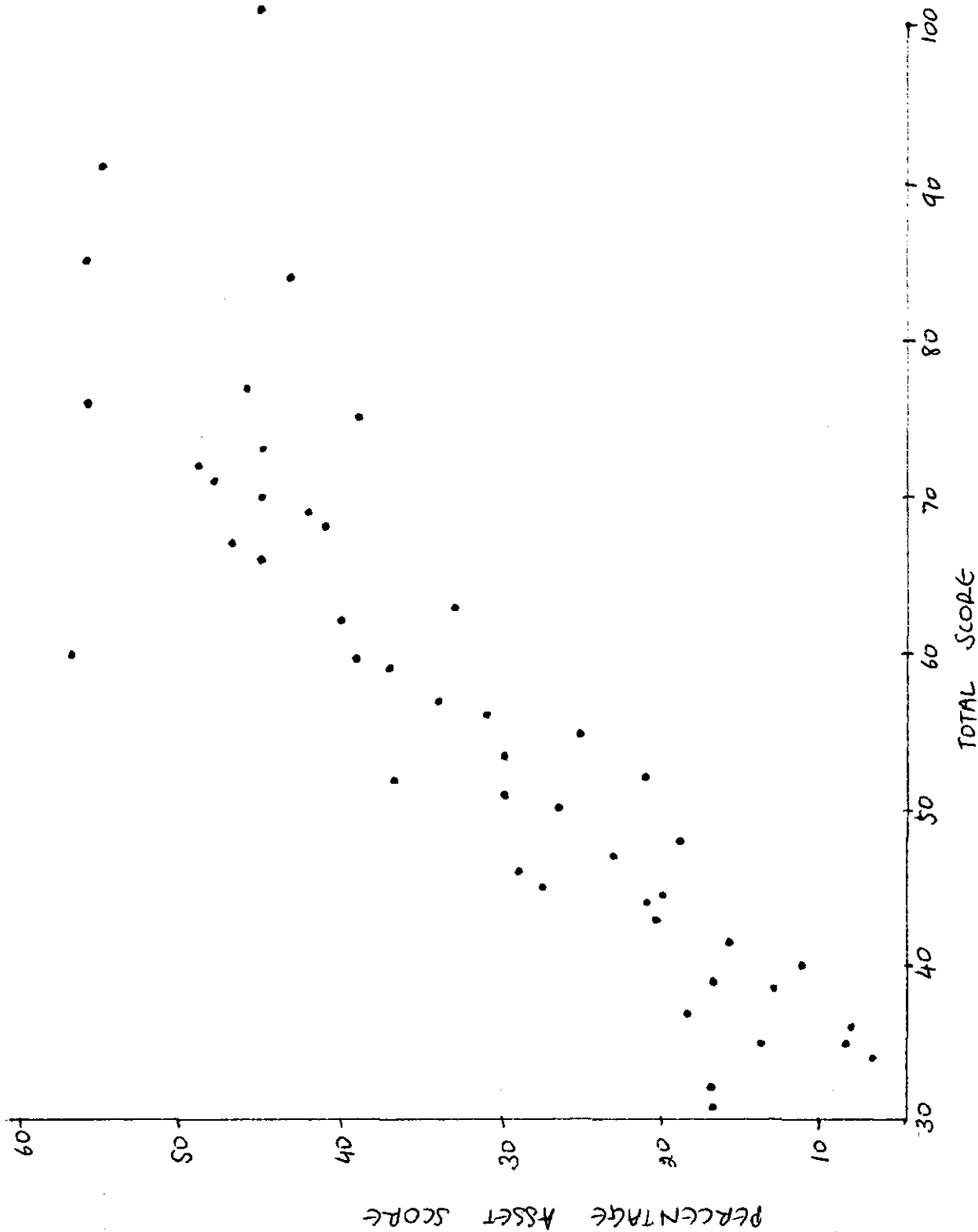


Scatter 1: Female Score as Percentage of Total Score --

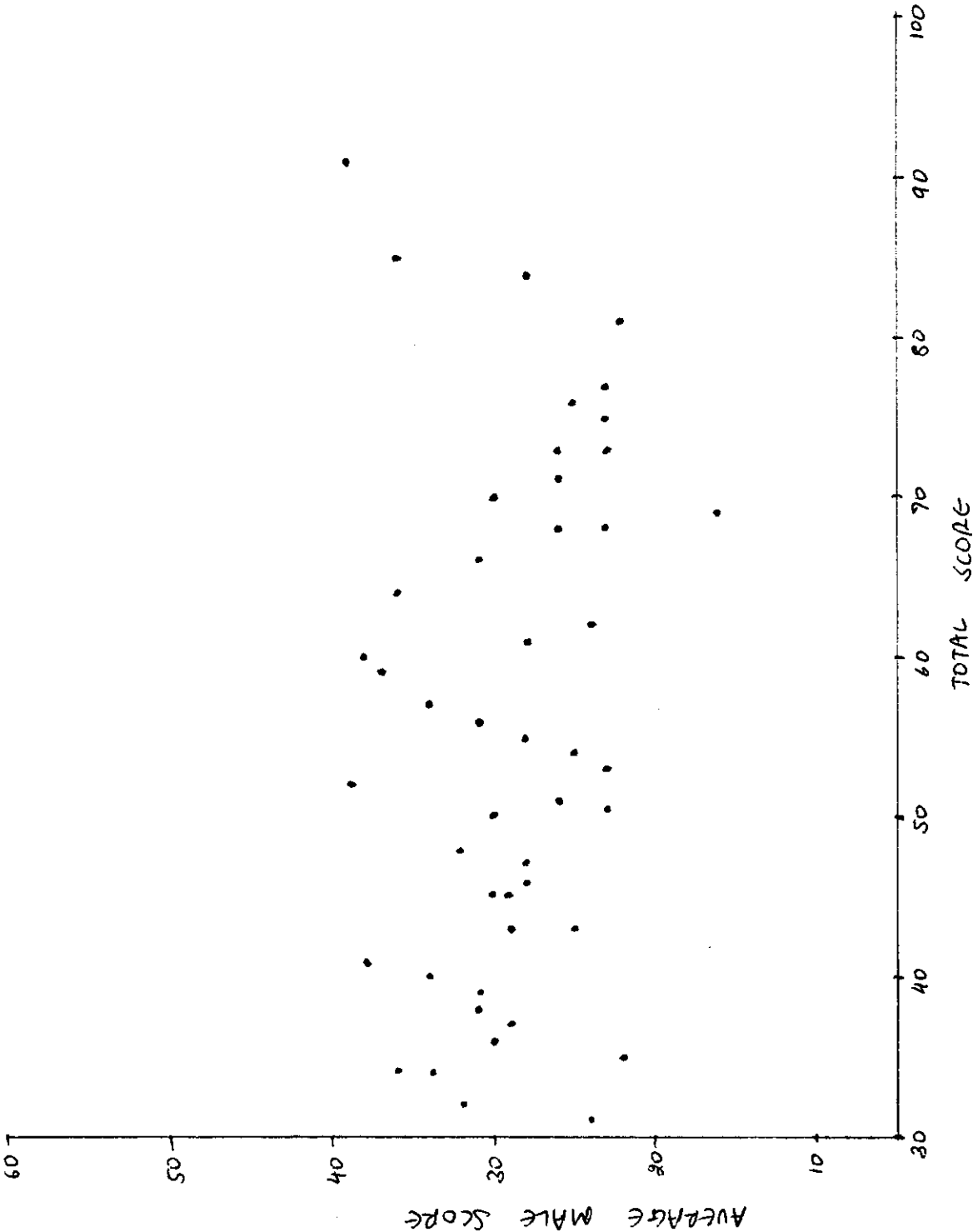


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Scatter 2: Asset score as Percentage of Total Score



Scatter 3 : Male Score as Percentage of Total Score



V. PACE-Scores in ascending order of the Asset score :-

From the previous section, it has become clear that with the increasing PACE-Score, the ownership of productive assets has a more significant role to play than either male or female contribution. The importance of productive assets has also been established in previous chapters. Keeping this in mind, I will now rearrange the households in the ascending order of their asset score, to enable us to see more clearly the relationship between assets and the female and male scores.

Before doing that however, I would like to draw attention to Table 8.7 which shows the average values of different kinds of assets by the four sub-groups. The most striking point which emerges from that Table is that for the Female/Male BRAC sub-group the average value of 'other' assets is the highest amongst the first three sub-groups, whereas that for land is the lowest. This finding is significant in the context of BRAC intervention, which has tried to enhance the importance of 'other' productive assets for households weak in land.

I have already discussed in Chapter 5 especially, the role of women vis-a-vis productive assets. This brings me to my second observation. Having arranged asset scores in ascending order, I have given the corresponding scores for women in Table 8.8, the results of which have been plotted in Graph 3. One can see clearly that as the asset score increases from the lowest value to nearly the middle value, the score for women also increases. This shows a positive correlation

Table 8.7 : Average values of different kinds of assets by sub-groups

Sub-groups	Average value of LAND per household	Average value of HOMESTEAD per household	Average value of OTHER ASSETS per household	Average value ALL ASSETS per household
Female/ Male BRAC	8,762	8,120	4,296	21,178
Male BRAC	12,115	7,429	4,123	23,667
Non-BRAC <= 1 acre	11,742	6,667	3,898	22,307
Non-BRAC > 1 acre	217,351	26,392	17,938	261,681
TOTAL	73,400	13,200	8,300	94,900

