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POVERTY
CONCEPTS AND MEASUREMENT

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Before we can answer questions about the fate of the poor in the past, and what we can do to reduce poverty, certain preliminary questions have to be asked, if not answered.[1] These relate to the concept of poverty and its measurement. I shall not be concerned with the concept and measurement of inequality as such, only in so far as it bears on poverty.

Perhaps the first question is, how should we identify the poor? The common practice of using fractiles of income recipients -- deciles or quintiles or quartiles -- has its uses but also has serious defects.

First, these figures have often been applied to households rather than to persons, or adult-equivalents, and therefore make no allowance for the fact that some households are large, others small, some consist of children, others of older people.[2] There is considerable disparity in ranking incomes, including imputed incomes from home-produced goods and services (or expenditure, always including expenditure on self-produced goods) per household and incomes (or expenditure) per head. Large households tend to have low income per person but high income per household. However, ranking by household income approximates ranking by income per adult equivalent less badly than by income per person, because larger households tend to have a higher ratio of children to adults. Income per head is a much better measure of poverty than income per household. Michael Lipton notes that only under two circumstances might income per household be a better measure. First, if indivisible assets (a car or furniture) or other economies of scale in consumption or forms of joint consumption are important, dividing the flow of services by the number of family members would understate the level of welfare enjoyed by each. But this is not likely to be important in very poor families. Second, as we have seen, larger households tend to have a higher ratio of children to adults, and therefore their income approximates income per consumer unit more closely than income per person does.[3] Figures for the ideal measure, income per adult equivalent,

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[1] I am indebted for very helpful comments to Joachim von Braun, Marty Chen, Rolph van der Hoeven, Michael Lipton, John Mellor, Erik Thorbecke, and Andrew Weiss.

[2] See Michael Lipton, Demography and Poverty, World Bank Staff Working Papers Number 623, 1983, pp. 58-61 and G. Datta and J Meerman, Household Income or Household Income per Capita in Welfare Comparisons, World Bank Staff Working Paper Number 378, Washington D.C. 1980.

[3] To correct for these two factors, household equivalent scales have been suggested. These give lower weights to additional household members (e.g. children) when dividing the value of household expenditure by household size. See Angus Deaton and John Muellbauer, Economics and Consumer Behaviour, Cambridge University Press,

are often not available. Nor is it possible to give precise weights to males and females at different ages for total requirements to attain a given level of welfare.

Second, looking a bit deeper than mere statistics, and moving from the measurement to the causes of poverty, we may identify the poor by their social and economic class, people who lack physical assets, or have assets of only low value -- the landless workers, the proletariat, the small peasant who owns dry, unirrigated, poor land; or by residence -- the rural poor, the urban poor; or by their lack of human capital -- people with low educational attainments, stuck in low-paying jobs without access to retraining; or by ethnic group -- the tribes in India, the Muslims in Malaysia; or by the region in which they live, frequently the South, or the mountains, or areas distant from the capital city; or by the stage they have reached in the age cycle -- young families with children or the old; or by the fact that they suffer from barriersto entry into jobs or capital markets, such as discrimination on grounds of race or sex; or by sex, family size and age (and sex) of the head of the family -- households with many children and other dependants, single parent, female-headed families, widows (in India); or by the season of the year -- poverty rising in the rainy season; or by the fact that they are temporarily or chronically handicapped, to which some of the just mentioned conditions provide clues. Poverty has many dimensions, some of which reinforce each other, and concentration on deciles, even when adjusted for adult-equivalents and therefore the size and composition of households, relative price changes, post-tax incomes and social services provided free, may obscure some of these. We need supplementary information. Many of these conditions give strong hints, and some may give definite information, about whether poverty is likely to be permanent or temporary.

Third, knowing a household's or a person's share in total income does not tell us how long they have been in that fraction. Perhaps we need not be unduly worried if a student is poor (as long as poverty does not damage his health), if we know that he will be much better off later. But poor people's incomes tend to fluctuate from year to year, and from season to season within the year, depending on the weather and other hazards. These people will save in good years and dissave in bad ones. Consumption expenditure will, therefore, be a better measure of their poverty than income. (It has the additional practical advantage of being often more easily gathered than income data, which can be quite uncertain for owner-

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Cambridge, England, 1980 and "On Measuring Costs: with Application to Poor Countries", Journal of Political Economy, vol. 94, No.4, 1986.

operated farms or firms, for which no books are kept and for which the concept of net profits is often vague.)

Knowing how long the poor have been in the poverty group raises also other questions. Two societies with the same income distribution by deciles enjoy very different levels of welfare, if in one the poor move rapidly up in the income scale, while some new entrants start poor, whereas in the other the poor and their children are condemned permanently to languish in poverty. Or compare two societies, in one of which incomes are determined each year by a series of lotteries, voluntarily entered by people who love gambling, and who become rich and poor in quick succession, while in the other the same unequal income distribution that would result from such a lottery is permanent. Or consider a society in which there is no inheritance and everybody saves exactly the same amount each year between age 21 and 65. At any given moment, the index of inequality would be quite high, yet looking at lifetime earnings this could be a highly egalitarian society.[1]

Albert Hirschman has coined the expression 'tunnel effect', in analogy to a lane of cars stuck in a tunnel. If the cars in one lane never move on, while the other lane passes them by, the people in the lane that are stuck become despondent. The despair and hopelessness bred of poverty is absent if there is hope that, though you are stuck for a while, there will soon be a chance to move on and perhaps even overtake the neighbouring lane. On the other hand, rapid mobility between income groups, other than through expected changing lifetime earnings, creates its own problems of insecurity, which a society in which status and related income are more permanent, is spared.

Over a person's life, there are normally periods of greater and smaller poverty. Young parents with small children, and old retired people are sometimes poorer than young parents without children, both of whom are working, or young, income-earning adults, still living with their parents but yet unmarried. Life-cycle poverty tends to be less severe than lifelong poverty because it can be partly alleviated by borrowing.[2] But life-cycle poverty is probably less important in developing countries than in

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[1] The example is taken from Brian Barry, "Claims of Common Citizenship", The Times Literary Supplement, London, No 4,47, January 20-26 1989, p. 52. The article is a review of Henry Phelps Brown, Egalitarianism and the Generation of Inequality, Clarendon, Oxford, 1988, where a similar example is given.
[2] For a discussion and considerable evidence on this, see Michael Lipton, Demography and Poverty, World Bank Staff Working Papers Number 623, Washington D.C. 1983, pp. 54-57.

industrialized ones, where the nuclear family is more pronounced, and where poverty is more the result of achievement than of ascribed status.[1]

At the same time strokes of misfortune do hit families in developing countries and may cause temporary poverty. Lipton cites Gaiha, who has found substantial mobility in and out of the two or three lowest deciles. Lipton suggests "that this mobility is due mainly, not to life-cycle factors, but to the fact that different households and villages, in any of two given years, are hit by (a high incidence of) environmental or personal misfortune."[2]

For poor women, however, life-cycle poverty can be severe; especially for female heads of households without adult males to help (as a result of death, divorce, illness, absence or disability). Among the poorest of the poor are young widows and elderly individuals with no adult male to help manage the family enterprise or negotiate the tenancy, labour or credit problems.

