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Chapter 7

Goals and Indices of Development: An Anthropological Perspective

Emilio F. Moran

The processes of global change, often referred to by the gloss “development,” have accelerated in the twentieth century. Driven by economic planners who have adopted theories and analytic methods primarily from neoclassical and Keynesian economics, the process has produced numerous disorders in the distribution of resources within and between nations as well as some notable improvements in public health, nutrition, and wealth. The net result most would agree, however, has been an exacerbation of the differences between rich and poor nations and between the rich and the poor within nations.

The extrapolation of aggregate macroeconomic indices which measure so-called development from First World nations to other settings has been going on for the greater part of the twentieth century. Even though these indices were not specifically developed to measure improvements in individual or even aggregate welfare over the years, they have become obligatory indices in measuring how well development efforts have succeeded. Their current value in evaluating how successful development efforts have been in improving the welfare of individuals in a nation is brought into question in this chapter.

In the nineteenth century European economic historians began to develop theories that sought to explain how the process of transformation from predominantly agricultural to industrial production occurred—and how it might be promoted further. Western economic theories, some of them dating from the peak period of European colonialism in the late nineteenth century, have attempted to explain the experience of the West and to justify its economic actions (Robinson 1979). The promotion of growth by the West has resulted, on the positive side, in unprecedented

amounts of wealth and, on the negative side, in unprecedented disparities in welfare and destruction of natural resources.

These disparities between nations have become, if anything, accentuated in the twentieth century. Just as these disparities between nations have grown larger, however, their interdependence has grown at a comparable rate. This interdependence has come about through the promotion and acceptance of Western economic concepts that purport to provide a value-free approach to understanding the wealth of nations and its change over time.

The best example of such a concept may be the use of gross national product (GNP) as the optimum measure of development. GNP—that is, the total flow of goods and services produced in a particular country measured at market prices—cannot and does not measure the distribution of that output among the people and thus is hardly an adequate measure of the improvement in welfare of the individuals of a nation.

To evade this dilemma it has been common to take a refuge in the calculation of per capita GNP as a more objective measure of economic success. The wealth and, by implication, the welfare of individuals is judged in terms of the growth of GNP per capita. As a prominent Cambridge economist has pointed out, "From the point of view of welfare, information about *average* income is meaningless unless we know how consuming power is distributed" (Robinson 1979:5).

The growing interconnectedness of the earth's national economies, together with the persistence of economic disparities and unequal terms of trade, represent a type of disorder that constitutes a major threat to global peace and stability—and to the ability of nations to provide adequate access to resources to a majority of the world's citizens. "Spokesmen for the Third World like to deploy comparisons of figures of national income per capita in order to demonstrate the difference between rich and poor countries, but there is nowadays great disillusionment with statistical GNP as the objective of development. Nevertheless, there have been few attempts to replace it in the simplifying operations that nations use to evaluate their progress" (ibid.).

This chapter provides one more critique of currently dominant aggregate economic indices of development, but it does so with the objective of encouraging anthropologists to join other social scientists in proposing alternative indices that provide a broader assessment of changes in social welfare than that which measures primarily output of goods and

services. Such an effort should beware of existing efforts to invent other single indices of development status (e.g., Tata and Schultz 1988), a simplifying exercise likely to overlook the variability in physical, social, economic, and political systems.

Anthropology, as the social science with the longest history of attention to the local details of human life in broad context, is in a particularly good position to consider how it might engage the challenge posed by the need to measure and evaluate positive and negative changes in human welfare. The indices we might develop cannot be purely disaggregated ones, as this would make them of little value for certain kinds of aggregate analysis that nations must engage in. Rather, the indices must permit both aggregation and disaggregation, macro- and micro-analysis of the improvement in human welfare in nations. Nothing is likely to teach us more humility than to attempt to create an index such as this, as others who have tried have been quick to point out (Daly and Cobb Jr. 1989).

