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SOME REFLECTIONS ON HUMAN AND SOCIAL INDICATORS FOR DEVELOPMENT

by

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PREFACE

In recent years there has been an upsurge of interest in developing appropriate and usable social indicators. This has been due in part to the need to measure the social impact of policies of adjustment and structural reform being attempted in a large number of countries. However, there is also an enduring interest in the relationship between the pace of social progress and the pattern and rate of economic growth. This paper discusses indicators on some aspects of living conditions and social concerns.

It begins with a discussion on the scope and use of social indicators. This is followed by a brief survey of some major strands of work in this area since the early 1950s. The paper then considers some widely used indicators on living conditions, assesses their shortcomings and suggests the need for low-cost and feasible methods of collection of social statistics. In the concluding section, there is a discussion of some social concerns on which it might be useful to develop indicators, collect information and prepare reports.

Considerable work has been done in the field of social indicators since the early 1950s. There have been advances in the discussion on components and indicators of living standards, although the 1954 report by the group of experts still constitutes the main conceptual basis for much of the current work on social indicators. There has been considerable work but few practical results from the attempts made to integrate social and economic statistics into more comprehensive accounting frameworks.

At the level of measurement, while there has been an important increase in the number of countries undertaking censuses, household surveys and similar enquiries, our review shows that there are still important gaps in data and serious questions about the reliability of available data on some of the more commonly used social indicators in a large number of countries. The launching of better and more frequent censuses and household surveys would no doubt lead over time to more

useful and reliable data on social indicators. However, such methods of data collection are expensive, demanding in technical skills and may not always generate reliable statistics.

There is therefore need to supplement these efforts by simpler, lower cost, non-conventional methods of information collection and analysis. As examples of such methods, mention may be made of sample registration areas where responsibility for reporting vital events is placed upon a local responsible person; establishment of "sentinels", "observation areas" or "observation posts" on social progress; rapid rural appraisals; use of innovative scaling methods; facilities registers and the use of trained local informants and of travelling "social development assessors" in a network of observation.

It is proposed that a comprehensive study be made of such innovative methods of data collection on selected social indicators, based on the several approaches that have already been tried out by different organizations in several countries. This study could be followed by pilot surveys to test the effectiveness of such methods in countries with particularly weak data on social indicators.

Finally, the paper has drawn attention to the lack of systematic information and serious analysis of some important areas of social concern in many developing countries. They relate to such themes as human rights, rule of law, status of women, participation, personal security, child labour, drugs, environmental deterioration, etc. It would be highly desirable to encourage data and information collection in these areas and preparation of social reports for dissemination and discussion.

Dharam Ghai
Director

Introduction 1/

The Charter of the United Nations enjoins it to "promote higher standards of living, full employment, and conditions of economic and social progress and development" (United Nations, 1968). As part of its mandate to promote social progress, the United Nations system has attempted since the early 1950s to develop theoretical and empirical work on social indicators. Over the past 30 to 40 years a great deal of effort has been devoted by international organizations, national statistical offices and individual researchers to identify components and indicators of social progress, gather relevant data and information, and undertake analysis of the relationship between economic growth and social progress.

This effort has extended our knowledge base and deepened our understanding of various aspects of social development. Yet in some respects, especially those relating to measurement of social progress in developing countries, improvements have fallen short of expectations and needs. In the majority of developing countries, it remains difficult to measure with a satisfactory degree of accuracy changes over time in living standards and social conditions. Given that the fundamental objective of economic growth is human well-being, it is necessary to continue efforts to improve the analysis and measurement of social progress.

The purpose of this paper is to discuss indicators on some aspects of living standards and social concerns. The structure of the paper is as follows. The next section contains a general discussion on the scope and use of social indicators. This is followed by a brief survey of some major strands of work in this area since the early 1950s. We then consider some widely used indicators on living conditions, assess their shortcomings and suggest some low-cost methods of data collection. Finally, there is a discussion of some social concerns on which it might be useful to develop indicators, collect information and prepare reports.

A. Scope and use of social indicators

Social conditions and concerns cover a wide spectrum of human experience. By the same token, social indicators elaborated to throw light on them display corresponding diversity. It may be useful to classify these indicators into four categories. 2/ The first refers to living conditions (health, nutrition, shelter, access to water, sanitary facilities). The second category comprises information and cultural aspects (literacy, education, libraries, newspapers, music, theatre, fine arts). The third relates to some social concerns (human rights, status of women, participation, equality, personal security, child labour, drug taking, corruption, state of the environment). The fourth category refers to indicators on the state of the mind and the spirit (happiness, satisfaction, tranquillity, etc.).

The literature on social indicators provides examples of work on all four categories of social domains. These indicators may be quantitative or qualitative, objective or subjective. Likewise they may be collected through a wide variety of methods, the principal ones being censuses, household questionnaires, individual surveys, administrative records, registration systems, public opinion polls and referendums. While the state is usually the main agency of data collection in all countries, useful social information may also be gathered by such organizations as political parties, religious groups, co-operatives, business enterprises, unions, communications media, research institutes, universities, non-governmental development bodies and international organizations as well as by individuals.

Naturally there is a great deal of variation in the quantity and quality of information available on social indicators in different countries. This is dependent on such factors as the stage of development, the financial, human and technical resources available, the strength of the research community and the priority attached to different types of information. Given the scarcity of resources and of skills and the high cost of data collection, each country would need to weigh carefully the costs

and benefits of collecting different types of information and establish priorities.

In this paper we focus on two areas, namely some major indicators on living conditions and information on selected issues of social concerns. These areas correspond to some items in the first, second and third categories noted above. There has been a good deal of discussion on indicators of living conditions and the next section recapitulates some highlights. On the other hand, there are some issues of widespread social concern on which there is relatively little systematic quantitative information and regular assessments may be a useful way to promote discussion of such issues.

Social indicators can be useful in a number of ways. First they provide information on matters of public concern, thereby stimulating discussion and analysis. The availability of suitable social profiles in countries at different levels of economic development and with different socio-economic systems can facilitate fruitful investigations into the relationship between the level, rates and patterns of economic growth and social progress. Secondly, within a country, the availability of time series data on indicators permits monitoring of social progress and analysis of the distribution of benefits of development. Thirdly, collection of appropriate indicators and data can provide guidance on the social impact of specific programmes and policies. Fourthly, such information can be useful in the formulation of development programmes and policies. Lastly, information on social indicators can point to areas of critical weakness in basic needs satisfaction, send warning signals and alert authorities to potential dangers.