Though poverty and vulnerability are often equated ("vulnerable groups" standing for the poor), Robert Chambers correctly distinguishes between them. "Poverty can be reduced by borrowing and investing; but such debt makes households more vulnerable."[3] There are trade-offs between poverty and vulnerability (or between security and income).

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[1]See Michael Lipton, "Who Are the Poor? What Do They Do? What Should They Do?" Lecture to the Center for Advanced Studies in International Development, Michigan State University, East Lansing, Michigan, March 13, 1988, pp, 16-18 and the references given there to Paul Schultz and R. Gaiha. Lipton distinguishes between disturbances causing temporary poverty that (a) are environmental or due to the family; (b) are predictable or irregular; (c) affect a few or entire communities.

[2] Loc. cit. p. 17. Robert Chambers writes movingly, "Among the physical factors which impoverish, accidents have been neglected, yet many of the poor are exposed to disabling accidents. Rural activities such as quarrying, mining, fishing, hunting, building, brick-making, ploughing, and herding, and urban activities -- in factories, transport and construction -- are often physically hazardous. The resulting accidents are rarely counted and little considered in the literature, yet again and again, individual case studies of destitute households reveal an accident as the event which impoverished -- disabling an adult, especially a breadwinner. At a sudden blow, the body, the poor person's greatest and uninsured asset, is devalued or ruined. From being an asset, at one stroke it becomes a liability that has to be fed, clothed, housed, and treated. A livelihood is destroyed, and a household made permanently poorer." "Editorial Introduction: Vulnerabiliy, Coping and Policy," in IDS Bulletin, April 1989 vol 20 No 2, Institute of Development Studies, Sussex, p. 4. Misfortune can lead to permanent poverty.

[3] Robert Chambers, *loc. cit.*, p. 1.

Vulnerability is a function of external risks, shocks and stress, and of internal defencelessness.

Next, we may ask, is poverty absolute or relative? Poverty lines vary between climates, cultures and social and economic environments. The poverty line for the USA is at a substantially higher income than that for Bangladesh. The US Bureau of the Census publishes figures showing that 15 per cent of Americans live below the official poverty line. Clearly, these are much better off than the majority of Bangladeshis. Is there a component in poverty that has to be defined in relation to the mean (in which case poverty is inevitable, for there will always be some below the average), or to the bottom of the 80 per cent above the lowest 20 per cent, or to one-third of average national income per head, or to some other reference of what is regarded as a minimum decent standard in a society? Some authors regard all poverty as relative, but this is surely confusing inequality -- an evil, but a different evil -- with poverty. Everyone in a society can be equally starving, and we would not want to say that they are not poor.[1] Some measures of inequality give greater weight to income distributions that are unfavourable to the very poor, and thereby catch an element of what we mean by "relative poverty". A. B. Atkinson defines what he calls "the equally distributed equivalent income" of a given distribution of total income. It is that level of income per head which, if enjoyed by everybody, would make total welfare exactly equal to the total welfare generated by the actual income distribution. Atkinson's measure is 1 minus (the equally distributed income divided by the average actual income), and therefore varies between zero and one.[2]

Karl Marx wrote about the man who lived in a small cottage and was perfectly happy until a neighbour came along who constructed a palace.[3] Then the cottager began to feel deprived. Relative deprivation is deprivation that results from comparing our level of living with that of a reference group with higher incomes.[4]

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[1]The opposite is more difficult to establish. It might be thought that it is logically quite possible to have great inequality combined with the absence of absolute poverty. But, analytically, in such a society the relative component in poverty (or, as it is called in this context, in deprivation) will become more pronounced, and, empirically, it is not easy to think of many societies in which great inequality is combined with absence of absolute poverty. Perhaps Kuwait is the exception that tests the rule.

[2]A. B. Atkinson, The Economics of Inequality Clarendon Press, Oxford, 1976.

[3]Karl Marx, "Wage Labour and Capital" in Karl Marx and Frederick Engels, Selected Works, volume 1, pp. 930-94, Foreign Languages Publishing House, Moscow 1958.

[4]Some forms of conspicuous consumption by the rich are enjoyed by those with lower incomes. The British royal family's stage coach and the gold-plated car of a couple

It is, however, important to note that not all poverty resulting from rising average incomes is relative; absolute poverty can also result from higher average incomes. A. K. Sen analyses this by saying that poverty can be an absolute notion in the space of capabilities, though relative in that of commodities or characteristics. [1] A number of different factors can account for this. Some of these are the result of goods and services either ceasing to be available or rising in price more than money incomes; others of changes in conventions and laws; others again of deeper psychological causes, such as shame at not being able to afford what has become socially necessary.

If the benefits from a primary education depend on watching certain television programmes at home, those who cannot afford a television set are absolutely worse off, when the average family in that society acquires a set.[2] The television set does not reflect a new need that arises as incomes rise, but satisfaction of the same need (to be educated) requires a higher income. The poor in California are absolutely deprived if they do not own a car, for public transport has deteriorated as a result of most people owning cars. The wide availability of refrigerators and freezers affects the structure of retailing and impoverishes those without these durable consumer goods.[3] Or, turning to low-income countries, as some groups get richer, land is diverted from producing grain to producing fodder crops or meat and dairy products, so that grain becomes more expensive, possibly raising poverty among the poor. In these cases the structure of supply is altered unfavourably to the poor. Or if an essential good is in inelastic supply, the growth of income of a particular group may raise its price so much that the poor are worse off.

In a richer society poor people may be forced to buy over-specified products to meet more essential needs: food that is processed, packaged, advertised, and correspondingly more expensive; drip-dry shirts, even though they may prefer to iron a cheaper, no longer available shirt themselves. It is as if one had to buy a Dior dress in order to keep warm. The disappearance of low-cost items as incomes rise is well reflected in

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called Sir Bernard and Lady Docker gave pleasure to readers of the mass journals. So must the pictures of the life styles of the rich and famous disporting themselves in *The New York Times'* "Evening Hours." Whether the same is true of the parties by Mr Forbes and Mr and Mrs Steinberg is an open question.

[1] A. K. Sen, "Poor, Relatively Speaking", chapter 14 in Resources, Values and Development, Basil Blackwell, Oxford, 1984.