It would be naive to think that this chapter advocates the abandonment of neoclassical economics. The neoclassical paradigm is a body of theory of considerable robustness that has been highly productive in the study of economic behavior. Even indices like GNP, which I will criticize in this chapter, have their place. GNP is an effective reductionist way to compare the relative total wealth and power of nations. As a measure of productive capacity, it can hardly be improved on. When applied to the measurement of social welfare within nations, however, it overlooks the great disparities in distribution that can be produced in an expanding economy. One of the earliest critics of GNP was Simon Kuznets, who argued that the national accounts' focus on market transactions distorted the assessment of society's actual well-being. This is particularly the case when applied to Third World nations, where so much of the productive economic activity occurs *outside* the market (Waring 1989). This is a matter of considerable seriousness given that international assistance programs often target aid to those groups in most need, but they do not always identify persons entirely outside the market. This may have had negative results on the nutritional well-being of farmers, in particular. This is proving to be the case also in the more developed economies, in times of recession, when the informal sector expands to meet the needs of the population left out of the formal sector by policies aimed, say, at controlling inflation. Despite the large investments in development and

the notable rise in GNP of most countries, there is growing evidence that there has been a decline in overall welfare in recent years even in the United States (Daly and Cobb Jr. 1989).

The GNP index is not wrong; it is misapplied in current practice. It hides unacceptable disparities in distribution created by development behind the apparent equity of per capita share of total GNP. It is easier to avoid the problems of distribution and to pretend that wealth will trickle more or less evenly to individuals. This is patently not the case. The GNP per capita has outlived its usefulness as an indicator of how well development efforts have succeeded in reducing the poverty of people in nations. It may still be useful in measuring the relative power and wealth of nations. It is difficult to comprehend why GNP continues to be such a broadly used gauge of economic performance when it excludes a large portion of women's productive but unpaid work within the home and when production that brings about environmental degradation is counted as value produced but an unspoiled environment is not (Waring 1989). This chapter is an invitation to anthropologists to join the economists and social scientists who find GNP and other current measures of development inadequate in working together toward producing them in ways that can be realistically implemented.

Economic Theory and the Disorders of Development

Economics lacks, to this day, a general theory of development (Gill 1967). "No clear-cut system of 'new development economics' has yet emerged to dominate the fields of economic development theory and policy as completely as the 'new economics' based on J. M. Keynes's work, dominated income and employment theory after 1936" (Hayami and Ruttan 1971:2).

Two approaches loom as most influential in the literature before the 1970s. One emphasizes the *growth stages* through which economies evolve (Rostow 1960); the other emphasizes the problems posed by the existence of *dual economies* (Jorgenson 1961; Ranis and Fei 1961). Efforts to arrive at a set of sequential stages that represent the process of economic growth go back to the nineteenth century and had their origin in Germany (Hoselitz 1960). Marx is considered the only one of a host of scholars that produced genuinely evolutionary economic theory (Schumpeter 1954). His scheme proposed five stages, each of which resulted from the struggle between those controlling the means

of production (i.e., capitalists) and those who did not (i.e., labor). This struggle occurs around the opportunities for transformation in the relations of production created by a changing technology. Less comprehensive but no less influential in policy circles were the views of Friedrich List, who emphasized the importance of having a national industrial policy to transform economies from being agriculturally to industrially based. No major growth stage theory emerged until Rostow proposed his stages of growth (1960). Rostow's stages gave a preeminent role to the rapid growth of agricultural output during the early stages of economic development, and his views became commonplace among public policy practitioners, despite the rejection of his stages by most economists (Hayami and Ruttan 1971:15).

Dual economy approaches emerged in an attempt to understand the relationship (or lack thereof) between the traditional sector and the modern sector in countries feeling the influence of Western colonialism (ibid., 17). The early dualistic models were static and emphasized the limited interaction between the two sectors. They tended to reflect the frustration of colonial powers with their colonies' failure to respond quickly to the economic policies that they introduced. Their models found tropical/colonial conditions as too different from the West and found Western economics as inapplicable in dual economy situations (Boeke 1953). Boeke noted that Indonesians were guided primarily by "social needs," in contrast to Western societies, which are driven primarily by "economic needs." Despite the rejection of Boeke by his own Dutch colleagues, and others in the field of economics, Boeke's views made their way into decision-making circles, whose members found in his models a justification for not investing in agricultural development and giving sole attention to industrial policy.