B. Evolution of work on living conditions

This section presents a preliminary and selective account of the evolution of work on measurement of living conditions with focus on the contribution made by the United Nations system. In broad terms this work has followed two main directions: elaboration and analysis of selected

indicators and attempts to develop macro-measures and accounting systems on living standards. 3/

1. Components and indicators of living conditions

An early concern with the social aspects of development came from the United Nations Charter and then in the early years of the United Nations there was a spurt of interest in the measurement of levels of living. In 1949, recommendations concerned with improved measurement of levels of living were adopted by the Social Commission of the United Nations, the Economic and Social Council (ECOSOC), the Seventh International Labour Conference of the ILO and the Rural Welfare Panel of the General Conference of the FAO. The first major United Nations document on this subject was the 1954 report of a group of experts on International Definition and Measurement of Standards and Levels of Living (United Nations, 1954). This report has formed the basis of much of the subsequent work in this area. The report divided the level of living into components and indicators. It defined 12 components that it considered should be included in the level of living. These were: (1) Health, including demographic conditions; (2) Food and nutrition; (3) Education, including literacy and skills; (4) Conditions of work; (5) Employment situation; (6) Aggregate consumption and savings; (7) Transportation; (8) Housing, including household facilities; (9) Clothing; (10) Recreation and entertainment; (11) Social security; (12) Human freedoms.

Realizing that indicators considered to measure progress in each of these components were in principle rather numerous but that data for many of them were not available for many countries, the report recommended a priority list of indicators. These were: (1) Expectation of life at birth; (2) Infant mortality rate; (3) National average food supplies in terms of calories at the "retail level" compared with estimated calorie requirements; (4) Proportion of children 5-14 years of age enrolled in schools; (5) Percentage of population literate above some appropriate age, total and by sex; (6) Proportion of economically active

population unemployed; (7) Percentage distribution of economically active population by principal industrial and occupational categories; (8) Personal consumption as a proportion of national income and index of changes therein.

Subsequent reports by the United Nations refined and improved upon the components and indicators identified in the 1954 study (United Nations, 1961, 1975, 1978, 1979). Collection of data also focused on these and similar indicators (United Nations, 1988). The United Nations Research Institute for Social Development has devoted considerable efforts since its early years to theoretical and empirical work on living conditions and social indicators. This work has comprised clarification of the concepts and measures of levels of living, collection and evaluation of data on selected social indicators for a large number of countries on a comparable and consistent basis at successive 10-year interludes, initiation of methods of information gathering on social progress at the local level and analysis of the relationship between social and economic indicators and between social advance and economic growth (Drewnowski, 1966; Baster and Scott, 1969; McGranahan et al., 1972; UNRISD, 1976; Scott, 1978; Bukh et al., 1978; Apthorpe et al., 1979; McGranahan et al., 1985; Scott and Mathew, 1985).

The specialized agencies meanwhile continued their efforts to refine the definition and improve collection of information on indicators of specific interest to them. Mention may be made of the work by WHO on health, UNESCO on literacy and education, ILO on employment, WHO-FAO-UNICEF on nutrition with focus on children and women, UNEP on environment, etc.

The work on living standards received a new boost following the recommendations of the ILO's World Employment Conference in 1976 that the primary objective of development efforts should be the satisfaction of basic needs. ILO's work in this area covered identification and measurment of core basic needs, establishment of targets and elaboration of strategies and policies for their attainment (ILO, 1976; Ghai et al.,

1977; Hopkins and van der Hoeven, 1983). The coverage of the basic needs was similar to that of the United Nations components of levels of living except for the important place given to the right of people to participate in decisions that affect them as an objective of policy (and indicator measurement). Subsequently the World Bank initiated work on basic needs but narrowed the concept down to a few indicators in order to estimate the resources required to meet core basic needs over a specific period and the role the World Bank can play in this (Burki and ul Haq, 1981).

There has also been some interest in the idea of developing a single index to measure level of living or basic needs. Although such measures as the physical quality of life index (PQLI) which combines infant mortality, life expectancy and literacy, can be useful in some respects, they have been subject to the criticism relating to choice of indicators as well as the weight to be given to different indicators (Forrester, 1971; Nordhaus and Tobin, 1972; Morris, 1979; Silber, 1983).

2. Macro-measures and accounting systems

Parallel with the efforts to identify and collect information on selected indicators, attempts have been made to develop comprehensive measures and accounting frameworks to throw light on levels and changes in living conditions. One of the primary sources of information for these attempts is the household income and expenditure surveys. These surveys have been used as sources for estimating food consumption and calculation of poverty lines as well as income distribution. If reliable and comparable household surveys are available over time, it is possible to estimate the incidence and trends in poverty as well as changes in income distribution and consumption patterns. Unfortunately, there are practically no countries in sub-Saharan Africa where comparable surveys are available over time, and relatively few in Latin America and the Caribbean. The situation is somewhat better in South and East Asia.

Several efforts have been made to construct a social accounting framework comparable to the national income accounts for economic statistics. Reference may be made to two such attempts in the United Nations system. In 1975, the United Nations took up the question of social statistics in an ambitious piece of work culminating in a document with the title **Towards a System of Social and Demographic Statistics (SSDS)** (United Nations, 1975). The idea of this work was to integrate social statistics into a system of accounts so that the individual elements were connected in some way. The system, however, proved too complex for practical application in most countries.

Subsequently the lack of an international consensus on the definition of social indicators led the United Nations to produce a report (United Nations, 1978) where it compared its own recommendations with those of other organizations (CMEA, 1976; OECD, 1976; EC, various years). The United Nations report also took account of its earlier publications, including the SSDS, and attempted some preliminary guidelines in preparing social indicator statistics. Given that developed, developing and least developed countries had different possibilities in producing statistics, it suggested three sets of indicators appropriate to the level of development of the country.