[2] T. C. Cooper, "Poverty", unpublished note, 1971, quoted in A K Sen, Resources, Values and Development, Basil Blackwell, Oxford, 1984, p. 336.

[3] A. K. Sen, op. cit., p. 337.

Marie-Antoinette's admonition to the poor, when bread was short, "Let them eat cake!" (Rousseau had referred to it much earlier.)

Then there are changes in conventional standards and legal restrictions that accompany greater prosperity, which may be unfavourable to the poor. If you are a rural dweller, you can pitch up a tent that provides shelter against the elements. But if you live in New York City, you must not put up a tent in Madison Avenue. In the bush you can wear only a loin cloth, but if you work in London you have to wear a shirt, suit, tie and shoes, and perhaps a neatly rolled umbrella. Higher minimum standards of housing are imposed on you by the higher incomes of the city dwellers, or by restrictions on what structures you can put up.

Adam Smith wrote that customary standards also determine what is a necessity.[1] To have no shoes in England is to be deprived of a necessity, though this is not so for women in Scotland, and for either men or women in France. But the shame that the shoeless feel when appearing in public in a society in which wearing shoes is part of social custom is not relative; they are not more ashamed than others. It is an absolute deprivation.[2] Peter Townsend reports that it may be impossible to avoid shame in the nineteen eighties in London if one cannot give one's children treats.[3] These feelings might in turn derive from a sense of lack of participation in community life, or lack of self-respect.

To view shame in the face of others possessing more goods as an absolute form of poverty leads, however, to somewhat odd conclusions. As Robert H. Frank has noted, "we may be prepared to believe, on the one hand, that the millionaire bond trader Sherman McCoy and his wife in Tom Wolfe's novel *Bonfire of the Vanities*, really do *require* a chauffeur and limousine in order to transport themselves without shame to a dinner party just a few blocks from their apartment. On the other hand, few of us would feel comfortable calling them *impoverished* if they were suddenly deprived of their car and driver."[4]

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[1] Adam Smith, An Inquiry into the Nature and Causes of the Wealth of Nations, London Everyman, Home University Library, 1776.

[2] A. K. Sen, "Poor, Relatively Speaking", chapter 14 in Resources, Values and Development, Basil Blackwell, Oxford, 1984.

[3] Reported by Geoffrey Hawthorn in Introduction to Amartya Sen, The Standard of Living, p. xi.

[4] Robert H. Frank, review of Amartya Sen, *The Standard of Living*, in *Journal of Economic Literature*, June 1989, volume XXVII, Number 2, p. 666.

This view of shame also leads to odd remedies. They may lie more in the realm of psychology than of economics. Educating people not to be ashamed when they do not have shoes (or linen shirts, another example of Adam Smith's) but proudly to display their different life style, as the members of the German Wandervogel did before the First War, or the hippies more recently, is one cure. Or it may become possible to reduce such forms of absolute poverty by taking the shoes or the linen shirts away from the better-off, or by a heavy tax on shoes and linen shirts.

In view of the fact that absolute poverty is partly a function of average living standards, it is clear that "absolute" does not mean fixed in time. The absolute level of poverty can rise, as incomes increase. The capability of appearing in public without shame, of participating in the life of the community or of maintaining self-respect will vary with the conventions, regulations, and material comforts of a society.

Fred Hirsch in his book Social Limits to Growth [1] analyses positional goods. The absolute enjoyment of an uncrowded beach depends on the relatively superior knowledge, compared with that of others. Here again, it is absolute deprivation that is a function of a relative advantage. But it has always seemed to me that Hirsch drew excessively gloomy conclusions from the existence of positional goods. Many people enjoy crowded beaches. And not everyone wishes to become a Field Marshall. One of the happiest days in my life was when I was promoted from Private to Lance Corporal.

If, for the moment, we confine our attention to the head-count measure of poverty (we shall see in a moment that other dimensions are also important), the next question in assessing the fate of the poor is whether the absolute number of poor or the proportion of poor in the total population (the head-count ratio) has increased. With rapidly increasing populations, it may be thought that the concept relevant to judging the success of strategies in eliminating poverty should be the proportion of poor. It may also be asked, as discussed above, whether the members (and families) of the groups of poor people have largely remained the same or whether their composition has changed?

Next we must ask how we proceed from money income shares or income levels, on which we have plenty of data, but which are largely irrelevant, to real income shares or levels, which are more relevant to

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[1] Fred Hirsch, Social Limits to Growth, Harvard University Press, Cambridge, Mass, 1978.

assessing inequality and poverty? Ideally, we should have an index for the minimum needs cost of living, allowing for price changes and consequential substitution between items in the basket. Together with other indicators, discussed below, we might then make estimates of what Seebohm Rowntree,[1] at the turn of the century, in his research on poverty in York, called primary and secondary poverty. Minimum needs bundles, stipulated by nutritionists or other outsiders, are seldom sensible and often not feasible. But if we cost actual bundles bought, the question arises whose cost of living should be used: that of the poorest, the poor, or those on the borderline? It has been argued that the poorest are always in poverty, those above the borderline almost never, and that it is the cost-of-living of those on the borderline that matters.

Primary poverty is defined as the inability to command enough income (or expenditure) to buy the bare necessities of life. This poverty line is usually constructed by estimating the cost of a minimum diet of essential food items and the fuel needed to prepare it. This can be done either in a rather mechanical way, by calculating the cost of a strictly minimum needs diet; or, it can be done better by allowing for the behaviour of actual consumers and observing how they spend their money on food. Having calculated the cost of an empirically observed, appropriate, minimum diet, and having discovered that non-food essential items such as clothing and lighting absorb about 20 per cent, these are added. This percentage has again been found empirically to be the irreducible minimum of income or expenditure spent on items other than food.[2]

There may be an inconsistency in this way of arriving at a poverty line. The minimum food requirements are derived normatively, by calculating how much the minimum food requirements would cost; while the non-food items are determined by observing how much people actually spend. In order to remove the inconsistency, we would have to assume that what people *actually* happen to spend is what they *need* to spend on non-food items, clearly an unrealistic assumption. It might well be that, if the non-food items were also determined normatively, the poverty line would

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[1] B. Seebohm Rowntree, Poverty: A Study of Town Life, London, Macmillan, 1901.
[2] See V. Dandekar and N. Rath, Poverty in India, Poona, 1971. The authors take data from the Indian National Sample Survey and record, for rural and urban consumers, the percentage distribution of expenditure on foodgrains and substitutes, other items of food, fuel and light, clothing, and others. They find that in 1960-61 more than 90 per cent of the expenditure of the poor was devoted to food and fuel for cooking. These are the ultra-poor.

be quite different, probably higher.[1] On the other hand, the poverty line does not comprise public services that are free, such as education and health services.