Table 8.7 : Average values of different kinds of assets by sub-groups

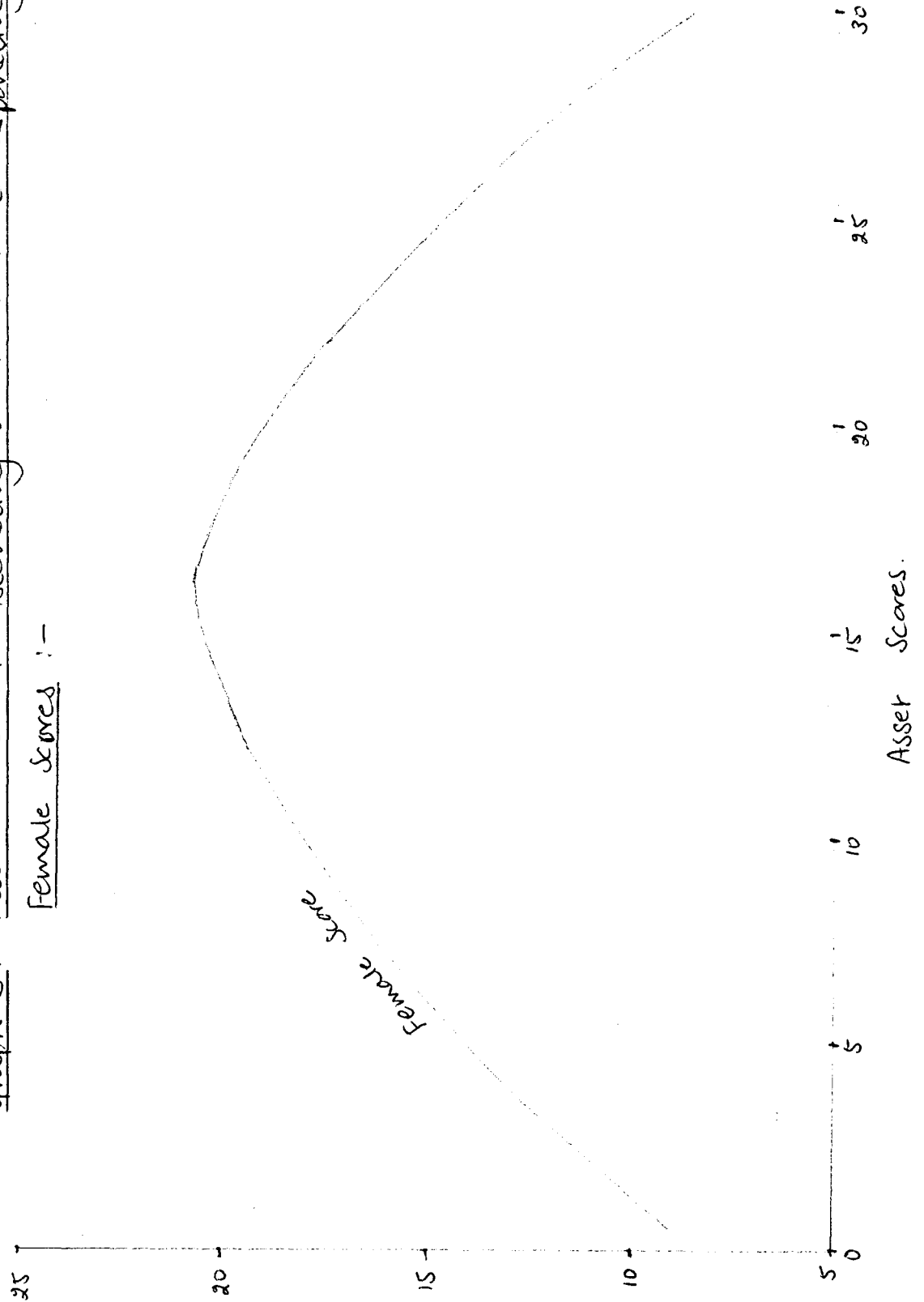
Sub-groups	Average value of LAND per household	Average value of HOMESTEAD per household	Average value of OTHER ASSETS per household	Average value ALL ASSETS per household
Female/ Male BRAC	8,762	8,120	4,296	21,178
Male BRAC	12,115	7,429	4,123	23,667
Non-BRAC <= 1 acre	11,742	6,667	3,898	22,307
Non-BRAC > 1 acre	217,351	26,392	17,938	247,190
TOTAL	73,400	13,200	8,300	90,500

Table 8.8 : Asset scores in ascending order with corresponding
Male and Female scores

<u>Total Asset Score</u>	<u>Female score</u>	<u>Male score</u>
0.5	9.4	11.6
2.4	13.3	12.0
4.5	15.1	14.7
5.6	15.1	14.0
6.5	14.2	14.1
8.0	12.0	11.4
10.1	16.6	13.5
12.2	17.5	14.1
13.8	16.4	14.0
16.3	20.8	12.9
19.4	14.9	14.0
24.3	16.3	15.8
29.1	13.2	15.3
30 & over*	5.3	23.0

* The asset score exceeded 30 for richer households, but as they are not important for the analysis here, they have been pooled together.

Graph 3: Asset Scores in Ascending Order with corresponding Female Scores :-



between women's work and productive assets owned by the household. This is particularly significant for poorer households, who rely on other productive assets relative to land. As mentioned in the previous chapter, other productive assets include cows, goats, sheep, chicken, vegetables, trees, fruit, handicraft, spinning wheel, etc. This finding is of particular relevance to this thesis because BRAC's major contribution in Dhakuly village through the women's programmes has been through increasing these productive assets of the poorer families.

The role of males vis-a-vis all assets remains nearly constant (see Table 8.8) except for the richest families. The reasons for this have already been discussed before with reference to Table 8.6 and Graphs 1 & 2.

VI. Further details regarding the Role of Assets :-

From the previous sections it will have become apparent that assets have a very significant role to play towards determining the economic viability of households. It is therefore considered important to give a more detailed account of the distribution of assets (namely land, homestead and other productive assets) in Dhakuly village. For each type of asset data has been given below showing ownership in terms of per household as well as per capita.

a) Average land owned per household :Table 8.9 : Distribution of Land owned by size of land owned per household

Size of LAND owned (in decimals)	Number of households	Total area of LAND (in decimals)	Average area of LAND owned per household (in decimals)
0	66	0	0
1-20	8	96	12
21-40	8	262	33
41-60	10	518	52
61-80	6	455	76
81-100	7	660	94
101-150	7	843	120
151-200	6	1064	177
201-300	14	3327	238
301-400	8	2792	349
401-500	11	4438	403
500 & above	4	7770	1943
TOTAL	155	22225	143

$$\frac{22,225}{155} = 143 \text{ decimals} = \text{overall average area of land owned per household}$$

Gini ratio of Land by average size of land (per household) = 0.76

Comments on Table 8.9 :

1. 42.6 % of households are landless.
2. 25.2 % of households own land ≤ 1 acre.
3. 2.6 % of households own land more than 5 acres each and their share in total land of the village is 35 %.
4. Households owning no land and those owning less than/equal to 1 acre of land are 67.8 % of the total number of households of the village, and their share in total land of the village is only 9 %.
5. Gini ratio indicates a very high degree of concentration of land ownership (0.76).

b) Average land owned per capita :Table 8.10 : Distribution of land owned by value per capita in Dhakuly village

Value of LAND owned per capita (in Taka)	Number of households	Total value of LAND (in Taka)	Average value of LAND owned per capita (in Taka)
0	66	0	0
1-2,000	8	8,771	1,096
2,001-4,000	7	23,190	3,313
4,001-6,000	12	61,430	5,119
6,001-8,000	12	86,580	7,215
8,001-10,000	2	20,000	10,000
10,001-15,000	5	65,601	13,120
15,001-20,000	11	194,645	17,695
20,001-30,000	12	304,905	25,409
30,001-40,000	9	306,720	34,080
40,001-50,000	3	138,125	46,042
50,001 & above	8	640,233	80,029
Total	155	1,866,200	12,040

$$\frac{1,866,200}{155} = 12,040 \text{ taka} = \text{overall average value of land per capita}$$

Gini ratio of Land by per capita value of land = 0.72

The fact that Gini ratio of value of land owned per capita is slightly lower than that for land owned per household is consistent with the result of Table 8.2 which shows that richer households are relatively larger in size.

c) Average homestead owned per household :Table 8.11 : Distribution of Homesteads owned by size of
homestead per household

Size of homestead (in decimals)	Number of households	Total area of households (in decimals)	Average area of households (in decimals)
0	27	0	0
1-5	19	79	4.2
6-10	29	276.5	9.5
11-15	29	405	14.0
16-20	34	669	19.7
21-25	12	287	23.9
26-30	2	60	30
31-50	0	0	-
51 & over	3	290	96.7
TOTAL	155	2066.5	13.3

$$\frac{2066.5}{155} = 13.3 \text{ decimals} = \text{overall average area of homesteads}$$

Gini ratio of homesteads by average size of homestead per household = 0.44

Table shows the following :-

1. 17.4 % of households do not own their own homestead, and are living in rented or shared accommodation.
2. Except for 3 richest households, the variation in the size of homestead is not so high as is the case with land. This explains the lower Gini ratio for homestead size.

d) Average homestead owned per capita :Table 8.12 : Distribution of homestead owned by value per capita

Value of homesteads (in Taka)	Number of households	Total value of households (in Taka)	Average value of households (in Taka)
0	27	0	0
1-500	4	1,537	384
501-1000	16	13,267	829
1001-1500	13	17,172	1,321
1501-2000	31	55,954	1,805
2001-2500	18	41,838	2,324
2501-3000	24	67,016	2,792
3001-3500	7	22,373	3,196
3501-4000	9	36,000	4,000
4001 & above	6	34,315	5,719
TOTAL	155	299,200	1,930

In this table (Table 8.12) :

$$\frac{299,200}{155} = 1,930 \text{ taka} = \text{overall average value of homestead per capita}$$

Gini ratio of homesteads by per capita value of homesteads
= 0.40

The fact that Gini ratio of value of homestead owned per capita is slightly lower than that for homestead owned per household is consistent with the result of Table 8.2 which shows that richer households are relatively larger in size.

e) Average other productive assets owned per household :Table 8.13 : Distribution of other productive assets owned by households by their value

Value of other productive assets owned (in Taka)	Number of households	Total value of other productive assets (in Taka)	Average value of other productive assets (in Taka)
0	1	0	0
1-1,000	22	9,195	418
1,001-2,000	11	15,058	1,369
2,001-3,000	17	43,778	2,575
3,001-4,000	10	34,475	3,448
4,001-5,000	11	49,583	4,508
5,001-6,000	20	108,435	5,422
6,001-7,000	11	70,365	6,397
7,001-8,000	15	111,390	7,426
8,001-9,000	8	67,360	8,420
9,001-10,000	7	66,273	9,468
10,001-12,500	7	79,350	11,336
12,501-15,000	6	81,790	13,632
15,001-20,000	7	117,950	16,850
20,000 & above	2	93,105	46,553
TOTAL	155	1,241,500	8,000

In Table 8.13 :

$$\frac{1,241,500}{155} = 8,000 \text{ taka} = \text{overall average value of other productive assets owned per household}$$

Gini ratio of other productive assets in Dhakuly village by value of these assets per household = 0.45

Comments on productive assets by households :-

1. Except for one household, some productive assets are owned by all the households (for a list of other productive assets see Chapter 7). However, 22 households, ie 14.2 % of households own other productive assets worth less than 1000 taka each, and their share in the total value of other assets for all the village is only 1 %.
2. Except for the 2 richest households and the poorest 23 households, the variation in the value of other productive assets owned is not so big as is the case with land. This explains the relatively low value of Gini ratio for other productive assets (0.45), which is similar to the Gini ratio for homesteads (0.44).

f) Average other productive assets owned per capita :Table 8.14 : Per capita distribution of other productive assets
by value

Value of other productive assets per capita (in Taka)	Number of households	Total value of other productive assets (in Taka)	Average value of other productive assets (in Taka)
0	1	0	0
1-500	38	8,623	227
501-1,000	48	36,351	757
1,001-1,500	29	35,032	1,208
1,501-2,000	22	37,274	1,694
2,001-2,500	10	22,103	2,210
2,501-3,000	3	8,445	2,815
3,001-3,500	3	9,651	3,217
3,501-4,000	1	3,878	3,878
TOTAL	155	221,700	1,430

$$\frac{221,700}{155} = 1,430 \text{ Taka} = \text{overall average value of other productive assets per capita}$$

Gini ratio of other productive assets in Dhakuly village by per capita value of these assets = 0.38

The Gini ratio for the value of other productive assets per capita (0.38) is the lowest of all Gini ratios relating to different kinds of assets (land, homestead and other assets). This shows that the distribution of other productive assets is less unequal than all the rest.

g) Total productive assets owned by sub-groups :

Table 8.15 : Distribution of all productive assets in Dhakuly village including Land, Homestead, and Other Assets:
Values of Assets by Sub-groups :

Sub-groups	Number of households	Value of Land (in Taka)	Value of Homestead (in Taka)	Value of Other Assets (in Taka)	Average value of all assets per household (in Taka)
Female/ Male BRAC	40	350,500	324,800	171,820	21,178
Male BRAC	35	424,000	260,000	144,305	23,667
Non-BRAC <= 1 acre	33	387,500	220,000	128,629	22,307
Non-BRAC > 1 acre	47	9,950,500	870,700	796,746	247,190
TOTAL	155	11,112,500	1,675,500	1,241,500	90,500
Per household	155	71,700	10,800	8,000	90,500
Per capita persons	870	12,040	1,930	1,430	15,400

Comments on Table 8.15 :-

1. The average values of all assets per household for the first three sub-groups are very close to each other, and they are each less than 10 % of the corresponding value for the fourth sub-group.
2. The Gini ratio for the value of all assets is quite high even though the Gini ratio for homestead and other assets was relatively low. This is because of the highly unequal distribution of land whose share in the total value of assets is 79.2 %.