The second effort in this area concerned the construction of social accounting matrices (SAM). The work originally initiated by ILO (Pyatt and Roe, 1977; Pyatt and Thorbecke, 1976) was subsequently taken up by the World Bank (Grootaert, 1982). In addition to the usual sources of data used in the national income accounts, a SAM draws upon data on household consumption and income distribution. Thus the economic inputs and outputs of households as well as government and enterprises are included. The novelty of the approach is the identification of different types of households and a consistent scheme of how they both earn and spend their money. Although SAMs are only snapshots at one moment in time of the circular flow of money, they can be used in modelling studies to examine the effect of changing levels and structures of production on income distribution and household consumption. Thus SAMs are a

powerful tool of analysis but are clearly restricted in being confined to the monetary and material need side of social conditions. Furthermore, the effort in building a SAM is considerably dependent, of course, on data availability and on the level of disaggregation chosen. Nevertheless, a SAM marks a considerable improvement on the GNP, and other indicators derived from economic accounts, as an approach to documenting some aspects of economic and social welfare.

3. Efforts to improve the quality and analysis of social data

Household surveys are a major source of social and economic data on indicators. In recent years considerable efforts have been made to initiate and improve the quality of household surveys. The United Nations National Household Capability Programme represents an attempt to strengthen the capacity of developing countries to design, implement and analyse household surveys (United Nations Statistical Office, 1980).

In the same vein, the Living Standards Measurement Study (LSMS) of the World Bank has attempted to initiate household surveys in a number of countries with the aim of getting better data. The initial emphasis has been on methodological aspects. The LSMS work started in 1980 with the objective of identifying the data which can be most usefully collected and the best ways of collecting it in order to provide a description of living standards and a basis for policy formulation. Household surveys are a main instrument of data collection. Since its inception, the LSMS project has produced nearly 50 working papers concerned with methodological issues, analytical studies and survey results, with most of the pilot work having been done in Côte d'Ivoire (Chander et al., 1980; Grootaert, 1986). These surveys under LSMS cover both community and household aspects. The former includes information about the community as a whole on demographic situation, infrastructure, transport, migration, education, health and agriculture. The latter survey has sections on household composition, housing conditions, education, health, employment, migration, agriculture, non-farm rural activities, capital and inventory, household expenditure, food expenses and home

production, fertility, remittance income, and credit and savings. The Bank plans to conduct such surveys on a regular basis.

UNRISD, working with cross-national socio-economic development data, has attempted to devise criteria for the selection and construction of indicators that can be used in analytic work on the basis of data already available (UNRISD, 1969; McGranahan et al., 1985). It has also sought to develop new analytic methods appropriate to the nature of the data. This has led to the development of a profile of indicators, a "relativistic" index which gives not the absolute level of a country in a field like education or health, but its level in this field in relation to its general level of social and economic development. Thus it is possible to quantify the extent to which a given country is more advanced (or less advanced) in, say, education, than would be expected from its status in the other dimensions of development on the basis of available evidence.

This approach to indicators permits identification of socio-economic development patterns of individual countries at a given time and analysis of their relation to subsequent economic growth. For example, those countries that grew fastest economically over 1970-1980 were clearly seen to be countries relatively high in education for their general level of development. This approach also makes it possible to compare rates of growth of economic and social indicators more meaningfully than by conventional use of percentage gain rates.

Other changes in social indicator work in recent years include greater attention to problems of distribution, including breakdowns giving data on women and administrative regions. In general, however, distributional data on social indicators are rare for developing countries. Another recent trend has been towards the use of simpler and more direct social indicators, as distinguished from elaborate constructions involving large amounts of guesswork. An example is the increasing use of infant or child body weight or height in assessments of nutrition or health.

C. The problem of practicable approaches to indicators on living conditions

Once it is decided what social conditions, concerns or characteristics are to be assessed through indicators, two basic questions must be faced:

(a) How are indicators of these conditions to be chosen or constructed?

(b) How are the relevant data to be obtained?

These questions are interrelated: it is pointless to construct indicators for which data cannot be obtained or to compile data on ill-conceived indicators. Failure to address these two questions realistically accounts for a great deal of useless output in the field of social indicators. Indicators are proposed for which no practicable method of obtaining the necessary data is or can be defined in the circumstances of developing countries. Or published statistical series, because they are available, are taken up and treated as social indicators when in fact they do not serve that purpose.

Social indicators tend to differ in their structure and in the nature of their reference from economic indicators. The latter tend to involve figures on simple volumes or per capita amounts of goods and/or services produced, sold, consumed, imported, exported, etc., while social indicators tend to be more distributional and to involve figures on the per cent (or per thousand or ten thousand) of the population, and of various sub-populations, having a given quality or characteristic (e.g. literacy, schooling, malnutrition, employment, access to a doctor, hospital, or other service) or per cent meeting a certain standard of adequacy (adequate housing, water supply, income above a poverty level, etc.). Social indicators have no common quantitative medium like money and also are generally more indirect than economic indicators. Thus, it is not possible to define and measure health directly; various indirect measures have to be attempted, generally measures of causes or inputs (health services, health expenditures) or consequences or outputs (age-specific death rates). These measures naturally give rise to problems of interpretation.

1. Selection and construction of indicators

The first criterion in the choice of indicators, in accordance with the above remarks, is **feasibility:** the selection of indicators for which a practicable method or set of alternative practicable methods of data collection can be identified. For example, the state of child nutrition in a country might best be assessed through technical ratings by a team of medical and nutrition experts, supported by necessary laboratory facilities, who would directly examine every child in the country, or a sufficiently large sample to get representative figures on each important sub-group of a country and identify problem groups and areas. However, no developing country would have the means to carry out such an enterprise. It is therefore necessary to have recourse to simpler and cheaper methods for measuring nutrition.

A second criterion in the selection of social indicators is the establishment of some order of **priority** and a minimum feasible list. While each indicator in a proposed series may be feasible, this may not be true of the group as a whole. There is a common tendency among those who devise social indicators to build up as full and comprehensive a list as possible, so that no criticism can be made regarding the omission of this or that item of possible interest. The result is that the set of indicators so elaborated becomes impossibly bulky and unwieldy, demanding excessive resources. The results may be debated with interest but they have no chance of practical application as a whole. A limited lean and flexible set of indicators is required, covering important subjects but not every conceivable interest.