Since the needs of children are less than those of adults, (and since there are economies of scale in food expenditure in households) we should calculate the income (or consumption) per adult-equivalent. This would indicate the shortfall of income (or consumption) for a typical member of that group, e.g. a member of a household of a given age- and sex-composition to obtain the required amount of calories. We then count the number of people falling below this line, and find the ratio of these to the total population. This is the head-count ratio. But this ratio tells us neither how far below the poverty line the poor are, nor how poverty is distributed among them. Therefore, in addition the income-gap measure has been used. It measures the average income shortfall of all the poor as a proportion of the poverty line. But these two measures do not tell us how poverty is distributed among the poor. A. K. Sen has added a measure of the distribution of poverty among those below the line.[2] "One gets a measure of poverty P that depends on three parameters, viz., the head-count ratio H, the income-gap ratio I as a proportion of the poverty line and the Gini coefficient G of the distribution of income among the poor:

$$P=H[I+(1-I)G]$$"[3]

A criticism of this measure of poverty is that the weights used for the shortfall from the poverty line depend on the rank order that a poor person occupies among all the poor. The severity of someone falling by $ 1000 short of the poverty line depends on how many poor are ahead of him. "Imagine a parade in which everyone walks past in order of their income; what the rank order measures is how far you are from the person just at the poverty line." This introduces an element of relative deprivation (though within the poverty range) into a measure of absolute poverty.[4] Sen argues

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[1] The poverty line is established by multiplying the money required to buy the food basket by the reciprocal of the ratio of food expenditure to total expenditure. Since this ratio is higher, and the reciprocal therefore lower, for poor people than for the better off, if the latter ratio is chosen, the poverty line is raised.

[2] A K Sen, "Poverty: An Ordinal Approach to Measurement", Econometrica, 44, 1976.

[3] Theorem 1 in loc. cit.

[4] See A. B. Atkinson, "Original Sen", New York Review of Books, vol XXXIV, Number 16, October 22, 1987, p. 43. The Foster-Greer-Thorbecke class of poverty measures overcomes several limitations of Sen's measure. In particular, it is decomposable in the sense that total poverty of a group is a weighted average of the levels of poverty of the subgroups. See James Foster, Joel Greer, and Erik Thorbecke "A Class of

in defence of this that "the lower a person is in the welfare scale, the greater his sense of poverty."[1]

Another possible criticism of measures such as Sen's and other similar scalar measures of poverty is that they are trying to catch too much in a single indicator, valid for all dimensions of poverty, for all countries, at all times. The ability to present a single figure has great attractions, but also costs. Some might prefer to disaggregate different dimensions or aspects of poverty and present them distinctly.

This could be done by a vector measure of poverty, such as the "Dissatisfaction of Basic Needs." People are asked about some aspects of basic needs: e.g. for education, the questions are about access to primary schools, level of education of the head of the household, dependency ratio, etc. For shelter, the questions may be about overcrowding, the quality of water, access to sanitary facilities, the precariousness of the residential

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Decomposable Poverty Measures" Econometrica, 52 (3), May 1984 and Joel Greer and Erik Thorbecke, "A Methodology for Measuring Food Poverty Applied to Kenya," Journal of Development Economics, 24 (1986), pp. 59-74. The measure is

$$P = \frac{1}{n} \sum_{i=1}^{q} \left(\frac{g_i}{z} \right)^a$$

where n is the total number of households, gi is the income shortfall of the ith household, z is the poverty line, and q is the number of poor households below the poverty line. This measure raises the proportionate shortfall from the poverty line to a power a, the magnitude of which reflects concern for this shortfall. When a=0, reflecting no concern for the depth of the shortfall, the measure becomes the head-count ratio. When a=1, reflecting uniform concern for the depth of poverty, the measure reduces to HI, the product of the head-count ratio and the income gap ratio. When a exceeds 1, the measure can be used to show any degree of heightened sensitivity to the poorest of the poor. For certain values of a, the poverty aversion parameter, it satisfies practically every desirable axiomatic property a poverty measure would be expected to satisfy in addition to being additively decomposable, a great advantage in any empirical application. It overcomes the rank ordering limitation since, for example, for a=2, the poor are weighted according to the square of their shortfall. By raising the proportionate shortfall from the poverty line by a power x, the measure, therefore, shows heightened sensitivity to the poorest of the poor. It allows for aggregating poverty measures for different groups, for different food preferences, and for different prices. This measure has been extensively used in both theoretical and empirical applications. It has also been applied to measuring food poverty, based on typically consumed diets, in Joel Greer and Erik Thorbecke, "Food Poverty Profile Applied to Kenyan Smallholders," Economic Development and Cultural Change, vol. 35, No.1, October 1986, pp. 115-141.

[1] Michael Lipton shows that the second derivatives of the Sen index have unacceptable properties. See "A Problem in Poverty Measurement," Mathematical Social Sciences, North-Holland 10 (1985) p. 91-97. He proposes a simple measure for the ultra-poor, among whom income cannot be very unequal and G=0, and two separate measures for the moderately poor.

structure, etc. Similar questions may be asked about food, health, clothing, fuel or transport. If the answer to *any one* of these questions shows an inadequate level, basic needs for that household are not satisfied and it is counted as poor. This multidimensional measure does not allow for substitution between different basic needs.

Secondary poverty Rowntree defined as a situation in which real incomes are adequate to buy the minimum needs basket, but for one reason or another (he identified drink, gambling and inefficient housekeeping) the poor do not spend the money on satisfying these needs. Primary poverty is in<u>suff</u>icient resources, secondary is in<u>eff</u>icient use of adequate resources. The distinction gained in sharpness when A. K. Sen analyzed the standard of living as "capabilities" and "functionings", which refer to the capacity to convert resources into well-being. Primary poverty refers to lack of resources, secondary to a flaw in the conversion mechanism.

In getting at primary poverty, money income has to be corrected for price changes. General consumer price indexes may not be relevant to determining the price changes of the goods bought by the poor. There are five distinct issues.

First, in developing countries, even more than in developed countries, different groups do not face the same prices for the same goods. The urban cost-of-living is higher than the rural, and costs vary from region to region. For this reason money income shares deflated by a general urban price index may overstate inequalities and rural poverty. Food in rural areas is between 5 and 15 per cent cheaper than in urban areas. Unfortunately, lower average rural incomes more than compensate for this effect and raise the incidence of poverty in rural areas.