Gini ratio of all assets by value per household = 0.69

Gini ratio of all assets by per capita value = 0.64

VII. Quantitative and qualitative components of the Female score :

I have already compared the average of the total female score for the four sub-groups of households (see Table 8.4) and noted that the female score was the highest for the Female/Male BRAC sub-group. In Table 8.16 I would like to break down the Female score into its three components to see the relative contribution of each to the total female score for the four sub-groups.

The first component, ie Female earners by age and child-care responsibilities, essentially measures the quantitative value, ie the number of women in each household that can be regarded as 'earners'. The second component is clearly a qualitative one, as it measures the level of literacy, schooling, training

or credit potential for female earning members of each household. The third component is rather tricky. Occupations by sector and status for rural women in Bangladesh, especially for the poorest households (and thereby those being helped by BRAC), usually require an element of training in order to be remunerative - this means that rural women of Dhakuly village are normally engaged in the household sector activities which are made more remunerative by the BRAC programme of production enhancement schemes and those which expand employment (see Chapter 5). It is therefore thought more appropriate to classify this component as one that is qualitative in nature, for it attempts to place a value on the quality of work done by the women, as it is the qualitative aspect of the work that determines the level and kind of returns to it.

Table 8.16 attempts to show the relative contribution of these three quantitative and qualitative components to the average female score for the four sub-groups. It shows the following :-

1. The quantitative component is fairly uniform for the first three sub-groups - this exemplifies the observation made elsewhere in the thesis (see Chapters 2 & 5 in particular) that almost all women of poorer households are engaged in some kind of work.
2. The qualitative components are much higher for the Female/Male BRAC group, as compared to all the other sub-groups. This shows that the type of work they do, the skills that are required for it, and the remuneration they receive from it, is higher and therefore better for the women of the Female/Male BRAC sub-group. BRAC is largely responsible for this

because they have been behind the training programme for the women, and also they are the source of credit for them.

3. All female scores for the richer households, ie Non BRAC > 1 acre sub-group, are relatively low ; this is due to their status considerations and the role of hired labour in these families, as has already been explained with reference to Table 8.4.

Table 8.16 : Average Female Score and its quantitative & qualitative components by sub-groups of households

Sub-groups	Earners by age and child-care responsibilities	Literacy, Schooling, Training and Credit	Occupation Sector and Status	TOTAL
Female/ Male BRAC	5.5	6.4	6.1	18.0
Male BRAC	5.1	3.0	4.7	12.8
Non-BRAC <= 1 acre	5.6	4.6	5.5	15.7
Non-BRAC > 1 acre	3.0	2.4	3.4	8.8
TOTAL	4.7	4.0	4.8	13.5

Distribution of Females and Males according to literacy and level of education will throw further light on the above observations. Following are Tables 8.17 and 8.18 which show such a distribution for Females and Males by the four sub-groups in Dhakuly village.

Table 8.17 : Distribution of Females according to Literacy and level of Education : (in age 5 years and over)

Sub-groups	Illiterate	Functionally Literate	Incomplete Primary	Completed Primary	Middle	Secondary	Higher	TOTAL
Female/ Male BRAC	33	45	12	-	-	-	-	90
Male BRAC	73	-	6	-	-	-	-	79
Non-BRAC <= 1 acre	59	-	1	-	-	-	-	60
Non-BRAC > 1 acre	100	-	15	4	2	-	-	121
TOTAL	265	45	34*	4	2	0	0	350

* 28 girls are currently enrolled in primary school; others have dropped out.

Table 8.18 : Distribution of Males according to Literacy and level of Education : (in age 5 years and over)

Sub-groups	Illiterate	Functionally Literate	Incomplete Primary	Completed Primary	Middle	Secondary	Higher	TOTAL
Female/ Male BRAC	53	20	20	-	-	-	-	93
Male BRAC	32	37	13	3	-	1	-	86
Non-BRAC <= 1 acre	53	-	10	-	-	3	1	67
Non-BRAC > 1 acre	77	-	23	6	4	10	4	124
TOTAL	215	57	66*	9	4	14	5	370

* 55 boys are currently enrolled in primary school ; others have dropped out.

The next table (Table 8.19) shows attendance of girls and boys in the primary school of Dhakuly village by the four sub-groups. The data shows once again that the Female/Male BRAC sub-group has the highest attendance of girls as well as boys among the three poorer sub-groups of households.

Table 8.19 : Attendance in the Local Primary School by Sub-groups of households

Sub-groups	Eligible Girls	Girls attending school	Percentage	Eligible Boys	Boys attending school	Percentage
Female/ Male BRAC	17	10	59	18	14	78
Male BRAC	15	3	20	16	11	69
Non-BRAC <= 1 acre	11	0	0	13	8	62
Non-BRAC > 1 acre	21	15	71	23	22	96
TOTAL	64	28	44	70	55	79

One final table is of interest. Table 8.20 below shows acceptance of family planning by households belonging to the four sub-groups. Here too, one can see the higher rate of acceptance amongst the Female/Male BRAC sub-group.

Table 8.20 : Acceptance of Family Planning by Sub-groups of Households

Sub-groups	Eligible couples	Women accepting Family planning	Percentage
Female/ Male BRAC	33	15	45
Male BRAC	30	11	37
Non-BRAC <= 1 acre	22	8	36
Non-BRAC > 1 acre	45	20	44
TOTAL	130	54	42

VIII. New applications of the PACE-Score and the concept of the 'security line' :-

In the beginning of this chapter, when comparing the PACE-Score to income, four broad claims were made regarding the measuring ability of the PACE-Score ; that is, the PACE-Score was regarded as a better and more adequate measure of the following :-

1. Women's contribution to the economic viability of households;
2. Prevalence of poverty in households;
3. The household's progress towards fulfilling its basic needs;
4. The household's ability to 'protect' itself from catastrophic occurrences.

The first claim has been accomplished by the data already presented. I shall now try to fulfill the claims for the other three points through the PACE-Score.

It is obvious from the way the components of the PACE-Score have been put together that the main thrust of the PACE-Score for each household was to provide an easy and useful measure for not only the household's progress towards fulfilling its basic needs, but also its ability to 'protect' itself from

catastrophic occurrences. For a detailed analysis of how this was done, I would like to clarify further.

I would like to define the stage for a household at which one might be able to say that it has made sufficient progress towards the fulfillment of its basic needs so as to be able to 'protect' itself from catastrophe, as the 'security line'. The idea of the 'security line' has been developed from the idea of the 'poverty line'. The 'poverty line' is a concept that is based on income per capita, to indicate a stage of fulfillment of minimum nutritional requirements. The 'security line', however, it is proposed, is a more complete concept, as defined above.

By the line of the argument presented here, it must be obvious that the 'security line' is a more ambitious target than the 'poverty line'. One might argue that when there are great difficulties in helping the poor population reach/cross the 'poverty line' itself, there seems little hope for fulfilling a more ambitious target. However, there is a fallacy in this argument. Given the catastrophic dimension of Bangladesh, there is an inherent conceptual drawback in the 'poverty line'. Just because the 'poverty line' might be relatively nearer target to reach, that in itself does not make it sufficient as a 'development' objective in the light of catastrophe ; in fact, it might even be creating a false illusion of progress. The 'security line', on the other hand, might be more difficult to reach, but nevertheless, it is a more meaningful target for genuine development in Bangladesh.

The next question to be answered is how to specify the 'security line' in terms of the PACE-Score. I have made a small attempt towards identifying such a value. However, I do realise that the task of standardisation of such a measure is not only beyond the scope of this thesis, but may also require much more debate and work over time, given the controversy that still surrounds the 'poverty line'.

Before suggesting a procedure for specifying the security line in terms of the PACE-Score, it would be useful to take a brief look at the distribution pattern of the PACE-Score for the village as a whole. I have presented the PACE-Score as a possible substitute for per capita income. It is known that the distribution of income in Bangladesh is heavily skewed and the distribution of per capita is also quite skewed. Of course, since richer households have larger family sizes, the distribution of per capita income is less skew than that of household income.

The distribution of PACE-Scores originally also reflected this same type of skewness. However, this was much reduced by restricting the total PACE-Score of the richest households to 100. The final PACE-Score therefore came close to a normal distribution, not only because of the above procedure but also because some components of the PACE-Score were positively skewed and some were negatively skewed (for example, the distribution of land is positively skewed and that for number of female earners by age is negatively skewed).

The average value of the total PACE-Score for the village as a whole was found to be 51.3. The security line will undoubtedly be higher than this average because according to the definition of the security line on p 348, majority of the households in the village will be 'insecure'. The question is what percentage of households will be below the security line.

If the total PACE-Score had a perfectly normal distribution, then the average would be 50 and a security line corresponding to the average plus one standard deviation would imply that 84% of households in the village are insecure. The average of the PACE-Score, however, is 51.3 (and not 50) which shows that the distribution is not perfectly normal. The standard deviation is 17.3 and the mean deviation is 13.1. If we take the average plus the mean deviation, we get 64.4 whereas the average plus the standard deviation gives 68.6. Within this range, I took a round figure of 65 as representing the security line which of course can be called arbitrary to a certain extent. In Dhakuly village, 127 households out of a total of 155 have PACE-Scores below 65, ie 81.9% of households are insecure. This figure is slightly less than what would be obtained by taking the average plus one standard deviation (namely 84%). The figure for the security line could however vary from village to village depending on their resources, training, etc and a more specific and scientific procedure will have to be identified before such a figure can be standardised.