Lack of priorities together with an impossibly long list of indicators is likely to mean that if there is any application, it will be mostly of those indicators for which data can be most easily collected. These may well be the least important indicators. Thus, while hardly any African countries have complete and reliable measurements of infant mortality and life expectation, which are important health indicators, nearly all African countries have data on inhabitants per hospital bed, a decidedly

inferior indicator. One possible approach, in the face of such problems, is to start off with a long list and narrow it down in successive steps by the application of various criteria such as feasibility, importance, validity and relevance.

Many social indicators that on the surface appear simple and straightforward measures of social conditions turn out to be seriously flawed. They do not measure what they are supposed to measure. Often they respond to conditions other than those they are intended to measure, and consequently they give a false and misleading picture. For example:

Crude mortality rate as a measure of health reflects age structure and fertility rate, as well as health conditions, so that a country or region with low fertility and a large contingent of elderly people will have its health level seriously underestimated by this indicator because of the high mortality of the elderly.

Primary school enrolment rate as a measure of educational conditions reflects (a) age-range of primary schooling (e.g. 6-10, 5-12) with percentage of enrolment dropping as age-range increases; and (b) circumstances that lead to heavy enrolment in primary schools of individuals not of primary school age (older persons trying to get primary school certificates, seeking literacy, etc.). In some places the primary school enrolment rate reaches 200 per cent of estimated primary-school-age population.

Sometimes the indicator does not measure what it is supposed to because it covers only a limited aspect of the condition under study. Thus, per cent of population with access to protected water supply as a public health indicator appears to give a misleading, overly positive picture of public health in arid and semi-arid areas, apparently because water in these areas, while protected, is limited in supply and used and re-used, with negative consequences for health.

The fact that many social indicators are indirect, measuring assumed causes or consequences of the phenomenon under study, or cover only a partial aspect of it, makes it highly desirable to test out an indicator before making serious use of it. Unfortunately, this is usually not done - personal opinions and theoretical suppositions tend to prevail. **Validation** is not attempted partly because it is often difficult, and partly because its importance is simply not recognized. An elementary method of validation that can be carried out on some indicators involves collection of preliminary data on populations that are known to differ with respect to the condition or factor under study, and examination to see if the proposed indicator adequately discriminates between such populations.

In other cases validation of an indicator is a complex procedure. Weight of children in relation to age and height is, for example, frequently used today as a measure of malnutrition but it is responsive also to sickness and to genetically determined somatotypes, so that its validation as a nutritional measure requires some means of factoring out these other influences.

A final criterion of social indicators is **relevance.** This is particularly important in the case of certain indicators originating in developed countries and applied to a developing country with different structural conditions and institutions. For example, per cent of population covered by "social security" is a developed country social indicator that applies poorly to developing countries with largely agrarian economies where social security functions are carried out on a family, neighbourhood or tribal basis, or by traditional obligations of landlords, or by storage of food in granaries, etc. Much has been written on the question of the relevance of the unemployment ratio as a social indicator in developing countries. Unemployment can hardly be said to exist overtly in areas of largely self-provisioning subsistence agriculture, although it may suddenly come into existence if a large-scale public works project is introduced nearby or if in nearby towns an extensive new industry is established; job

applicants will be found to exceed by far the job opportunities - employment opportunities create unemployment.

It should be emphasized in general that while in a broad sense social concerns are fairly universal, specific indicators for social concerns are not necessarily universal - they may differ not only with level of development but also with geographical, environmental and other circumstances (e.g. assessments of housing facilities and clothing adequacy obviously differ in places with very different climates). In fact, what appears as a basic human need (protection against cold) and a social concern in one area (in an artic region or region with severe winters) may hardly appear as a need or social concern in another (a tropical island). It is also true that the same indicators may have different meanings at different levels of development or in different environments. Furthermore, different indicators become relevant at different stages of development; for example with the achievement of universal primary schooling, the interest may shift to quality of education.

2. Problems and methods of data collection

The second major problem of social indicators in developing countries - the problem of how data for social indicators are to be collected - is of such seriousness today that it calls for an international reconsideration of current assumptions and practices. The unfortunate fact is that reliable, observation-based statistical data for a good number of the more important social indicators simply do not exist in a great many developing countries and have little prospect of becoming available in the near future by current methods of data collection.

It is true that various international publications issue data on such important social indicators as infant mortality rate and life expectation for nearly every country in the world, but as will be discussed below, the figures given in these publications for most developing countries are not observational counts but estimates made in national or more generally international offices on the basis of various assumptions and models. The

estimates serve either to correct reported but obviously erroneous observational data or to fill in gaps where no direct observational data exist. These estimated figures, it must be noted, may differ markedly from one estimator source to another for the same country.

Estimated figures can play an important role in giving the best available quantitative assessment of a country's social condition in a particular field and thereby call attention to the need for international aid. They cannot, however, be used for analytic purposes (e.g. to identify causes or effects), nor can they be used for the monitoring of progress over time in the context of development efforts, national or international. It makes little sense, for example, to relate an increase of five years in life expectation, over a 10-year period, to a health programme or any other factor in a developing country when the increment is not an observed figure but is taken from a model which assumes that amount of improvement over a decade in countries of the level of the country in question. While estimates tend to be identified as such in the original publications, they are often overlooked by data users or they tend to lose identification as estimates as they are picked up and re-published by other organizations or individuals. Scholarly works have announced discovery of important findings about the process of social development in developing countries when in fact they have discovered only the assumptions of the model-makers producing the estimates. 4/

Serious lack of observational data is also found in the case of various other social indicators of importance such as: percentage of dwellings with pure water supply or with sanitary facilities, percentage of population with reasonable access to primary health centres, percentage of children who are malnourished, morbidity rates, percentage of families with income above given poverty levels, etc.

The main current methods of observational data collection for social indicators are the following: 5/

Censuses occur only every 10 years or so, often take four or five years or more for the results to be analysed and published, and are generally so overloaded that there is little room for more than a sprinkling of social indicators. They are generally carried out in most countries by interviewers with limited knowledge of the subject matter in different special fields (health, housing, education, etc.). They are expensive and difficult undertakings. Nevertheless, they are a very important source of information for certain social indicators, and for background information generally. Figures from censuses taken 15 or 20 or more years ago often provide critical input into models producing current estimates of social indicators in developing countries.