Second, different groups consume different goods, and the same goods in different proportions. Prices do not change in the same proportion for all groups. Food forms a higher proportion of total expenditure for the poor (and within food, coarse grains), and if its price rises by more than average prices (and that of coarse grains more than those of other food items), poverty is underestimated by money income shares deflated by a general price index (or by a general food price index). The same problem arises for both cross-section and time series data.[1]

[1] In rural India cereal prices for different decile groups of the population moved unequally in the Nineteenfifties and sixties. The average price of cereals has risen by more for the poor than the rich. This was due partly to higher price rises for coarser cereals, normally consumed by the poor, and partly to a shift to superior cereals in the

Third, as different prices change in different proportions, consumers will substitute cheaper food items for more expensive ones. Ideally, the new basket bought should be the basis for calculating changes in real income.

Fourth, we have already seen that with rising average standards certain items, especially important to the poor, may cease to be available and be replaced by more expensive items; and the same items may be subject to more sophisticated treatment through more packaging, a higher degree of processing, advertising, or types of 'improvement' which raise their costs to the poor, especially the urban poor and subsistence farmers switching to cash crops and beginning to be dependent on market purchases.

Fifth, some goods and services are provided free to the poor, but they are rationed. If, for example, health services are provided without a monetary charge, but the queuing time has lengthened, this is equivalent to a rise in the price of these services. Such changes do not show up in price indexes.

In trying to measure poverty we may envisage the process as the removal of six veils. The removal of each veil gets us nearer the facts that we want to measure, but the outer veils are not therefore unnecessary. First, there is money income, which does not reveal anything about changes in the prices of the goods and services bought.

Second, there is real income, adjusted for changes in the general price level. Third, there is real income adjusted for the region-specific, and commodity-specific purchases of the poor, and for the non-availability of important items. Compared with the money and effort that have gone into calculating international purchasing power comparisons, rather little has gone into comparisons of purchasing power of different income groups. But even the measure of real income has certain defects. It ignores the welfare derived from leisure. Attempts to estimate the value of leisure run into problems about what value to attach to it.

The concept does not always include non-marketed and non-priced subsistence income, such as that from crops grown and consumed within the household, or the services of housewives. Sometimes attempts are made

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consumption basket of the poor. See Pranab K. Bardhan, *Pattern of Income Distribution in India: A Review*.

to impute these. It fails to account for free social services and the benefits from pure public goods. And, if presented as an average for an income group (the nation, a province, a region, or the household), it fails to account for distribution. To some extent this deficiency can be overcome for national figures by using not the mean, which is biased by the few very large incomes, but the median or the mode, though reliable figures on these are rarely available. Life expectancy can also be incorporated, by giving not average annual income, but average lifetime income. Two societies, or two income groups, may enjoy the same average annual income, but in one people live, on the average, to age 50, in the other to age 75. While some of these distributional and social considerations can therefore, in principle, be incorporated in average real income per head of the income group, or the socio-economic group, there are many important aspects that remain concealed.

Fourth, there are direct measures of physical inputs to meet basic needs, such as calories consumed, yards of cloth bought, cubic feet of house room occupied, hospital beds available, school enrollment, letters posted, etc. These are still instruments or means, but they penetrate behind the veil of money and identify 'characteristics' of commodities and services. A measure of dietary energy intake relative to requirements (not easily determined) would be a good scalar measure of nutritional status, if supplemented by the type of impact indicator of basic needs discussed under the fifth heading, such as infant mortality, literacy and morbidity. "There is a strong case for using adequate food as the scalar indicator, at least for the presence of ultra-poverty. That is not because people, children or households 'live by bread alone'. It is because 'access to adequate sources of nutrition' turns out to be a very good, and in a sense self-weighting, summary of what most people mean by absence of ultra-poverty: health, shelter, education, even mobility, are all reflected in nutritional status, although not in a linear or otherwise simple way."[1]

This measure of adequate access to food is a particularly good indicator of ultra-poverty, of the standard of living of the poorest of the poor. They spend about 80 per cent of their income on food, and this proportion does not decline when their income rises, as it does for those above the ultra-poverty line. The Engel curve, viz., the declining proportion of income spent on food as income rises, (and the Bennett curve, viz., the

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[1]Michael Lipton, Who Are the Poor? What Do They Do? What Should We Do? Center for Advanced Studies in International Development, Michigan State University, East Lansing, Michigan, mimeo, pp. 6-7.

declining proportion of food consisting of starchy staples, such as cereals and roots) begins to register only above the range of ultra-poverty.[1]

Fifth, there are impact measures of health, mortality, literacy, morbidity, which register 'capabilities' or 'functionings'.[2] Weight for age or height for age (in children) and weight for height (in adults) are anthropometric measures trying to get at one purpose of nutrition: the full, healthy development of the body. These measures look behind income and what it is spent on, at the inputs in relation to requirements, and the skills and abilities of converting goods and services into human functionings. One may have more money and more food than another, but be more undernourished because she has parasites in her stomach, or is pregnant or lactating, or has to work harder collecting water and wood, or lives in a colder climate, or has a higher metabolic rate, or a larger body. Or, having less education, she may marry earlier, produce more children, and thereby raise the food requirements of the household. The impact is, moreover, determined not only by income and the ability to convert what it buys into nutritional status, but also by social services, provided free of charge.

Not only are average income (or expenditure) per he ad figures not very closely correlated to these human indicators, so that quite low-income countries perform well, while some high-income ones perform poorly, but IFPRI among others has done a good deal of research on how specific groups of small farmers and landless labourers change their nutritional status as their incomes rise. In some cases nutritional status drops as households enter into commercial transactions and their incomes increase, while they produce less of the subsistence crops. On the other hand, on the whole different basic needs indicators are very highly correlated with one another, so that recording the composition of poverty is less important than its level.

The nexus between income (or expenditure) per head and nutritional status is stronger in some areas of the world, such as South and East Asia (but not parts of West Asia) and weaker in others, such as Africa. The precise reasons for this are a matter for research, but it is plausible to assume that factors such as education (particularly in health and hygiene),

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[1] Michael Lipton, Poverty, Undernutrition and Hunger, Working Paper no. 597, World Bank, 1983; Who Are the Poor? What Do They Do? What Should We Do? Center for Advanced Studies in International Development, Michigan State University, East Lansing, 1983; and Bhanoji Rao, "Measurement of Deprivation and Poverty Based on the Proportion Spent on Food", World Development, 9, 4, 1981.

[2] Amartya Sen, The Standard of Living, The Tanner Lectures, Cambridge University Press, Cambridge, 1987.

infrastructure, such as safe water and sewerage, and the distribution of power within the household, between men, women and children, are important components. Clearly, this is a very important question for policy, because the answer to the question of the nexus will determine whether opportunities to earn income or the provision of public social services should have priority.