Table 8.21 : Distribution of households in four sub-groups according to Total PACE-Score

Total PACE-Score	Number of households in sub-groups				Whole village
	Female/Male BRAC	Male BRAC	Non-BRAC <= 1 acre	Non-BRAC > 1 acre	
Below 35	7	11	9	0	27
35-49.9	18	15	16	1	50
50-64.9	15	6	5	24	50
65 & over*	0	3	3	22	28
Total number of households	40	35	33	47	155

* This category refers to households which have either reached or crossed the 'security line'.

Table 8.21 gives distribution of households in four sub-groups according to total PACE-Score, drawing particular attention to the value corresponding to the 'security line'.

In Table 8. above, with reference to the 'security line' one notes that of the first three sub-groups, only 6 out of 108 households, ie 5.6% have crossed or reached the 'security line'. As compared to this, amongst the richer households belonging to the fourth sub-group, 22 out of 47, ie 46.8% have crossed/reached the 'security line'. In the village as a whole, the corresponding percentage is 18.1%.

This draws attention to the magnitude of the task that still remains as a challenge for rural development. What makes the challenge even greater is the fact that BRAC has been active in Dhakuly village for over 10 years.

The Table also contains three other sets of values of the PACE-Score. Perhaps the second most interesting are the ones showing PACE-Score values 50-64.9. The average value of 50 nearly corresponds to the average value for the total PACE-Score, which is 51.3. The interval 50-64.9 can be used to identify those households that have perhaps crossed poverty, but have still not reached a level of security.

Households with PACE-Score below 35 can be regarded as absolutely poor.

IX. Introducing the Insecurity Index :-

This index has been developed as an inspiration from Sen's Poverty Index (see Chapter 1). The main idea underlying the Insecurity Index is to find out how much increase in the PACE-Score is needed by those below the 'security line' in order for them to reach the level of security. For this purpose, the difference between the total PACE-Score and the security line is calculated for every household lying below the security line. This is called the PACE-Score Gap. A weighting device is applied which gives relatively greater weight to those households whose PACE-Score Gaps are greater. This is justified through consideration of the need to highlight the importance of the PACE-Score Gap of the poorest households. The actual derivation of the mathematical formula is not shown here because it is similar to Sen's Poverty Index (see A K Sen 'Poverty and Famines, 1981, opt cit).

The formula, however, is the following :-

$$\text{Insecurity Index} = H (S + G - SG)$$

where, H = Head-count ratio of those below security line, ie

$$\frac{\text{number of households below security line}}{\text{total number of households}}$$

S = PACE-Score Gap ratio of those below security line, ie

$$\frac{\text{Security line} - \text{Average PACE-Score of those below security line}}{\text{Security line}}$$

G = Gini ratio of those below security line

The formula for the Insecurity Index differs from Sen's formula for the Poverty Index in only one respect :
Sen's formula as given on p 53 (Ch.1) is $P = H (I+G - IG)$ and that for the Insecurity Index is simply replacing I by S. The difference thus is that whereas Sen's Poverty Index measures the income-gap ratio, the Insecurity Index measures the PACE-Score gap ratio, which can also be called security gap ratio. This ratio refers to the gap from the security line which needs to be overcome before the household can reach a level of security as defined by the security line. Similarly the Insecurity Index differs from the Poverty Index in that the Poverty Index measures the gap still to be covered to reach the poverty line whereas the Insecurity Index makes the same measurement from the security line. Since for any village the security line will be higher than the poverty line, the Insecurity Index will also be higher than the Poverty Index. In other words, the objective of majority populations reaching/crossing the security line is more ambitious and perhaps more far reaching than that associated with the poverty line.

The lower the value of the Insecurity Index, the better the situation is, ie for example, if the Insecurity Index is 0.37, then it means that the PACE-Score is 63% of what is required for reaching security and that the gap from the security line is 37%.

All values of the Insecurity Index fall between 0 and 1, where, 0 = perfect security (ie there is no household below security line),

and 1 = absolute insecurity (ie all households are below the security line, and their PACE-Score = 0).

(See Appendix 4 for further details on the calculation and interpretation of the Insecurity Index).

The Insecurity Index for each sub-group has been calculated, and its values are as shown below :-

Sub-group Female/Male BRAC	=	0.37
Sub-group Male BRAC	=	0.44
Sub-group Non BRAC ≤ 1 acre	=	0.43
Sub-group Non BRAC > 1 acre	=	0.08
Dhakuly village as a whole	=	0.34

An interesting observation can be made when we compare these values of the Insecurity Index for the first three sub-groups with the data presented in Table 8.21. We noted there that no household belonging to the sub-group Female/Male BRAC has crossed/reached the 'security line' whereas 3 households of each of the sub-groups Male BRAC and Non BRAC ≤ 1 acre had done so. That measure, however, was the head-count. The Insecurity Index data presented above, on the other hand, show that when comparing the three sub-groups just mentioned, the position of the sub-group Female/Male BRAC is relatively better. This is very interesting, because it shows that even though the households of this sub-group may be more insecure in number, their level of insecurity, ie their PACE-Score Gap is comparatively less. This is further explained by the lower Gini ratio of the PACE-Score for this sub-group as compared to the other two (see Table 8.4).

All these results confirm the conclusion arrived at earlier that the target-group approach and the women's participation in the group activities have led to significant progress towards security by the Female/Male BRAC sub-group.

X. Main Conclusions :

I. Conceptual :-

1. The traditional framework, concepts and methodology are inadequate for making in-depth studies on poverty and basic needs (cf chapters 1 & 6).
2. A study of catastrophe, both at the national and at the village/household level was seen to be a crucial element for a more meaningful understanding of poverty and basic needs in the context of Bangladesh (cf chapter 6), and it is proposed that any basic needs programme for Bangladesh should include not only an awareness of catastrophic occurrences there but also concrete measures to safeguard against them.
3. Following from the above two conclusions, an integrated approach linking poverty and catastrophe becomes a guiding principle for this study and it is a new feature of this type of research.

II. Conclusions derived from the PACE-Score and the Field Survey :

Before summarizing such conclusions, it is necessary to point out some limitations of the PACE-Score. The most striking of the limitations is the vast amount of data that is required for each household to calculate the PACE-Score, not to mention the elaborate calculations themselves. It would be quite impossible to collect such data and to perform such calculations for the country as a whole and this is certainly not the suggestion implied here. The PACE score is introduced in this thesis more as an example of a possible alternative to the use of per capita income as a social indicator. It is clear that such an alternative would not be easy to find specially in the complex situation and stratification in Bangladesh. Nevertheless, the PACE score is an attempt and of course needs to be further polished for wider application.

The primary use of the PACE score is one for identifying policy implications in relation to rural poverty and, in particular, catastrophe by examining in detail the various components that contribute to it. Such an application could perhaps be done by calculating the PACE score for either some selected villages from various regions of Bangladesh, or by selecting small samples of households from various socio-economic strata.

Such possibilities will need to be explored by future research workers.

One particular quality of the PACE-Score unlike other indicators is that it is specially sensitive to the role of women and productive assets. Any indicator that could compare the contribution of women to that of men toward the rural household economy would indeed have to be quite elaborate due to the sheer 'invisibility' of many factors that pertain to an assessment of such a contribution. There is perhaps therefore an inherent conflict between the magnitude of data required and the desire to obtain a social indicator that would do women and their work some justice.

It might be clear to the reader that in a country like Bangladesh, an identification of the problem of catastrophe may not require an elaborate indicator like the PACE-Score. However, an evaluation of the effectiveness of the measures of protection would perhaps call for a social indicator approach similar to what has been attempted in the PACE-Score by combining and comparing the role of women to that of men and productive assets. In this way, the PACE-Score is introduced here as an illustration of such an approach and it needs to be specified clearly that much more work will need to be done on it before it can be made operational on a large scale.

Having clarified the limitations and having identified some of the special qualities of the PACE-Score, I would now like to summarize the conclusions derived from the PACE-Score and the field survey:

4. The Pace-Score represents the economic viability of a household. Economic viability is defined as the ability of a household for survival and development in spite of deprivation, exploitation, and disaster, and its potential for sustaining such a survival beyond the help of organisations like BRAC (chapter 7). The higher the PACE-Score, the more economically viable is the household.
5. The average total PACE-Score for each of the four sub-groups of households of Dhakuly village was calculated showing the following :
 - a) the richest sub-group has the highest average total PACE-Score as expected.
 - b) of the three poorer sub-groups, the sub-group in which both female and male members are participating in BRAC activities (hence the 'target-group', ie the poorest) have surprisingly the highest average total PACE-Score.
6. The average total PACE-Score of the Female/Male BRAC sub-group is the highest among the three poorer sub-groups because of the highest female score of this sub-group. The

cont.

average female score for this sub-group is 18.0 out of the average total score of 45.5, which is nearly 40%. For the other sub-groups, the corresponding percentages are the following :

Sub-groups	Average Female Score	Average Total Score	Percentage of Female to Total
Female/Male BRAC	18.0	45.5	39.6
Male BRAC	12.8	43.1	29.7
Non BRAC \leq 1 acre	15.7	42.3	37.1
Non BRAC $>$ 1 acre	8.8	68.8	12.8

10. The female members of all the poorer sub-groups are engaged in activities primarily in the household sector, and the reason why the average female score of the Female/Male BRAC sub-group is higher is because BRAC has introduced diversification in these activities and made them more remunerative.
11. The inclusion of the household sector is more appropriate for studies on rural women and their work ; this was largely neglected in the traditional approaches which only concentrated on modern and informal sectors.

12. The most remunerative of the household sector activities for women are the following :

- rearing of cows, goats and sheep
- rearing of poultry
- growing of vegetables and fruit trees
- grass/basket, mat making
- silk-culture/spinning

13. The total PACE-Scores of all the 155 households of the village have been arranged in ascending order in order to plot graphs and scatter diagrams. The following results were noted from these graphs and diagrams :

- a) low total scores are characterised by very low asset scores (graph 1 and scatter 2).
- b) for poorer families, female contribution to total score increases to a higher level than that for males and assets. This result is not only unexpected but also very relevant for policy-making (graph 1 and scatter 1).
- c) for the richer families on the other hand, the female scores decline while both the male and the asset scores show a sharp increase. This is explained by the role of hired labour, status considerations and the muslim custom of 'purdah' for women of richer households (graph 1).
- d) by transferring the contribution of assets, males and females into percentage terms, with reference to the total PACE-Score, one gets a clearer idea of the general direction of the contribution of each of

them : that is, the female contribution is coming down, assets are going up, and male contribution remains steady (graph 2).

14. Because of the crucial role of assets for increasing the total PACE-Score, the asset scores for all the households of the village were arranged in an ascending order with the corresponding female scores in order to observe the role of women as the assets increase. Graph 3 shows such a relationship, namely that there is a positive correlation between women's work and productive assets for the poorer households. This is perhaps the most interesting and relevant finding for future policy decisions, because it emphasises the role of other productive assets vis-a-vis the role of women in the absence of land as a primary asset. Other productive assets include cows, goats, sheep, poultry, vegetables, fruit-trees, spinning wheel, etc.