Household sample surveys are less costly and more flexible than censuses but are nevertheless quite expensive. They face problems of statistically justified procedures for selecting the sample of households and of the sample size required for breakdowns by region and social groups (especially for items that involve statistically rare events such as infant mortality), since statistically significant and representative data for each sub-group require almost as large a sample as for the nation as a whole. They also appear questionable or unsuitable for certain objects of investigation because of problems of memory (in the absence of records) for various items under investigation (income, food consumption, sickness and death within a given period such as a year). They suffer seriously from problems in the formulation of questions that fit the conceptual orientations of the respondents. Data from household sample surveys are often found to be inconsistent with data from other more reliable sources, such as doctors' records, even in more advanced literate societies. Important nation-wide household sample surveys have nevertheless been carried out in a few developing countries on a regular basis, but problems of organization, costs, personnel and processing appear to have kept regular surveys from spreading rapidly.

Registration systems for vital statistics (births, deaths, marriages, divorces) are common means of obtaining basic information in developed countries where reporting generally involves various parties - doctors,

hospital administrators, public officials who assist in or supervise the registration processes. In developing countries, where registration systems are less common, responsibility for reporting appears to rest more with members of the families involved, who are often illiterate and without means of travel and lack assistance or supervision. The results are generally incomplete and not reliable. 6/

Administrative records include school records (enrolments and graduations), hospital records, licensing records (automobiles, radios, television sets), installation and service records (telephones, electricity), import and export records, public transportation records, income tax records, etc. While subject to distortions and non-indicative of the quality of services provided, the administrative records are useful sources for information on certain of the social indicators. They have not, however, always been put to good use and further and better use could be made of them.

3. Some problems with information on selected indicators

It is of interest to examine after 34 years of experience, the available information on priority indicators that were set forth in the 1954 United Nations report of an expert group on International Definition and Measurement of Standards and Levels of Living (United Nations, 1954). The group identified eight priority indicators discussed below.

Expectation of life at birth. While data on this important indicator are regularly published and re-published for practically every country in the world in a number of international yearbooks, bulletins and other compilations (mostly by the United Nations, WHO and the World Bank), the great majority of the figures for developing countries are still estimates, based on limited amounts of actual knowledge and substantial amounts of assumption. In the 1986 **Demographic Yearbook** published in 1988 by the United Nations, figures on expectation of life at birth are given (male and female separately) for all 46 countries on the African mainland but in only six cases are the figures issued by countries, the rest

being estimations by the United Nations Population Division for the period 1980-1985 as a whole. In South America, figures for 7 of the 12 countries are estimates. Such estimates, as noted, cannot serve major purposes of analysis and cannot monitor progess in health over time since the model used in estimation has a built-in assumption of rate of progress (generally two and a half years of increase of life expectation every five years until 62.5 years is reached).

The estimations are made on admittedly incomplete information. 7/ In addition to assumptions about rates of gain in life expectation at five-year intervals, assumptions are made about the validity and relevance for particular countries of the life tables used, and about the constancy over time of the levels of age-specific mortality given in the tables.

Infant mortality rate. The picture today is much the same as that for life expectation, disappointing. Only one country (Egypt) in mainland Africa is reported by the United Nations to have complete data on infant mortality for a recent year; an overall estimate for the years 1980-1985 is given for the other 45 countries (United Nations, 1986). In South America, 4 countries are identified as having complete reporting out of 13 listed, and in Asia only one sixth of the developing countries have complete and presumably reliable coverage. One reason for this disturbing picture of data availability on life expectation and infant mortality indicators in developing countries after 34 years of efforts is the inadequacy of vital registration systems as discussed above, and the difficulties of using censuses and household sample surveys to get reliable current data.

National average food supplies in terms of calories at the "retail level" compared with estimated calorie requirements. The experience of UNRISD in dealing with this item in analytic work suggests that it is not a very good indicator. It is too complex and involves too much guesswork. It requires estimations of total food production, imports and exports, stocks, losses in transport and storage, use of supplies for non-food purposes; and then for the requirements part, data on population size, age

structure, and activity level (in relation to theoretical calorie requirements). Even so it does not, as formulated, cover food gathered or grown by the family for home consumption, and it omits losses of food and nutrients after the retail level, e.g. during home storage, preparation and cooking, from plate waste, etc. A final and major weakness of this indicator is the fact that it does not reveal distribution of consumption, in particular the percentage of the population that has insufficient food or nutrients, which is a more important social statistic than average or per capita consumption.

Proportion of children 5-14 years of age enrolled in schools. This is a reasonable indicator in principle but data may not be readily available since school system reports on enrolment tend to give numbers of children enrolled in primary and secondary schools, together with the nominal age ranges for those schools, but not necessarily the actual ages of the children enrolling. In areas where there is no secondary school, primary schools are likely to have large numbers of children above primary age (and also above 14 years). UNRISD has found that combined primary and secondary education enrolment as per cent of population 5-19 appears to be the best general education indicator. Such data are widely available in developing countries. Enrolment, of course, is not attendance and enrolment ratios give no indication of quality of education.

Percentage of population literate, above some appropriate age, total and by sex. This indicator, with use of 15-plus as the age range, is fairly widely available today, and UNESCO provides extensive data. The source of literacy figures is generally censuses. When the census covering literacy has been taken some years back, adjustments are made to update the literacy estimates by means of a model which assumes, among other things, that children who have completed a given number of years of education will be literate when reaching 15. The process of adjustment loses reliability the farther back the census. Literacy estimates in Africa for the year 1985 are made for 37 countries, 18 of which had a relevant census within 15 years, 14 of which had a relevant census 16 or more years ago, and 5 of which never had a relevant census and were estimated on

some other basis (UNESCO, 1985). While the use of estimates based on censuses some years back raises questions, in general the literacy data seem reasonable and are fairly extensively available. International comparability suffers from the fact that different countries use different tests of literacy, include or exclude literacy in other than the national language, and report data for different age ranges.

Proportion of economically active population employed. Most developing countries, quite reasonably, collect unemployment data only for urban areas or selected urban areas. The ILO 1986 **Yearbook of Labour Statistics** ventures to give national unemployment rates (as distinguished from numbers in defined urban areas) for only one African country (Ghana). It may be noted that there are serious problems not only of identifying the unemployed but also of estimating the size of the labour force, particularly in view of the labour of children and of women who do a considerable amount of farm work, for example, but may or may not be counted as in the labour force, depending on prevailing cultural attitudes.