Finally, as we have already seen, much of the information on income and consumption and their impact is based on the household as the unit of observation. Removal of the sixth veil would reveal the distribution of the benefits from basic necessities and services within the household and show the impact on specific individuals, adults and children, men and women, able-bodied and disabled. As has been argued elsewhere in this paper, consumption per head is a better measure than consumption per household, where such figures are available. At least for Africa, there is no evidence that women or children are discriminated against inside the household. Amartya Sen has suggested that India could learn from Africa how to reduce the "gender-bias" against women, which produced "30 million missing Indian women", who would be living now, if African attitudes to women prevailed in India.[1]

If food is scarce, it is sensible to provide the chief bread-earner, who has to work harder, with an adequate diet, even if this is at the expense of other members in the family; otherwise everybody will lose.

So far we have assumed that the numerator is income or physical quantities and the denominator of these indicators is the number of persons, so that we get measures of income, or of food 'per head'. But not all persons have the same requirements. The correct indicator is 'adult equivalent', so that we can allow for the fact that children need less food than adults. This is, of course, quite independent of the question of whether some members of the household get less in relation to their requirements.

These human impact indicators have some advantages over income or consumption indicators, in addition to the fact that they measure ends rather than means, but they are useful as complements rather than replacements. Specific human and social indicators make, for some purposes, better sense than average income. The reason is that income distribution can be highly skewed (there are no upper limits to income),

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[1] A. K. Sen in *The Balance Between Industry and Agriculture in Economic Development.* Vol I: *Basic Issues.* Edited by Kenneth J. Arrow; Basingstoke: Macmillan/IEA, 1988.

while e.g. life expectancy or literacy have a definite maximum -- say 100 years (or 78 years, as the highest recorded average life expectancy) or 100 per cent. Any increase in life expectancy or literacy can therefore be welcomed. But the incidence of these indicators between different groups (e.g. men and women or rich and poor, or urban and rural) can throw light on the distribution of well-being in a society. We may not wish to attach the same value to one old man living another ten years, as to ten young women living each another year. The costs of the two options may also be quite different, one involving expensive, curative services, the other cheap, preventive ones. But the average increase would show up the same for the two options. Ideally, we should have indicators of life expectancy, infant mortality and literacy that are adjusted for inequalities in their distribution.

Another advantage is that they measure over- as well as under-development. There are diseases of affluence, just as there are diseases of poverty. A third advantage is that it makes sense and is realistic to attempt to reduce gaps (between rich and poor, men and women, urban and rural dwellers) in life expectancy, literacy and infant mortality, while it makes less sense, and is often neither feasible nor desirable, to reduce gaps in income per head. A fourth advantage is that impact measures sift 'goods' from items that should be counted as costs or 'anti-bads'. Food consumed to meet excess food requirements, resulting from unwanted pregnancies, or children that die, long walks to collect water or fuel wood, or in search of jobs, or between unconsolidated plots of land, show up not as increases in welfare, but as regrettable, though possibly avoidable, hardships. So do the higher housing and transport costs that urban dwellers incur, but that are counted as higher incomes, giving the false impression of higher levels of welfare.

It is, however, a drawback that there is no easy and clear way of aggregating these human indicators into a composite one. GNP appears to have great attractions of precision by comparison. But, as Amartya Sen asks, "Why must we reject being vaguely right in favour of being precisely wrong?"[1]

An attempt to aggregate three human indicator into a single index is the Physical Quality of Life Index (PQLI).[2] It gives one third weight each to life expectancy at year one, infant mortality and literacy. But it is not only

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[1]Amartya Sen, The Standard of Living, edited by Geoffrey Hawthorn, Cambridge University Press, 1987.

[2]Morris D. Morris, Measuring the Condition of the World's Poor: The Physical Quality of Life Index, London, Frank Cass, 1979.

arbitrary, it also aggregates where we should wish to disaggregate. We have already seen that, on he whole, different basic needs indicators are very highly correlated with each other, so that only one, say life expectancy, is needed and the PQLI is then unnecessary. But if in a society literacy indicators are good, while health is poor, we should want to know why, not blur the difference by a single index. The same criticism can, of course, be made of the GNP as a measure of welfare. When whisky, consumed by the rich, goes up and milk, consumed by the poor, down, the GNP figure may register an increase. But such inadequacies of the GNP measure were precisely among the reasons why we had to complement it by physical and impact indicators. And it could be argued that it is better to be vaguely right with the PQLI, than precisely wrong with the GNP. But with only three indicators, disaggregation is both easier and more illuminating than with the large number that go into the GNP. This is quite independent of the question as to whether prices -- market prices or shadow prices -- are a good set of weights with which to aggregate national income.

Moreover, the PQLI measures more the quantity of life, than its quality, although at low income levels illness often leads to death, so that longer lives tend to mean also healthier and more productive lives. But it does not include any measure of basic needs such as security, justice, freedom, human rights, etc. It would be possible to register a high PQLI in a zoo or even a well-run prison. And, although at low incomes illness often leads to death, the PQLI has no independent indicator of morbidity, absence of which is surely one of the most basic of needs.[1] Life can be nasty, brutish and long.

A more promising approach than to look for a single indicator is to use life expectancy as an integrating concept for human, social and demographic analysis. Sir Richard Stone and Dudley Seers have pioneered this system of accounts. The essence of this method is to express the life-time chances of different groups with respect to schooling, unemployment, illness, marriage, migration, etc. We can then say how many years (or months), on the average, a group spends in pre-school, primary, secondary, tertiary education; at a technical college, at a university; how many regularly employed, how many unemployed, how many on holidays, how many in retirement, pensioned, unpensioned; how many in a particular

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[1]See Paul Streeten with Shahid Javed Burki, Mahbub ul Haq, Norman Hicks and Frances Stewart, First Things First: Meeting Basic Human Needs in Developing Countries, for the World Bank, Oxford University Press, 1981, chapter 3 "The Search for a Suitable Yardstick", pp. 87-89, and Michael Lipton, Poverty, Undernutrition and Hunger, World Bank Staff Working Paper Number 597, 1983.

town, region or country, and how many outside it; we can add to these the months spent in hospital, or sick at home, or on a psychiatrist's couch or in prison; how many in a first, second, nth marriage, how many single, divorced, widowed. By following a cohort through a sequence of such states we can estimate the probability of transition from one state to another, for which data are more readily available than for the length of stay in the state. Such life-time profiles are useful supplements to income per head. Thus, for example, Dudley Seers' unfinished article[1] showed that a male born in Great Britain in 1971 could look forward to 68.9 years of life, during which 12.2 years would be spent in school, 41.3 years employed or self-employed, 2.7 unemployed. This profile could then be compared with profiles of those born in Brazil, Malaysia, Hong Kong, and with the profiles of different social classes, by sex, in Britain.