15. Gini ratios for the three types of assets, namely land, homestead and other productive assets, were calculated for Dhakuly village and are shown below :

Land	- 0.76
Homestead	- 0.44
Other productive assets	- 0.45

These ratios show that the distribution of land is the most unequal (chapter 8).

Furthermore, looking at the national distribution a worsening trend is noticed for the gini ratio of land, which is an alarming feature of Bangladesh (cf Osmani 1982). In the light of this worsening trend in relation to land distribution,

the previous conclusion regarding the increasing importance of other productive assets and the role of women becomes even more significant for policy.

16. The qualitative components of the PACE-Score measure the level of literacy, schooling, training and credit potential for both female and male members of each household. The average female score for these components is the highest for the Female/Male BRAC sub-group as compared to all the other three sub-groups (see chapter 8, table 8.16). This is a good finding as these qualitative components help towards improving their skills through the training programme of BRAC and especially the functional literacy programme of BRAC is useful for building their awareness. The credit potential is also important, especially in the face of lack of other assets.
17. The Female/Male BRAC sub-group shows the highest attendance in the local primary school for both girls and boys among the three poorer sub-groups of households.
18. Apart from training, functional literacy, credit schemes and diversification of activities of the rural poor, BRAC has a significant role to play in organising the 'target-group' so as to form a 'viable group' (chapter 5). Within the context of economic, social and political constraints in the lives of the rural poor, the 'viable group' is viewed potentially as a source of :
 - group strength, group insurance and group security
 - collective bargaining power

- providing an alternative base and source of strength for the poor to the existing structures on which they have depended so far but which have failed them.

19. As regards acceptance of family planning also, households belonging to the Female/Male BRAC sub-group showed the highest rate. 45% of women of eligible couples of this sub-group had accepted family planning as compared with 37% , 36% and 44% of Male BRAC, Non BRAC ≤ 1 acre and Non BRAC > 1 acre sub-groups respectively.
20. The crucial role of the size of a family is incorporated in the PACE-Score by converting the values of its components into per capita terms. This is important because other things being equal, the size of a family can have a negative effect on the economic viability of a household. This is particularly appropriate for Bangladesh where family sizes are usually large, but it was found in the field survey that the traditional practice of extended families generally tended to break down in the face of extreme poverty.
21. The concept of the 'security line' has been introduced which has been defined as the stage for a household at which one might be able to say that it has made sufficient progress towards the fulfillment of its basic needs so as to be able to 'protect' itself from catastrophe. As can be seen from this definition, the 'security line' is a more ambitious target for development than that implied by the traditional 'poverty line'. Nevertheless it is

seen to be more meaningful than the concept of the 'poverty line' which refers only to the fulfillment of minimum nutritional requirements.

22. The PACE-Score has been used to specify the 'security line' as defined above. An objective procedure has been suggested for this purpose, based on the average total PACE-Score, the Gini ratio of the PACE-Score, as well as its standard deviation and mean deviation. With reference to the 'security line' one notes (Table 8.21, chapter 8) that of the poorer sub-groups only 6 out of 108 households, ie 5.6% have crossed or reached the security line. As compared to this, amongst the richer households 22 out of 47, ie 46.8% have crossed/reached the security line. In the village as a whole, the corresponding percentage is 18.1%.
23. Based on the concept of the 'security line', I have also suggested an Insecurity Index, drawing inspiration from Sen's Poverty Index. The main idea underlying the Insecurity Index is to find out how much increase in the PACE-Score is needed by those below the 'security line' in order for them to reach the level of security. A simple formula to estimate the Insecurity Index has been given and it has been applied to all the sub-groups of households in Dhakuly village. The lower the value of the Insecurity Index, the better the situation is, that is for example, if the Insecurity Index is 0.37, then it means that the PACE-Score is 63% of what is required for reaching security and that the gap from the security line is 37%.

All values of the Insecurity Index fall between 0 and 1, where, 0 = perfect security (ie there is no household below security line), and 1 = absolute insecurity (ie all households are below the security line, and their PACE-Score = 0).

(see Appendix 4 for further details on the calculation and interpretation of the Insecurity Index).

The Insecurity Index for each sub-group has been calculated, and its values are as shown below :

Sub-group Female/Male BRAC	=	0.37
Sub-group Male BRAC	=	0.44
Sub-group Non BRAC 1≤acre	=	0.43
Sub-group Non BRAC 1>acre	=	0.08
Dhakuly village as a whole	=	0.34

24. All results derived from the PACE-Score and the field survey confirm that BRAC's target-group approach which includes women's participation in multi-faceted group activities have led to a significant progress towards 'security' by the poor families of Dhakuly village, although much work still remains to be done in order for them to cross the 'security line'. An estimate of the relative magnitude of the gap still to be covered is given by the 'Insecurity Index'.

III. Conclusions for possible consideration by NGO and Government.

22. It is felt that the main focus of a basic needs programme for a village like Dhakuly should be to somehow incorporate measures of 'protection' against catastrophic occurrences in addition to its current rural development programme. BRAC is already using credit in such a capacity. However, the problem with credit is mainly two-fold in the context of catastrophe. Firstly, due to the high frequency/risk of household level catastrophe, the availability of funds would need to be greatly increased and, secondly, because credit is repayable, the burden of repayment might soon become beyond the capacity of the borrower. Because of such problems, it is felt that if an element of 'insurance' were to be incorporated into the larger credit scheme, it might make the programme more viable.

By insurance I mean a scheme of collaboration between four parties, three of which are already involved in the credit scheme, namely, the poor household, the NGO, and the health and veterinary services. The additional fourth party would be an insurance company which draw support from the government.

At present, the NGO provides credit to the poor household either to acquire or to replace an asset. The NGO also collaborates with the health and veterinary services which act as one of the safeguards against

catastrophe. In the aftermath of a catastrophe the borrowing household often faces difficulty in fulfilling repayment obligations thereby leading to increased indebtedness.

Under a possible insurance scheme, the individual or household will be able to exchange the risk of a large loss for the certainty of a small loss. In other words, the responsibility of paying the premium will fall on the household's shoulders along with the help it might receive towards it from the NGO. In this way, the contributions made by all the households in the form of insurance premiums will be received as lump sum payment from the insurance company by those households who suffer from catastrophe. Thus the loss inflicted due to catastrophe will be shared by all the households to some extent rather than fall heavily on a single household.

Moreover, the insurance could include a life insurance scheme, especially for the primary earner (male and/or female). Such a precaution cannot be taken adequately under the credit programme which concentrates heavily on assets. In fact, availability of credit is often drastically reduced in the event of sudden death of a primary household earner. The insurance scheme on the other hand would safeguard against such a catastrophe more effectively. The insurance money received by the

surviving members of the household would enable them to tide over the crisis. In the event of the death of all the members of the household the insurance money could be paid to the NGO for the benefit of other households in the village.

In the above illustrations, the role of insurance as a device to spread out the burden over all the households has been highlighted. An additional important role of insurance would be to encourage the effectiveness of health and veterinary services with a **view** to reducing the occurrence of catastrophe at the household level. Such an objective would obviously include not only extra funds for such services but also an in-built check-up scheme to monitor the health of the insured people and livestock.

Any insurance scheme would however not be free from problems and much work would have to be carried out before a satisfactory solution could be reached. The most obvious problem is of course one of funds - not only additional funds for the insurance company and the health and veterinary services, but also the more critical problem of raising funds for the premium payments. This may lead to the related problem of adverse selection in the sense that the poor may not be able to join the scheme because of lack of funds (even though the scheme is primarily for their benefit)

while the rich who may not need to join will safeguard their situation even further by joining the scheme. Another serious problem with such an insurance scheme would be, what is called in welfare economics, moral hazard. The concept of moral hazard implies a "divergence between the private marginal cost of some action and the marginal social cost of that action thus resulting in an allocation of resources which is not optimal." (cf. D.W. Pearce, Macmillan Dictionary of Modern Economics, 1983). This means that because of the security of insurance, the individual tends to care less about loss, thereby **increasing** total loss to society as a whole. This could result in the opposite of the desired effect, ie. catastrophe might even rise rather than decline due to insurance schemes. This, of course, is a major problem and perhaps one way of safeguarding against it would be to restrict compensation to less than 100 per cent of the value of the insured asset. The other method of safeguarding against moral hazard, namely requiring the individual/household to contribute the first 10-20 per cent of the claim, would be counter-productive anyway because of the incapacity of the poor households to do so.

In view of such issues, it is felt that there are indeed many problems and not enough solutions. However, because of the basic advantages of an insurance programme in the context of frequent catastrophe especially at the

household level, it would be worthwhile to explore further the possible mechanisms by which such a scheme could be made viable. A combination of credit and insurance might be the most appealing, especially as this would entail only modest changes to the existing programme.

Following is a list of all possible measures of protection that could be considered while planning an insurance scheme. One realises that to incorporate them all would perhaps be too grand and impossible a task; however, they are worth bearing in mind before selecting those that might be appropriate under particular circumstances.

Measures of protection would include the following :

1. Life Insurance :
 - for primary female earner
 - for primary male earner
 - improvement in health services
 - protection against common water-borne diseases
 - improvement in nutrition
2. Asset Insurance :
 - availability of credit against assets to avoid distress sale of assets
 - group savings fund
 - monetary resources for the destitutes
 - credit for reaquiring lost assets (mainly cows)

3. Group Insurance :-joint responsibility in case of default of repayment
-group security - financial & emotional
-group strength to exert power and influence
-community shelters on raised ground for safety during floods and cyclone
-early warning systems for cyclones
4. Crop Insurance -a guarantee scheme backed by the government, to make up for loss or damage of crops due to catastrophies
5. Adequate housing/
shelter -raising the ground level for homes

cont.

- provision of tin roofs for houses
- protective measures for trees and vegetables

6. Adequate animal protection

- provision of veterinary services
- provision of feed
- provision of animal shelters

7. Minimum employment guarantee scheme

- guaranteed employment in public works programme for construction of flood protection embankments

Of the above, a few could be selected as minimum measures to be incorporated into a basic needs programme, and the revised expanded set of needs may be termed as 'basic security needs'. Along with the already recognised basic needs such as food, shelter, clothing, drinking water, sanitation, public transport, health and family planning, education, participation in decision-making, employment, human rights and freedom, at least four more 'basic security needs' can be added, namely, life insurance for primary female earner, life insurance for primary male earner, credit for reacquiring lost assets (mainly cows) and availability of credit against assets to avoid distress sale of assets. These four are considered important due to the incidence of catastrophe at the household level.

The extent to which life insurance of primary earners would contribute to the security of rural poor households can be measured by the PACE-Score after expanding the list of "other assets" so as to include such insurance. This can be justified

by viewing life insurance as a "protective asset". The letters "PA" in the PACE-Score would then stand for "productive as well as protective assets". Such enlargement of "other assets" was not needed for the survey of Dhakuly village because of non-existence of life insurance among rural poor households.