Percentage distribution of economically active population by principal industrial and occupational categories. Adult male labour in agriculture as per cent of total male labour appears to be one of the more important socio-economic indicators and UNRISD has made extensive use of it. The exclusion of data on female agricultural labour has been due to gross inconsistencies in the counting of female farm labour. Professional, technical and related workers has been found to be a fairly useful indicator in UNRISD experience.

"Personal consumption" as a proportion of national income and index of changes therein does not today seem to be an important "priority" social indicator and not very much use is made of it in social indicator work.

The most notable data deficiency today is in the health and nutrition indicators in the above list. A fresh approach to these subjects is called for by review of possibilities of registration systems improvement and by consideration of possible innovative low-cost methods of obtaining relevant data. It should be noted that the above 1954 list contains no reference to water supply, sanitation or housing, all of which would be considered to merit priority indicators today, although requiring intensive search for means to get more and better data.

The above considerations suggest that there is need for review and development of innovative, low-cost methods of data collection. Available data in many developing countries cannot answer satisfactorily the question: are people benefiting from development, who are benefiting, in what respects and to what extent? Proposals for getting more and better information by the same data collection methods attempted in the past should be critically reviewed. The possibility of experimenting with and building up innovative low-cost methods of data collection needs to be given serious attention, whether as a replacement or as a supplement to prevailing methods.

Experiments have already been carried out with certain innovative methods and proposals have been made for others. These should be taken into account in an overall review and schema for the future. The following may be listed as examples of innovative low-cost methods. Some may be suitable for some indicators, others for other indicators. An overall strategy may involve combined use of several different methods including the conventional ones to obtain maximum efficiency and accuracy.

Sample registration areas where responsibility for reporting vital events - and perhaps additional items - is placed upon a local school teacher or other responsible person. This has been experimented with in India.

The establishment of "sentinels", "observation areas" or "observation posts" on social progress. These have had some limited experimentation, as in studies by UNRISD of the measurement of social progress at the local level.

"Rapid rural appraisals", to assess selected social concerns in rural areas, using short-cut methods in rural information gathering.

The use of innovative scaling methods which involve a simplification of questionnaires. One such approach, called "scalogram measurement" in the context of development work, has been used where a common order of progress can be defined in a given population for a given social condition (e.g. housing), and the achievement of a particular stage will imply achievement of certain preceding items or stages which do not therefore have to be measured. Another approach is the use of simple adequacy scales (indicating whether water supply, sanitation, education, health services, etc. can be judged adequate by defined standards reasonable in the particular country or region under study). Such scaling can also simplify and speed up assessment of progress, if used in place of complex and costly measurements.

Facilities registers, in which the availability of various facilities such as water supply, electricity, telephones, transportation, primary health centre, etc. is determined for a local area by use of readily available data which are grouped together.

The use of trained local informants and of travelling "social development assessors" in a network of observation. There have been various historical and contemporary experiences relevant to this proposal but no widely known systematic effort in this direction has been undertaken by an organized research or data collection body.

D. Indicators on social concerns

Past discussions on social indicators have been concerned for the most part with measures of living conditions. These measures give information on how individuals fare with respect to different components of living standards, for example, life expectancy or proportion of children enrolled in primary schools. However, there are also areas of social concern which affect individuals as members of a society or of a class or group. Some of these issues are of deep concern to signficant groups of the population and have a crucial impact on their well-being. Official neglect of these concerns may provoke strong reactions, often of a violent nature, and seriously disrupt social and economic advance in a country.

Development literature is curiously silent on these issues. The attempts that have been made to undertake an analysis of these problems often fail to relate them to development patterns and policies. Certainly there is an acute scarcity of data and information on many such issues of social concern. There is often a reluctance to collect, publish and analyse data on certain sensitive issues in the mistaken belief that official silence would lead to a disappearance of these problems. Experience, however, indicates that it would be far preferable to encourage an open and dispassionate discussion of these issues rather than sweep them under the rug. The collection of relevant information, elaboration of indicators (where appropriate) and publication of social reports seem to offer a more promising approach to the eventual solution of these problems.

The critical areas of social concern vary from one country to another and over time within a country. Thus the choice of the themes for information collection, analysis and public debate, has to be made at the country level. There are few standard indicators in many of these areas. In some it does not even make sense to think in terms of the conventional type of indicators. Nevertheless it may be useful to stimulate thinking on the kinds of information that may be collected which could contribute both to a better understanding of the extent and

trends in the evolution of the problem as well as the underlying causes and approaches to a solution.

The list of major issues of social concern in different parts of the world is likely to be long and to include such diverse themes as human rights, rule of law, status of women, participation, equality, personal security, child labour, drugs, state of the environment, etc. For illustrative purposes, we have chosen five themes which are of widespread concern in a large number of countries. These relate to discrimination, status of women, participation, personal security and environment. For each we indicate the nature of the problem and sketch the kind of information and indicators that might contribute to improved social analysis and monitoring of the issue.

Prevalence of discrimination in any form is a denial of an aspect of human rights. Social discrimination owes its origin to differences of class, ideology, race, ethnicity, caste, religion, gender and region. Not only is discrimination socially unjust and economically inefficient but in many situations it is the underlying cause of enduring tensions and violent upheavals. The first step in the solution of these problems is the recognition of their existence and improved understanding of the underlying causes through social analysis and public debate. It is necessary, therefore, to generate information on the nature and forms of dominant patterns of discrimination. A wide variety of indicators might be relevant. Just to mention a few, these might include data on access by relevant social groups to productive resources and public services as well as on their relative position with respect to incomes, occupational patterns and wage rates. Such information might be obtained from established surveys, through specially designed enquiries, public opinion polls or directly from the organizations of the affected groups. In a few countries such information has been extensively collected and analysed, especially by sociologists.