A quite different approach to measuring poverty is to ask people how miserable they perceive themselves to be. Such questionnaires can take different forms. For example, a sample of households may be asked not only what they consume but also what they consider an adequate level of consumption to be for different goods. Or people could be asked whether they think their income is too low, just adequate, or more than enough.[2]

Psychologists have not found a high correlation between such indices of satisfaction and some of the previously discussed measures of poverty. They have also found people at all income levels declare that about the same additional percentage of their actual income would be required to meet their needs and make them satisfied.

In re-surveying villages in Gujarat after twenty years N. S. Jodha found that the households whose real income per head had declined by

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[1] Dudley Seers, "Active Life Profiles for Different Social Groups: a Contribution to Demographic Accounting, a Frame for Social Indicators and a Tool for Social and Economic Analysis", 1982, unpublished. See also his "Life Expectancy as an Integrating Concept in Social and Demographic Analysis and Planning", *Review of Income and Wealth*, ser. 23, no. 3 (September 1977) pp. 195-203; Richard Stone, *An Integrated System of Demographic, Manpower and Social Statistics*, UNESCO, Paris, 1970; *Towards a System of Social and Demographic Statistics*, Series F, No. 18, United Nations Statistical Office, New York, 1975, and Paul Streeten *et. al.*, *First Things First*, Oxford University Press, 1981, chapter 3.

[2] Peter Townsend, in his *Poverty in the United Kingdom* (1979) asked a large number of questions, ranging from basic needs to styles of living and social interaction. The response scored 0 if the reply corresponded to the social norm, and 1 if it was below it. The responses were then added up for each household and showed a strong negative correlation to income. Below a critical level of income, the deprivation score rose sharply.

more than five per cent were, on the average, better off on 37 of their own 38 criteria of well-being. Besides income and consumption, they were concerned with independence, mobility, security and self-respect.[1] This should serve as a warning against attempting to simplify measures of poverty into single indicators, especially those relying on income and consumption.

There are numerous non-material benefits, often more highly valued by poor people than material improvements. Among these are good working conditions, freedom to choose jobs and livelihoods, self-determination, self-respect, liberation from persecution, oppression, violence and exploitation, the assertion of traditional cultural and religious values (often the only thing a poor person can assert), empowerment or access to power, recognition, status, adequate leisure time and satisfying forms of its use, a sense of purpose in life and work, the opportunity to join and participate actively in voluntary societies and social activities in a pluralistic civil society, with institutions that are layered between the individual and the central government. These are all important objectives, valued both in their own right and as means to satisfying and productive work. Many of these can be achieved in ways that do not increase the measured production of commodities, while a high and growing national income, even if properly distributed, can leave these basic needs unsatisfied. No policy maker can guarantee the achievement of all, or even a majority of these aspirations, but policies can create the *opportunities* for their fulfilment. In assessing and measuring successes or failures in the pursuit of these objectives, it is important not to fall victim to the twin fallacies that only what can be counted counts, and that any figure, however unreliable, is better than none.[2]

A. K. Sen has argued that neither states of mind, the utilitarian measure, nor characteristics of commodities, the Gorman- Lancaster

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[1] Robert Chambers "Editorial Introduction: Vulnerability, Coping and Policy" IDS Bulletin, April 1989, volume 20 No 2, Institute of Development Studies, Sussex, p. 2. The reference is to N. S. Jodha, forthcoming, "Social science research on rural change: some gaps (a footnote to debate on rural poverty)", in Pranab Bhardan, forthcoming, *Rural Economic Change in South Asia: Methodology of Measurement.*

[2] The story is told that during the great Lisbon earthquake if 1755 a peddler was selling anti-earthquake pills. Under the then equivalent of the Food and Drug Administration he was accused of fraud and hailed before the sheriff. His defence was, "What would you put in their place, your Honour?"

measure,[1] but human capabilities (potentials) and functionings (actuals) are at the heart of our poverty and welfare concerns. A person (particularly in some cultures a woman) may be miserably poor, but not feel deprived. There is a character in one of Anita Brookner's novels who is so modest that she does "not even presume to be unhappy."[2] In parts of India, women and girls report much less frequently than men and boys of being ill. Or the person may enjoy adequate food, but be too ill to absorb it or too uneducated to prepare it nutritiously or share it among fewer children. The ability, or capability, not only to keep alive, but also to be well nourished, healthy, educated, productive, fulfilled, these are the objectives of good policy, and incomes or the goods they buy are only one type of instrument to achieve them.[3]

Returning to income measures, we may ask next whether consumption or income is the appropriate measure of poverty. Data for consumption and income are sometimes inconsistent. Consumption may be thought to be the appropriate welfare and impact measure. Income may have to be used to repay debt; or it may have to be saved for a time when consumption threatens to decline even lower; or it may be spent on an addiction. Two of Seebohm Rowntree's reasons for secondary poverty -- drinking and gambling -- can be regarded as addictions which we might want to deduct from income before arriving at resources available to meet basic needs. Today we would add drugs.

Then we may ask whether we should use cross-country or time series comparisons? Cross-country evidence is popular, but it may tend to neglect policy options if it suggests inevitable sequences, but time series data (a) are unreliable, (b) much more time-consuming, (c) do not lend themselves to generalizations, and (d) may also encourage undue determinism *if* general conclusions about policy are drawn from them. The twentieth century is different from the nineteenth, and its last decade may turn out to be different from earlier ones. The stock of knowledge has changed, and will change in the future, coexistence of countries at vastly different income levels changes the fate of any one country, and many other factors invalidate conclusions drawn from a more advanced country to a

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[1] W M Gorman, "The Demand for Related Goods", Journal Paper J3129 Ames IO: Iowa Experimental Station, 1956; and K J Lancaster, "A New Approach to Consumer Theory", Journal of Political Economy, 74, 1966.

[2] Anita Brookner, Latecomers Pantheon Books, 1989.

[3] Amartya Sen, The Standard of Living, The Tanner Lectures, Cambridge University Press, Cambridge, 1987 and Resources, Values and Development, Cambridge, Ma ss, Harvard University Press, 1984.

poorer one, whether in cross-country or time-series comparisons. Both cross-country and time series data sometimes lead to the tacit but unwarranted conclusion that all countries have to follow the same path as the now industrialized ones. None of this means, of course, that sensible and careful use of either set of data cannot be very illuminating. If a choice has to be made, it will depend on what it is we want to know. Time series show the evolution of certain states, while cross country comparisons can point to policy options. But the two sets should be regarded as complementing each other, particularly if good judgment and historical knowledge are added.

Policy issues will be discussed elsewhere. But there is one issue that is directly related to the concept and measurement of poverty; it is how to monitor success in poverty reduction resulting from the policies of aid donors. Ideally, donors would like to know changes in the number of poor people, in the severity of their poverty, in the length of time they are in poverty, in the changes in the impact on health, education, population growth, work performance, etc., and in the costs of the remedies.