Initially, any practical scheme of life insurance for primary earners of poor households can be started in the village, only as a pilot project and after considerable spade work is done by BRAC and other similar agencies, both official and non-official, in the form of creating awareness through social education and working out the logistics in detail.

From the conceptual point of view, the following line of argument about the superiority of PACE-Score over income is worth elaborating as a step-by-step reasoning:

- (i) life insurance of primary earners of rural poor households is not expected to increase their current income, but could contribute to their security in the face of catastrophe;
- (ii) since current income of poor households is not directly increased by life insurance, the income variable by itself, cannot measure the contribution of life insurance to security;
- (iii) the PACE-Score is capable of measuring the contribution of life insurance to the security of poor households (as mentioned above);
- (iv) therefore, for purposes of assessing the progress towards security, of rural poor households who are exposed to relatively greater risks of catastrophic occurrences, the

PACE-Score is more relevant, meaningful and effective than income.

26. Possibilities of making more funds available for credit to the rural poor and especially the women should be explored. Such credit should be mainly available for enabling an increase in the economic viability of households. There are two reasons for this suggestion :
- a) at present the only sources of credit for the rural poor are NGOs like BRAC who receive aid from abroad. An internal organisation and/or pressure group should perhaps be developed in order to diversify sources of credit (the traditional source of credit was of course the moneylenders who charge exorbitant interest and can also use this for exploitative purposes).
 - b) women should have access to credit in their own rights, especially as in the poorer households they assume major responsibility for making good use of the credit, as was observed from the field survey. At the time of the field survey, BRAC staff had further pointed out that women on the whole had a better repayment record than the men belonging to the poorer households.
27. The primary use of additional credit should be as an investment in productive assets other than land and homestead. There are two reasons for this :
- a) for landless or near-landless households, other productive assets (eg cows, goats, sheep, poultry,

vegetables, fruit trees, spinning wheel, etc.) have a particularly significant role to play towards increasing their economic viability.

- b) such productive assets will add significantly to the earning capability of women within the household sector ; this is because the field survey established that it was the women who were largely engaged in activities revolving around these productive assets.

28. For efficient use of credit and productive assets, it is important to develop and diversify training schemes, primarily for women, along the lines followed by BRAC. Such training should be of the following types :

- a) prevention of disease and death of animals which is one of the catastrophes at the household level and is very common.
- b) increasing the output of products obtained from these assets eg milk, eggs, vegetables, fruits, etc.
- c) improving marketing skills and facilities.
- d) functional literacy and training for improving the keeping of accounts related to repayment of loans, sales of products and preventing expropriation.
- e) improving their organisation skills which will enable them to maintain their own group security beyond NGO intervention.

APPENDIX I

PROFILES OF RURAL POVERTY :

EVIDENCE FROM ASIA

Appendix 1Profiles of Rural Poverty : Evidence from Asia

The information presented in this appendix is taken largely from the ILO booklet of 1979* which summarises the important findings of the preceding ILO study of ' Poverty and Landlessness in Rural Asia '(1977). The findings of the study, and the general topic of ' poverty profiles ' has been discussed in some detail in Chapter 1 of this thesis. This Appendix is meant to support what was discussed in chapter 1, and its purpose is further to present evidence on poverty and poverty profiles from Asia in a stylised form. Its aim is to quantify the level of, and trends in, rural poverty by discussing the major correlates and causes of poverty in some eight Asian countries where the problem is marked. It is also considered useful to add some evidence from other parts of the developing world, especially Africa and Latin America, to provide a comparative perspective. Admittedly the evidence concerning these two continents is not as well documented as in the case of Asia but the few data provided give an indication of the magnitude of the problem there also.

Why has economic growth in developing countries so often been coupled with increasing poverty ? Experience of development in the rural areas of seven south Asian countries has been examined in an effort to identify the processes through which this occurs.

* ILO 1979, ' Profiles of Rural Poverty'.

Context of Poverty :

The causes of perpetual poverty and the form that it takes are linked to the nature of the society in which it exists. Charts 1 and 2 describe the basic structure of the seven countries studied.

Most have a very low income per head of the population, with only Malaysia in the middle income range of developing countries. But only in the case of Bangladesh has national income failed to keep pace with the growth in population. Most countries have increased their national income by more than 4% a year, while population has increased at around 2.3 % a year on average. This means the amount of income, in theory, available to every person in the region has increased on average by 2 % a year.

Chart 3 shows the dominant role agriculture plays in contributing to this income. Manufacturing never accounts for more than 20% of GNP. More often, industry contributes half this proportion. Agriculture provides most of the remainder and accounts for more than 60% of the labour force in doing so.

But while national income has been increasing, the benefits of growth have not been distributed evenly.

Charts 4a and 4b show that the poorest 20% of the population do not receive their fair share of national income: on average, only 6%. The richest 20%, on average, enjoy some 48% of national income, and the top 5% 22%. As well as being predominantly agricultural these countries have a high degree of inequality. (See Tables 1.1, 1.4, and 1.6 of this Appendix and Chart 10).

Rising poverty :

As a result of inequality in the distribution of national income, present rates of economic growth have not been sufficient to raise the standard of living of all the population.

Chart 5 shows the extent of poverty still persisting in the rural areas of eight regions of South Asia. It demonstrates that poverty is not going away. On average, 40% of rural people live below the poverty line; that is, they earn an income less than sufficient to supply their basic needs of food, health, water, housing and education. Behind these stark facts there is a mass of people condemned to hunger, malnutrition and ignorance.

But chart 5 also suggests something far worse. Not only is poverty refusing to go away, it may in some countries be on the increase. In seven of the eight cases studied the proportion of the population living below the poverty line was higher in the 1970s than it was in the 1960s. In poor countries like Bangladesh the proportion reaches a frightening 78% ; even in the Punjab, where the Green Revolution has raised incomes dramatically, the percentage of the rural population living in poverty has risen.

The increase is not a marginal one ; it is not a case of a few more people being slightly less well off. Many people exist on incomes well below the so-called poverty line (for a more detailed discussion of the poverty line see Chapter 1).

In Bangladesh between 1963 and 1974 there was a fivefold increase in the proportion of the population considered "extremely poor" ; that is, those with a maximum calorie intake only 80% of the calculated minimum. In Sri Lanka, while rice continued to account for 70% of the poorest group's expenditure, its actual per head

consumption fell drastically during the 1960s. In the poverty stricken region of Yogyakarta in Java per head daily consumption of calories fell between 1960 and 1969 by 16% from a level that was already two-thirds of the recommended intake for the region. (See Table 1.5 of this Appendix for data on poverty in Latin America).

Who are the poor ?

Everywhere it is the agricultural labourers, the landless and the near landless who form the core of rural poverty in Asia. In Uttar Pradesh 48 million people were living below the poverty line by the end of the 1960s, nearly all labourers or farmers with tiny plots of land. 93% of agricultural labourers were living below the poverty line. In Tamil Nadu in 1971 56% of cultivators, 85% of 'other workers' (mainly artisans) and 87% of agricultural labourers were living below the poverty line that year. In Indonesia, Malaysia, Pakistan and Sri Lanka the pattern of concentration of poverty among the small farmers and the landless is repeated.

Myths :

According to the "conventional wisdom" in development literature, as a country increases its income the benefirs will "trckle down" to even the poorest members of society. This should happen through the creation of more jobs as the economy expands, better wages as the country earns more and higher prices for farm produces as towns grow. The process can be accelerated and potential bottlenecks removed by the judicious allocation of government incentives and subsidies. It may all take time and the distribution may not be

equal, but the incidence of poverty and starvation should be reduced. This has not, in fact, occurred. Poverty refuses to go away. In trying to explain this, many people have argued that population growth has outpaced the rate at which national income and food production have been growing. Chart 2 shows that this is not true for the majority of Asian countries studied. In the past 20 years only Bangladesh has experienced a negative rate of growth per head of the population. Nor can it be argued that insufficient food has been produced.

Chart 6 shows the production of cereals, the staple of everyone's diet. Except in bad years like 1972, production has kept pace with population growth. The margin is a slender one at times, for both income and food, but, taken over-all, rapid population growth by itself cannot explain why, after 20 years of growth, more people are poorer. All else being equal, more than enough has been produced to raise incomes and feed everybody.

But not all else is equal.

The answer to why poverty has increased has more to do with the structure of the economy than its rate of growth. In a society characterised by extreme inequality of income and hence spending power, the very fact of inequality has a number of important consequences. The counterpart to the compression of the income of the poor is the concentration of the economic surplus in the hands of a minority. The way in which this surplus is used in turn largely determines the pace and nature of economic growth. Where the distribution of land is highly unequal the role of large land-owners is particularly crucial in determining the wages and incomes of the other members of rural society. (See Table 1.7 of this Appendix for data on land distribution).

Another reason for the persistence of poverty in rural areas is the pattern of investment in the country as a whole. (This point has been discussed in detail in Chapter 1).

Increase in landlessness, and decline in wages :

Further, the technological advancement in agriculture has failed to raise significantly the demand for wage labour. Often labour has been displaced and where the demand has been raised it has been absorbed by under-utilised family time rather than with hired labour. The sale of land by small farmers also points to the lack of alternative income-earning opportunities in the form of wage labour. (See also table 1.2 and 1.3 of this appendix for reasons given for sale of land).

Among cultivators the distribution of land is very unequal, despite frequent land-reform legislation. In India, often more than half of all land is owned by the top 10% of land owners, while the majority of farmers must be content with less than 1 acre. Chart 7 shows that, in the other countries as well, a large percentage of farms fall into the smallest size group.

Many small farmers are becoming more and more dependent on wage labour. As a result, agricultural labourers present a large and increasing section of rural society. The growth in their numbers has far outpaced the average growth of the rural population. Chart 8 shows their rise in India during the 1970s.

In this situation the failure of economic growth to secure a faster rate of job creation becomes crucial. With numbers increasing at the same time that employment is often falling, the wages of agricultural labourers have declined in many regions. Chart 9

shows that, at the very least, the real wages of agricultural labourers (adjusting them for inflation) fluctuate wildly from year to year. Some years they are relatively high, more often they are low. But, in three out of five examples, wages failed to rise at all, or even fell dramatically. As these wages relate to daily rates the decline in the number of days worked throughout the year means that the real income of an increasingly large section of rural society is falling sharply from its already unacceptably low levels.

Landlessness in an agrarian society presents an alienation from the principal source of income generation : land. The rise in landlessness means that fewer and fewer people in rural Asia can directly control their supply of food and income. In such a category we may also include the small farmer with insufficient land to feed his family and, in many cases, the tenant farmer who is deprived of any security over either his farm or his crops. The precariousness of such an agrarian structure becomes manifest when employment fails to increase or incomes fail to keep pace with inflation.