The subordinate status of women is an area of related concern. In practically all countries women suffer from one form or another of inequality. While in some societies these are of a relatively mild nature, in others they can assume quite oppressive and degrading forms. Data on inequalities in access to education, health, training, credit, employment, wages, senior policy-making posts in government, business, social and religious organizations, etc. can uncover some elements in the women's subordinate position. In recent years, as a result of increased consciousness on this question brought about in part through international conferences and discussions, some progress has been made in identifying relevant indicators but much less in collecting, assembling and analysing this information (United Nations, 1984a,b; Safilios-Rothschild, 1986). Furthermore, data of this sort relate only to what might be described as the public domain. The private or family domain which is the scene of more subtle and pervasive forms of discrimination remains largely shrouded in ignorance. In order to obtain this sort of information, it may be necessary to have recourse to attitudinal surveys, participant observation and inquiries and reports by women themselves through their organizations, in addition to the more conventional methods of data collection.

The third area of concern relates to participation. Despite ringing declarations on the desirability of widespread participation as both a means and an objective of development, few serious efforts have been made to assess the nature, extent and forms of participation in particular countries. Some of the commonly used indicators, for the most part in developed countries, concern frequency of and electorate participation in elections, the number and size of non-governmental organizations, etc. Such indicators provide useful information but may be a poor measure of meaningful participation by the people. Since it is the economically and socially disadvantaged groups who lack opportunities for effective participation in the affairs of the country, indicators in this field need to relate to their situation in the economy and the society. In addition it would be useful to generate information on the practice of the right to form associations and to stage peaceful demonstrations, representation in

nations' policy-making organs, and self-management in production enterprises.

The fourth illustrative area relates to individual security. The last few decades have witnessed a rising tide of robberies, thefts, mugging, violence, murder, rape and other acts of terrorism in an increasing number of countries. The inability to walk around peacefully in some parts of the city at certain times, the constant fear of being attacked, robbed and molested, can generate anxiety and stress and deeply affect the state of people's well-being. Contrary to what is generally believed, personal security is not just a problem of the affluent but in many countries it is often the socially and economically disadvantaged groups who are the least protected and the most exposed. There is scarcity of systematic data and information in this area in most developing countries. This in turn has contributed both to lack of knowledge of the incidence and forms of personal insecurity as well as meaningful discussion of the measures that can be taken to counter the problem.

The final area of social concern relates to deterioration in the state of the environment. As in the case of women's status, international conferences and discussions have served to heighten interest in this area and to draw attention to the serious social and economic repercussions of deteriorating environment. While the industrialized countries have made a great deal of progress in collecting relevant data on water and air pollution, waste disposal, noise, the state of rivers, forests and oceans, much less information is available in most developing countries. Once again it would be wrong to conclude that this is a problem of the affluent groups. The poor are the principal victims of such aspects of environmental deterioration as deforestation, soil erosion, disappearance of common pastures, creeping desertification and the squalor of urban slums. It would be extremely useful to develop a few basic indicators of the state of environment which are especially relevant for the livelihood and conditions of life of the poorer classes.

In concluding this section, it is necessary to reiterate that it has not been our intention to identify priority areas of social concern or to develop suitable indicators for them. Our purpose has been to argue the case for collecting more information and elaborating simple indicators in respect of issues of social concern which are necessarily country specific. The examples given above are of an illustrative nature. As is clear from the above discussion, a wide variety of indicators may be relevant in different areas. Likewise a wide range of methods for generation of relevant information and data may be necessary. While in some cases, the state may be the most appropriate agency for collection and analysis of such data, some of the social concerns are of such sensitivity that special commissions or non-governmental bodies such as private research institutes, social organizations and private development entities might be best placed to undertake data and information collection and prepare social reports for dissemination and discussion.

Concluding remarks

In this paper we have attempted a broad but necessarily selective review of the work that has been done on social indicators in developing countries and the main problems encountered in their measurement. It may be useful to highlight some of the principal conclusions that have emerged from this review.

Considerable work has been done in the field of social indicators since the early 1950s. There have been advances in the discussion on components and indicators of living standards, although the 1954 report by the group of experts still constitutes the main conceptual basis for much of the current work on social indicators. There has been considerable work but few practical results from the attempts made to integrate social and economic statistics into more comprehensive accounting frameworks.

At the level of measurement, while there has been an important increase in the number of countries undertaking censuses, household surveys and similar enquiries, our review shows that there are still

important gaps in data and serious questions about the reliability of available data on some of the more commonly used social indicators in a large number of countries. The launching of better and more frequent censuses and household surveys would no doubt lead over time to more useful and reliable data on social indicators. However, such methods of data collection are expensive, demanding in technical skills and may not always generate reliable statistics.

There is therefore need to supplement these efforts by simpler, lower cost, non-conventional methods of information collection and analysis. A brief reference was made to such methods. We would propose that a comprehensive study be made of such innovative methods of data collection on selected social indicators, based on the several approaches that have already been tried out by different organizations in several countries. This study could be followed by pilot surveys to test the effectiveness of such methods in countries with particularly weak data on social indicators.

Finally, our paper has drawn attention to the lack of systematic information and serious analysis of some important areas of social concern in many developing countries. It would be highly desirable to encourage such work, perhaps initially by research organizations, in receptive countries.

NOTES

1/ This is a revised version of the paper presented at the UNDP North-South Roundtable Conference on "Human Development: Goals and Strategies for he Year 2000", Amman, Jordan, September 1988. We gratefully acknowledge the financial assistance received from UNICEF in the preparation of this paper. Thanks are also due to Claude Richard, Wolf Scott and participants at the Amman meeting for their comments. The authors alone are responsible for the views expressed here.

2/ Apart from the United Nations reports, several authors, including Andrews and Withey (1976), Drewnowski (1974), Goulet (1974), Maslow (1968) and Miles (1985), have attempted to classify indicators in different categories.

3/ For a more complete review of work on social indicators, see Baster (1972) and Miles (1985).

4/ A recent detailed critique of internationally published mortality data (Murray, 1987) concludes that "the mortality data produced by the UN Estimates and Projections Sub-Division, the UN Statistics Office, and the Population, Health and Nutrition Department of the World Bank are inappropriate for use in quantitative analysis". Three examples are given of scholarly publications with misleading analytic statements based on such data.

5/ Excluded from this listing are methods yielding data on a small and not necessarily representative part of the population, such as village and other case studies, participant observation records, family records, biographies and diaries, etc. Such studies may provide depth and understanding to supplement broader surveys but they do not provide systematic assessment of populations by means of social indicators.