Before suggesting measures that can serve the desire of donors to monitor poverty reduction, it is useful to remind ourselves that perceptions, and therefore indicators of poverty, may not be the same for donors as for recipients. We have seen that there are women, so modest that they do not even presume to be unhappy or ill, as surveys in India have shown. The same may apply to low castes, to underclasses, or to other groups whose welfare is valued less in the society concerned than it is by the donors. This differential valuation may even be shared by these neglected or oppressed groups. The notion that each should count for one, and noone for more than one, is not universally accepted. Such differences may give rise to conflicts, to the resolution of which the institutional proposals below may make a contribution.

In the light of the foregoing discussion three measures are proposed. First, income or expenditure or consumption per head or, better, per adult equivalent; per household figures should be used only if nothing else is available. Consumption has the drawback that it leaves out savings, and therefore potential future consumption, but is, at any rate for low-income people preferable to income. Then a poverty line has to be defined, so that those below this line are counted to be in poverty. For the purpose of combining the dimensions of poverty as measured by income or consumption into a single figure, the Foster, Greer, Thorbecke index is probably for practical purposes the most useful. It combines the head count ratio, the proportionate shortfall of the average poor person below the poverty line, and a poverty aversion parameter that gives greater weights to the poorest of the poor.[1]

Second, calories per head or, better, per adult equivalent, in relation to calorie requirements, as laid down by some reliable organization, such as the World Health Organization. The needed data for this measure are fewer than for income or expenditure, but greater than for food consumption per head (allowing for different prices), which might be a substitute for calories. The data are also often more reliable. But they are inadequate by themselves, partly because the requirements standard is controversial, and partly because they do not account for important other dimensions of poverty than food. Third, the proportion of income or expenditure spent on food. A proportion higher than, say, 75 per cent indicates poverty, and an unchanging proportion with growing income, ultra-poverty. Since this ratio rises with family size, there is no need to adjust it for household size or other household characteristics.[2]

If these three indicators yield roughly the same number and groups of poor people, confidence in the estimate is justified. Unfortunately, it is likely that the three indicators will identify different groups of people as poor. If this turns out to be the case, greater scrutiny of the data and search for additional data is indicated. Among these would be anthropometric measures such as weight for age or height for age of children between birth and nine years, or weight for height, for countries or regions in which undernutrition and poverty are likely to be related. In other countries various other basic needs indicators may be in order, such as school attainment, literacy rates, floor area per head, land area per head, etc. Over longer periods it is in any case useful to supplement these measures by indicators of changes in life expectancy of the poverty groups or, if unavailable, of the population as a whole, and of changes in the ratios of men to women.

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[1]See J. Foster, J. Greer and E Thorbecke, "A Class of Decomposable Poverty Measures", Econometrica, 1984. Additional advantages of this index are that it is decomposable by groups or regions, and that, by choosing the poverty aversion parameter = 0 it reduces to the head count ratio, by choosing it = 1, it shows the head count ratio combined with the average shortfall below the poverty line, and by choosing it larger than one, any degree of sensitivity to ultra-poverty can be introduced.

[2]See Paul Glewwe and Jacques van der Gaag, "Confronting Poverty in Developing Countries", Living Standards Measurement Study Working Paper No. 48, The World Bank, Washington, D.C., 1988, p. 8.

A crude but simple indicator for which data are normally available is the price of some staple food in relation to the money expenditure on consumption (or the money income) of poor people. There is clearly a trade-off between accuracy and costs of gathering indicators. The cheapest indicators are likely to be the least accurate.

The question of monitoring, though it may appear to be a purely recording effort, does, however, raise policy issues. On the one hand, monitoring of poverty reduction and income distribution by donors is regarded by recipient countries as intrusive and perhaps even violating national sovereignty. On the other hand, donors believe that their responsibility to the taxpayer is to account for the use of aid funds and to ensure that poverty reduction is achieved, if this is the purpose of the aid. Donor institutions are distrusted by recipients, because they fear that extraneous criteria may enter into the process; and recipients' institutions are distrusted by donors, because they may wish to conceal unsuccessful performance. To resolve this conflict it is necessary to design institutions that are trusted by both sides, and monitor reliably and objectively.

In addition to having to gain the trust of both sides, and be responsive to their needs and demands, these institutions would have to fulfil the function of buffers between donors and recipients, would have to be sensitive to social and political conditions, and would have to have the expertise to judge the impact of programmes on poverty reduction. They should also be helpful in building up the indigenous capacity of poverty monitoring in developing countries.

One possible solution would be to adopt the method that the Organization of European Economic Cooperation practised under Marshall Aid. The USA generously withdrew from the monitoring process and encouraged European governments to monitor each other's performance. Analogously, groups of countries, such as those of East Africa, would get together, and one, say Uganda, would monitor the performance of another, say Kenya or Tanzania, and vice versa. Technical assistance would initially be needed to acquire or strengthen the professional capacity to do this.

Another solution would be to appoint a mutually agreed council of wise men and women, with a competent secretariat, who would be performing the monitoring, possibly again combined with technical assistance for the strengthening of indigenous capacity. A third solution would be to aim at the creation of a genuine global secretariat, with loyalties to the world community, socially sensitive, and at the same time technically competent. The secretariats of existing international organizations such as the World Bank have not quite reached that point, and are not perceived by recipients as being truly global. Reforms in recruitment, training, and promotion would be needed, and perhaps in the governance and location of these institutions.

Whatever institutional solution might be adopted, there is virtue in introducing a degree of competition into the monitoring process, so that a variety of methods may be tested against each other. At the moment it is feared that the large international financial institutions exercise a monopoly of power and wisdom, and propagate at times prematurely crystallized orthodoxies. The proposed buffer procedures or buffer institutions should contribute to the building and strengthening of indigenous research and monitoring capacities of the recipient developing countries. For research on poverty and action against poverty tend to go together, as the investigations of Charles Booth and Seebohm Rowntree at the beginning of the century, and of Sidney and Beatrice Webb, of the World Bank and of the Specialized UN Development Agencies have shown.

Finally, it might be asked whether it is important to know the facts about poverty. We may say 'Yes', because what we know, or think we know, enters into our theories, models and policies. Ill-informed or ignorant action can be ineffective or counter-productive. It can contribute to the aggravation of poverty. In the attempt to help one group we may hurt another, or even the one chosen. On the other hand, firm knowledge is very hard to gain. The fate of the English poor during the Industrial Revolution is still an unsettled issue. Action cannot wait for the results of research and proposals to study sometimes serve as excuses for inaction. We have to act on whatever inadequate knowledge we possess, as best we can.