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Image redacted due to third party rights or other legal issues

APPENDIX II

ADDITIONAL DATA ON POPULATION AND ECONOMIC
SITUATION OF BANGLADESH

Basic Population Data :

1. Population (millions)	
IBRD, 1 January 1983	93.6
BBS, 1 July 1983	94.7
USAID, 1 July 1983	95.1
USAID, 1 January 1984	96.2
UN, 1985 (projection)	98.0
IBRD, 1990 (projection)	119.0
IBRD, 2000 (projection)	156.0
2. Population growth rate (percent)	
IBRD, 1981	2.9
BBS, 1983	2.3
USAID, 1983	2.4
3. Crude birth rate (per 1000 population)	
IBRD, 1981	47
BBS, 1982	35
USAID, 1983	41
4. Crude death rate (per 1000 population)	
IBRD, 1981	18
BBS, 1982	12
USAID, 1983	17
5. Infant mortality rate (per 1000 live births)	
IBRD, 1981	135
BBS, 1982	122
Females, BBS, 1982	119
Males, BBS, 1982	124
6. Child mortality rate (per 1000 children aged 1-4 years)	
IBRD, 1981	20

Basic Health and Nutrition Data :

1. Life expectancy at birth (years)	
IBRD, 1981	48
BES, 1982	55
Females, BBS, 1981	54
Males, BBS, 1981	55
2. Population per physician (persons)	
IBRD, 1980	8,775
BBS, 1982	8,810
3. Average daily caloric intake (calories)	
Dhaka Nutrition Survey (rural) 1975-76	2,094
(percent of minimum daily caloric requirement)	93%
IBRD, 1980	1,960
(percent of minimum daily caloric requirement)	87%

Education :

1. Adult literacy rate (percent)	
BBS, 1982	26
Females, BBS, 1982	16
Males, BBS, 1982	35
IBRD, 1980	26
2. School participation rates (percent)	
Primary school, BBS, 1982	67
Female share in Primary school enrolment (FREPD)	37
(FREPD, 1978)	
Secondary School, BBS, 1982	14
Female share in Secondary school enrolment	27
(FREPD, 1980)	
Higher education, BBS, 1982	1.2
Female share in higher education enrolment	18
(FREPD, 1980)	

3. Drop-out rates (percent)

Primary school, FREPD, 1980

Girls	75
Boys	45

Other Basic Data :

1. Urban population (percent of total population)

IBRD, 1981	12
BBS, 1981	11
USAID, 1981 (estimate)	14

2. Share of urban population in largest city (percent)

IBRD, 1981	30
------------	----

3. Income distribution (percent of total income)

Lowest 20% of households, IBRD 1973-74	6.9
Highest 20% of households, IBRD 1973-74	42.2

4. Land ownership pattern (percent share)

Lowest 10% of owners, IBRD, 1978	2
Highest 10% of owners, IBRD, 1978	49

5. Labour force (percent of population aged 15-64)

IBRD, 1981	55
------------	----

6. Labour force growth rates (percent)

IBRD, 1970-1981	2.9
IBRD, 1980-2000 (estimated)	3.1

7. Sectoral share of labour force (percent)	
Agriculture, IBRD, 1980	74
Industry, IBRD, 1980	11
Services, IBRD, 1980	15
8. Villages electrified (percent)	
Power development board, 1982	7.4

Aggregate Economic Data : (BBS)

1. Gross Domestic Product (factor cost, '000,000 tk.)

<u>Year</u>	<u>Current prices</u>	<u>Constant (72-73) prices</u>
1977-78	139,204	60,240
1978-79	163,909	62,813
1979-80	187,633	63,586
1980-81	219,799	67,514
1981-82	251,170	68,460
1982-83 (provisional)	269,597	70,529

2. Per capita domestic product (Taka)

1982-83 (provisional)	2,880
-----------------------	-------

3. Per capita gross domestic product (US \$)

1982-83 (provisional, using US \$ = Tk 23.76)	121
---	-----

4. Annual growth rate, gross domestic product 1977-78 -- 1982-83
(provisional) (percent)

Current prices	14.1
Constant 1972-73 prices	3.2
Implied GDP deflator	10.9
Per capita real growth rate (assuming a 2.6% population growth rate 1977-78 -- 1982-83)	0.6

APPENDIX III

ILLUSTRATION OF THE CALCULATIONS FOR MULTIPLIER

AND PACE-SCORE

The general method for the calculation of the multiplier and the PACE-Score has already been described in Chapter 7. In this appendix, the purpose is to provide an illustrative example for these calculations.

The example relates to Land owned by all the households of Dhakuly village. The following steps are followed (also described in Chapter 7) :-

1. Calculation of per capita values of land owned by each household, ie $\frac{\text{value of land owned}}{\text{household size}}$
2. Arranging these per capita values in ascending order with corresponding household numbers (as shown in Table A3.1)
3. Calculation of average of these per capita values (as shown in Table A3.1).

4. Calculation of multiplier by

$$\frac{\text{Percentage of households below the average value}}{\text{Average value} \times 10}$$

10 is used in the denominator so the average score is below 10.

5. Final PACE-Score for each household is calculated by

$$\text{Per capita value for household} \times \text{multiplier}$$

(see Table A3.2)

6. Similar PACE-Score and multiplier is calculated for each of the 10 components (not necessary to be shown here in such detail).
7. All the PACE-Scores for each component for each household are added up to derive the Total PACE-Score (not given).

Table A3.1 : Distribution of households by value of land per capita in Dhakuly village

Range of per capita values (in Taka)	Number of households	Total of per capita values (in Taka)
0	66	0
1-1,500	6	5,437
1,501-2,500	3	5,477
2,501-4,000	6	21,047
4,001-6,000	12	61,430
6,001-8,000	12	86,580
8,001-10,000	2	20,000
10,001-15,000	5	65,601
15,001-20,000	11	194,645
20,001-30,000	12	304,905
30,001-50,000	12	444,845
50,001 & over	8	640,233
TOTAL	155	1,866,200

Average value of land per capita = 12,040 Taka

Number of households with per capita value below the average = 109 = 70.3 % of total number of households (155).

Multiplier = $\frac{70.3}{12,040 \times 10} = 0.000584$

Table A3.2 : Calculation of PACE-Score for land owned by each household in Dhakuly village*

Household serial number	Value of land per capita (in Taka)	PACE-Score**	Household serial number	Value of land per capita (in Taka)	PACE-Score**
501	5,000	2.9	521	0	0
502	0	0	522	0	0
503	0	0	523	0	0
504	0	0	524	1,200	0.7
505	0	0	525	6,429	3.8
506	1,250	0.7	526	0	0
507	1,071	0.6	527	0	0
508	0	0	528	7,857	4.6
509	3,214	1.9	529	0	0
510	0	0	530	0	0
511	0	0	531	0	0
512	0	0	532	0	0
513	4,417	2.6	533	0	0
514	5,000	2.9	534	8,000	4.7
515	0	0	535	0	0
516	1,667	1.0	536	0	0
517	0	0	537	0	0
518	5,500	3.2	538	0	0
519	0	0	539	0	0
520	0	0	540	5,883	3.4

* This is shown only for the households belonging to Female/Male BRAC Sub-group, as the idea is to be illustrative only.

** Calculated by the use of multiplier 0.000584, derived in Table A3.1.

APPENDIX IV

ADDITIONAL DETAILS ABOUT THE CALCULATION AND

INTERPRETATION OF THE INSECURITY INDEX

The 'security line' has been described in Chapter 8.. Briefly, it is the value of the PACE-Score which is needed for achieving 'security'.

The formula for the Insecurity Index (given in Chapter 8) is the following :-

$$\text{Insecurity Index} = H (S + G - SG)$$

where H = Head-count ratio, ie

if n = total number of households

and q = number of households below the security line

then $H = \frac{q}{n}$ = ratio of households whose PACE-Scores
are below the security line

S = Security-gap ratio, ie

$$\frac{\text{Security line - average PACE-Score of households below the security line}}{\text{Security line}}$$

G = Gini ratio of PACE-Score of those below the security line (calculation of Gini ratio shown later in this Appendix)

The inspiration for the Insecurity Index has come from Sen's Poverty Index (described in Chapter 1). The precise axiomatic derivation of the Index is described in Appendix C of Sen(1981). The details are not necessary here : however, one point is worth mentioning, and that is the question of weights.

Weights :-

Sen has given bigger weights to bigger gaps. He has experimented with various types of weights but perhaps the most appealing is the following :-

for the smallest gap : weight = 1
 for the next largest gap : weight = 3
 for the next largest gap : weight = 5
 and so on.

The advantage of these weights is that

$$\text{Sum of } q \text{ weights} = q^2$$

ie. in the above example, sum of the three weights 1, 3 & 5 is equal to 9, which is equal to 3^2 .

Interpretation of the Insecurity Index :-

The lower the value of the Insecurity Index, the better the situation is : ie, for example, if the Insecurity Index is 0.37, then it means that the PACE-Score is 63 % of what is required for reaching 'security', and that the gap from the 'security line' is 37 %.

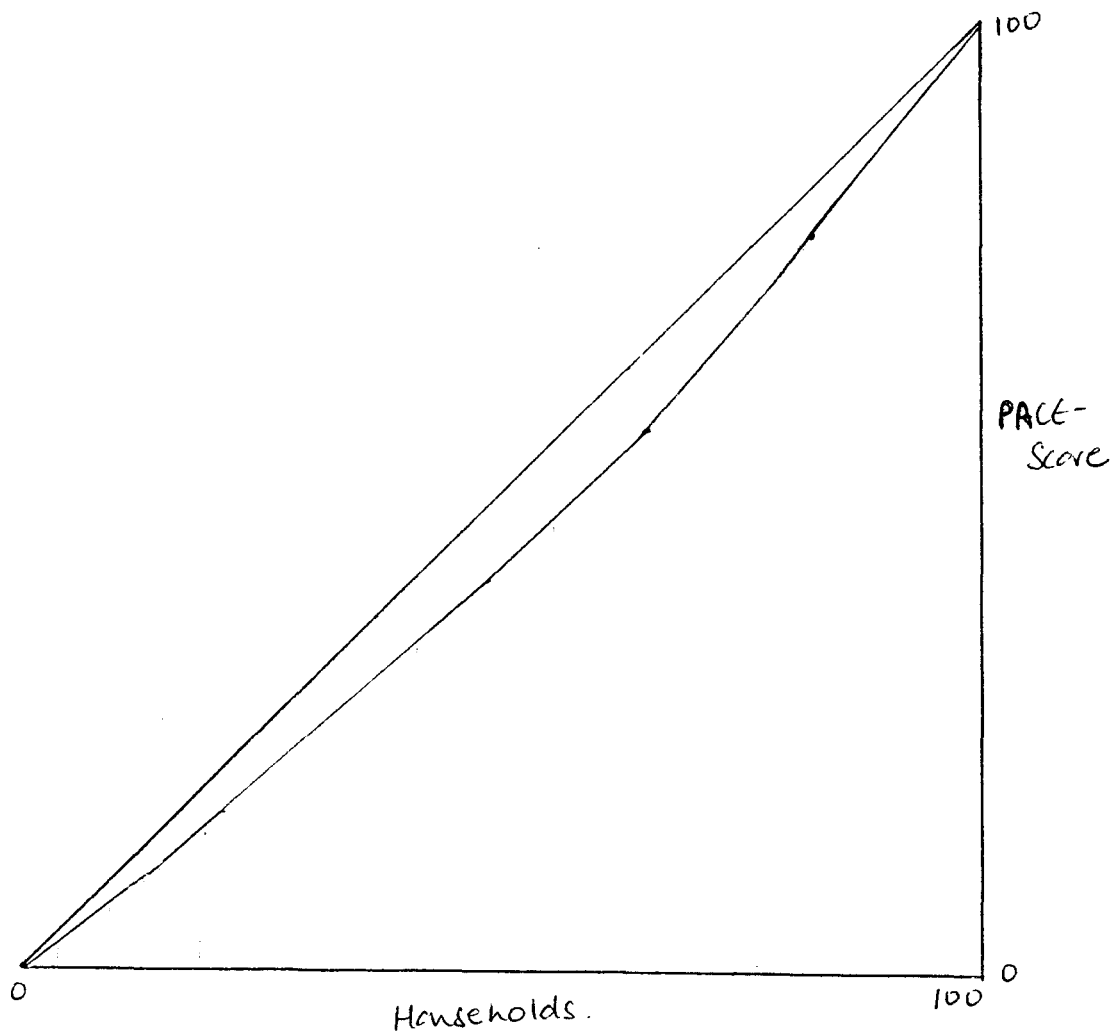
All values of the Insecurity Index fall between 0 and 1,
 where 0 = perfect security (ie there is no household below the security line)

and 1 = absolute insecurity (ie all households are below the security line, and their PACE-Score = 0)