6/ An examination of 52 developing countries in Africa, Asia and Latin America found 34 countries with vital registration systems but only 26 with nation-wide coverage, and of these 26, only 11 had estimated completeness above 75 per cent; only 6 had estimated completeness of 90 per cent or more (US Bureau of the Census, 1978).

7/ Where there is no relevant information at all on a country, data from a neighbouring country may be used.

BIBLIOGRAPHY

Andrews, F.M. and S.B. Withey
Social Indicators of Well-being, Plenum Press, New York, 1976.

Apthorpe, R. et al.
Measurement and Analysis of Progress at the Local Level, Vol. III, Country Case Studies in Argentina, Iran, Mexico, Nigeria and Papua New Guinea, UNRISD, Geneva, 1979.

Baster, N. and W. Scott
Levels of Living and Economic Growth: A Comparative Study of Six Countries, 1950-1965, UNRISD, Geneva, 1969.

Baster, N. (ed.)
Measuring Development: The Role and Adequacy of Development Indicators, Frank Cass, London, 1972.

Bukh, J. et al.
Measurement and Analysis of Progress at the Local Level, Vol. II, Country Case Studies in Ghana, India and Poland, UNRISD, Geneva, 1978.

Burki, S. and M. ul Haq
"Meeting Basic Needs: An Overview", **World Development**, February 1981.

Chander, R. et al.
Living Standards Surveys in Developing Countries, LSMS Working Paper, World Bank, Washington, DC, 1980.

Council for Mutual Economic Assistance (CMEA)
"System of Basic Indicators for Social Statistics" (mimeo), Moscow, 1976.

Drewnowski, J.
Social and Economic Factors in Development, UNRISD, Geneva, 1966.

———
On Measuring and Planning the Quality of Life, Institute of Social Studies, The Hague, 1974.

European Communities (EC)
"Report on the Development of the Social Situation in the Community", Brussels, various years.

Forrester, J.
World Dynamics, Wright Allen Press, Cambridge, Mass., 1971.

Ghai, D. et al.
The Basic Needs Approach to Development: Some Issues Regarding Concepts and Methodology, ILO, Geneva, 1977.

Goulet, D.
The Cruel Choice: A New Concept in the Theory of Development, Atheneum, New York, 1978.

Grootaert, C.
"The Labor Market and Social Accounting: A Framework of Data Presentation", LSMS Working Paper No. 17, World Bank, Washington, DC, July 1982.

———
"Measuring and Analyzing Levels of Living in Developing Countries: An Annotated Questionnaire", LSMS Working Paper No. 24, World Bank, Washington, DC, April 1986.

Hopkins, M. and R. van der Hoeven
Basic Needs in Development Planning, Gower, Aldershot (United Kingdom), 1983.

ILO
Employment, Growth and Basic Needs: A One World Problem, Geneva, 1976.

Maslow, A.
Towards a Psychology of Being, Van Nostrand Reinhold, New York, 1968.

McGranahan, D.V., C. Richard-Proust, N.V. Sovani and M. Subramanian
Contents and Measurement of Socio-economic Development, Praeger, New York, 1972.

McGranahan, D., E. Pizarro and C. Richard
Measurement and Analysis of Socio-economic Development, UNRISD, Geneva, 1985.

Miles, I.
Social Indicators for Human Development, Frances Pinter, London, 1985.

Morris, M.D.
Measuring the Condition of the World's Poor: The Physical Quality of Life Index, Pergamon, New York, 1979.

Murray, C.J.L.
"A Critical Review of International Mortality Data", **Social Science and Medicine**, Vol. 25, No. 7, 1987.

Nordhaus, P. and J. Tobin
"Is Growth Obsolete?", **Economic Growth,** NBER, Columbia University Press, New York, 1972.

OECD
Measuring Social Well-being: A Progress Report on the Development of Social Indicators, Paris, 1976.

Pyatt, G. and A. Roe
Social Accounting for Development Planning with Special Reference to Sri Lanka, Cambridge University Press, Cambridge (United Kingdom), 1977.

Pyatt, G. and E. Thorbecke
Planning Techniques for a Better Future, ILO, Geneva, 1976.

Safilios-Rothschild, C.
Socio-economic Indicators of Women's Status in Developing Countries, 1970-1980, Population Council, New York, 1986.

Scott, W.
Measurement and Analysis of Progress at the Local Level: Vol. I, An Overview, UNRISD, Geneva, 1978.

Scott, W. and N.T. Mathew
A Development Monitoring Service at the Local Level: Vol. III, UNRISD, Geneva, 1985.

Silber, J.
"ELL (The Equivalent Length of Life) or Another Attempt at Measuring Development", **World Development,** January 1983.

UNESCO
Statistical Yearbook, Paris, 1985.

United Nations
"Report on International Definition and Measurement of Standards and Levels of Living", New York, 1954.

_____"International Definition and Measurement of Levels of Living: An Interim Guide", New York, 1961.

_____"Charter of the United Nations and Statute of the International Court of Justice", New York, 1968.

_____"Towards a System of Social and Demographic Statistics", New York, 1975.

_____ "Social Indicators: Preliminary Guidelines and Illustrative Series", New York, 1978.

_____ "Improving Social Statistics in Developing Countries: Conceptual Framework and Methods", New York, 1979.

_____ "Compiling Social Indicators on the Situation of Women", New York, 1984 (a).

_____ "Improving Concepts and Methods for Statistics and Indicators on the Situation of Women", New York, 1984 (b).

_____ **Demographic Yearbook**, New York, 1986.

_____ **Handbook of Social Statistics**, New York, 1988.

United Nations Research Institute for Social Development (UNRISD) **Compilation of Development Indicators for 1960**, Geneva, 1969.

_____ **Research Data Bank of Development Indicators**, Vols. I-III - 1976, Vol. IV - 1977, Geneva.

United Nations Statistical Office (UNSO) "Towards More Effective Measurement of Levels of Living and Review of Work of the United Nations Statistical Office Related to Statistics of Levels of Living", LSMS Working Paper No. 4, World Bank, Washington, DC, October 1980.

US Bureau of the Census, "Measurement of Infant Mortality", International Research Document No. 5, Washington, DC, 1978.

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