Derivation of the Gini ratio : (Table A4.1)Example : For PACE-Score of households in Female/Male BRACSub-group

Range of PACE- Score	Number of households (f)	Cumulative f	Percentage value of cumulative f	Total PACE- Score	Cumulative total PACE- Score	Percentage value of cumulative total PACE- Score
20-29.9	1	1	2.5	26.8	26.8	1.5
30-34.9	6	7	17.5	198.8	225.6	12.4
35-39.9	4	11	27.5	151.2	376.8	20.7
50-44.9	7	18	45.0	301.2	678.0	37.3
45-49.9	7	25	62.5	335.8	1013.8	55.7
50-54.9	12	37	92.5	635.8	1649.6	90.6
55-59.9	3	40	100.0	170.4	1820.0	100.0
60-64.9	0	40	100.0	0	1820.0	100.0
65 & over	0	40	100.0	0	1820.0	100.0
Total	40	40	100.0	1820.0	1820.0	100.0

Figure A4.1 : Lorenz curve for PACE-Score of households
of Female/Male BRAC Sub-group :-



Calculations :-

$$\text{Gini ratio} = \frac{\text{Shaded area}}{\text{Total area of triangle}}$$

$$\text{Total area of Triangle **} = \frac{100 \times 100}{2} = 5000$$

$$\text{Shaded area} = \text{Total area of triangle} - \text{Unshaded area}$$

$$\begin{aligned} \text{Unshaded area} &= (\tfrac{1}{2} \times 2.5 \times 1.5)** + (\tfrac{1}{2} \times 15.0 \times 13.9)* \\ &\quad + (\tfrac{1}{2} \times 10.0 \times 33.1)* + (\tfrac{1}{2} \times 17.5 \times 58.0)* \\ &\quad + (\tfrac{1}{2} \times 17.5 \times 58.0)* + (\tfrac{1}{2} \times 30.0 \times 146.3)* \\ &\quad + (\tfrac{1}{2} \times 7.5 \times 190.6)* \\ &= 1.9 + 104.3 + 165.5 + 507.5 + 813.8 + 2194.5 \\ &\quad + 714.8 \\ &= 4502.3 \end{aligned}$$

$$* = \text{Area of triangle} = \tfrac{1}{2} \text{ base} \times \text{height}$$

$$** = \text{Area of trapezium} = \tfrac{1}{2} \text{ height} \times \text{sum of parallel sides}$$

$$\begin{aligned} \text{Therefore, shaded area} &= 5000 - 4502.3 \\ &= 497.7 \end{aligned}$$

$$\begin{aligned} \text{Therefore Gini ratio} &= \frac{497.7}{5000} \\ &= 0.10 \end{aligned}$$

Derivation of the Insecurity Index for households in Female/
Male BRAC Sub-group :-

$$\text{Insecurity Index} = H (S + G - SG)$$

$$H = \frac{q}{n} = \frac{40}{40} = 1$$

$$S = \frac{65.0 - 45.5}{65.0} = 0.30$$

$$G = 0.10$$

Therefore Insecurity Index

$$= 1 (0.30 + 0.10 - 0.30 \times 0.10)$$

$$= 1 (0.40 - 0.03)$$

$$= 0.37$$

APPENDIX V

COPY OF QUESTIONNAIRE IN ENGLISH AND BENGALI

Name of interviewer: _____

SURVEY OF ECONOMIC ACTIVITIES and ASSETS —
QUALITATIVE CHANGE DUE TO WOMEN'S PROGRAMME
WITH BRAC (UPJILLA : MANIKGANJ)

Person interviewed: _____

Date of interview: _____

Union: _____

Village: _____

Name of head of household: _____

Number of members in household including children: _____

Amount of land owned (in decimals): _____

Total household income in last year: _____ Taka.

Women's share of income in last year: _____ Taka.

Information on members of household.

Name and Sex	Relation to head of household	Age	Occupation	Marital Status	Membership with BRAC & year joined	School attended & class	Adult social education class attended	Type of skill or Training	Acceptance of Family Planning

In the last five years did any child of less than 1 year of age die?

Yes: _____ No: _____ If yes, how many? Number: _____

Sources of Income of all women members of household (last month):

Source of Income of all household women.	Number (Quantity) produced	Quantity consumed in household	Quantity sold or exchanged.
Processing of Grain			
Livestock / fish			
Milk & other dairy			
Poultry / Eggs			
Vegetables			
Trees / fruit			
wage labour / food for work			
Grass / Jute / Bamboo craft			
Block - printing			
Spinning & weaving			
Tailoring / Embroidery			
Sericulture / Pisciculture			
Other handicraft			
Maid			
Health worker			
Teacher			
Veterinary worker			
Other service			
Beqqing / charity.			

Total household income in last month : _____

Source of men's income : _____

What percentage of your owned land is irrigated : _____

Quantity of land operated	Main crops produced	Total Quantity of Crops	Quantity of crops given away	Quantity of crops received

Use of Household Income last month :-

Item	Food		Clothes & Footwear for family		Health	Education	Type of improvement in homestead	
	No. of meals yesterday	Quality (use code)	Item	Quantity			Tin roof	Thatched roof
Amount spent in 1 month								

Code: Ata = A ; Rice = R ; Fish = F ; Vegetable = V ; Dal = D ;
 Meat = M ; Chicken = C ; Eggs = E ; Aloo = P ; Pumpkin = K ;

Losses in last twelve months :-

Death of cow	Death of male or female earner	Death of other animal	Death of Poultry	Sale of Land	Sale of Other Asset

Any help received to meet the losses and from whom :-

Type and Use of Saving in last twelve months :-

Earning members	Type of Saving (eq. cooperative society, bank)	Amount of Saving (money in bank or used for buying)	Use of Saving (buying livestock, equipment etc.)
All women			
All men			

Productive Household Assets :-

4/-

Name of Asset	Quantity owned	Quantity shared	Value
Plough			
Spade			
Grass-cutting scissors			
Dheki			
Bullock cart / Horse cart			
Bullock / Horse			
Cow / Buffalo			
Cart			
Goat / Sheep			
Chicken / Duck			
Fishing Net			
Tea shop			
Barber's Shop			
Carpenter's equipment			
Blacksmith's equipment			
Shoemaker's equipment			
Sewing machine			
Spinning wheel			
Handloom			
Potter's wheel			

Name of Asset	Quantity owned	Quantity shared	Value
Embroidery equipment			
Kerosene stove			
Tube - well			
well			
Cycle			
Rickshaw			
Boat			
Land owned			
Pond owned			
Homestead owned			
Coconut tree			
Date tree			
Mango tree			
Jackfruit tree			
Bamboo tree			
Beetlenut tree			
Papaya tree			
Lemon tree			
Guava tree			
Banana tree			

ଆବେଦନକାରୀଙ୍କ ନାମ:-

SURVEY OF ECONOMIC ACTIVITIES and ASSETS

QUALITATIVE CHANGE DUE TO WOMEN'S PROGRAMME

WITH BRAC (UPJILLA : MANIKGANJ)

ଆବେଦନକାରୀଙ୍କ ନାମ:-

ଆବେଦନକାରୀଙ୍କ ନାମ:-

ପରିବାର:-

ଆସ -

ପରିବାରର ସଭ୍ୟଙ୍କ ନାମ:-

ପରିବାରର ଗୋଟିଏ ସଭ୍ୟଙ୍କ ନାମ:-

ପରିବାରର ଗୋଟିଏ ଛାତ୍ରର ପଢ଼ିବା ସ୍ଥାନ (ଡିମିନିଷିଆ):-

କାହାଣୀର ସାମାଜିକ ସେବା କେଉଁ ସ୍ଥାନରେ ଥାଏ:-

କାହାଣୀର ସାମାଜିକ ସେବା କେଉଁ ସ୍ଥାନରେ ଥାଏ (ଡିମିନିଷିଆ):-

ପରିବାରର ସଭ୍ୟଙ୍କର ସମସ୍ତ ଉପାଦାନ:-

ସଭ୍ୟଙ୍କର ନାମ	ପରିବାରର ସଭ୍ୟଙ୍କର ନାମ	ବୟସ	ଲିଙ୍ଗ	ବିବାହିତ ଅବସ୍ଥା	ସ୍ୱାଧୀନ ସଭ୍ୟ କି ନା? ଯଦି ନାହିଁ ତେବେ କେଉଁ ସଭ୍ୟଙ୍କ ସହିତ?	ସ୍ୱଳ୍ପ ମାତ୍ରାରେ କାମ କରୁଛନ୍ତି କି ନା? ଯଦି ନାହିଁ ତେବେ କେଉଁ କାମ କରୁଛନ୍ତି?	କୋମଳ ବୟସ୍କ କାମ କରୁଛନ୍ତି କି ନା? ଯଦି ନାହିଁ ତେବେ କେଉଁ କାମ କରୁଛନ୍ତି?	ବୃଦ୍ଧ ବୟସ୍କ କାମ କରୁଛନ୍ତି କି ନା? ଯଦି ନାହିଁ ତେବେ କେଉଁ କାମ କରୁଛନ୍ତି?

କାହାଣୀର ସାମାଜିକ ସେବା କେଉଁ ସ୍ଥାନରେ ଥାଏ:-

କାହାଣୀର ସାମାଜିକ ସେବା କେଉଁ ସ୍ଥାନରେ ଥାଏ (ଡିମିନିଷିଆ):-

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