More recent dualistic models have been characterized as "dynamic" because they proposed a solution to the apparent lack of interaction between the traditional and the modern sector. W. Arthur Lewis (1954) provided the intellectual takeoff for the models proposed later by Jorgenson, Fei, and Ranis. Their models sought ways to transfer labor and surplus from the traditional sector (subsistence agriculture) to the modern sector (mechanized agriculture and industry) through policy interventions. They neglected to take into account the additional costs of technological inputs to agriculture and the possibility that it may be "appropriate in some situations to have a net flow of savings into the agricultural sector" (Hayami and Ruttan 1971:23).

Development economics moved from the economic modernization phase of the 1950s and the 1960s to a phase of growth-with-equity in the 1970s. The former was defined largely in terms of growth in average per capita output, while the latter has attempted to include income distribution, employment, nutrition, and other variables (Eicher and Staatz 1984:3). In models before 1950 agriculture was given a rather passive role, while the interdependence of the agricultural and industrial sector became more recognized in the 1960s.

Considerable changes took place in the 1970s and into the 1980s through greater emphasis on microeconomic research, intersectoral linkages, rural factor markets, migration, and rural small-scale industries. These were, in part, responses to the growth of political economy and dependency models that criticized Western neoclassical economies. Dependency theorists argued that low-income countries were pauperized both through a process of unequal exchange with the industrialized nations and through the repatriation of profits from foreign-owned businesses (Frank 1966). They also attributed to the understanding that each country has a historical experience that affects how they respond to economic incentives and policies. They showed that economic development was more than just a matter of raising per capita GNP; it involved restructuring institutional and political relationships. In the words of de Janvry, "economic policy without political economy is a useless and utopian exercise" (1981:263).

These critiques, as well as the series of political disasters that struck a number of Third World countries from the 1960s on, led to a growing emphasis in economics on equity rather than on growth. It became increasingly apparent that rapid economic growth in some countries had deleterious and even disastrous effects (Eicher and Staatz 1984:13).

This resulted in greater attention to the agricultural sector, a greater effort at targeting projects to labor-absorbing projects, and welfare programs. An expansion of micro-level research on agricultural production and marketing, farmer decision making, the performance of rural factor markets, and rural nonfarm employment resulted. Anthropologists were called upon to participate in growing numbers during this phase and to contribute to the "social soundness" of development projects (Chenery et al. 1974; Chenery 1979; Streeten et al. 1981; Cernea 1987).

Important efforts at modeling the agricultural sector were produced in this period (Hayami and Ruttan 1971; Johnston and Kilby 1975; Mellor 1976; de Janvry 1981). Each of these emphasized different ap-

proaches to agricultural development. Hayami and Ruttan (1971) argued for the importance of identifying which mix of factors of production a country provided a comparative advantage in and through what changes in relative factor prices the process can be optimized. This implied that countries have different factor endowments and, thus, different growth paths—a notable improvement over previous models, which presumed that wholesale importation of agricultural technology from developed countries would lead to growth.

Mellor (1976) emphasized how the high-yielding varieties could become the cornerstone of policies leading to growth linkages in other sectors, with most of the employment actually occurring in the nonfarm sector. Johnston and Kilby (1975) proposed a view, with which anthropologists would generally tend to agree, that concentrating development efforts on the mass of small farmers would lead to faster growth rates of both aggregate economic output and employment—given the importance of the size distribution of farms on the demand for industrial products and through notable improvements in individual welfare that would result. Many other scholars (e.g., Dorner and Ranel 1971; Barraclough 1973; Berry and Cline 1979) supported the view of the importance of land reform to bring about equitable development, but political support for such reform waned in the 1970s; in some cases it was opposed by the rise of authoritarian regimes with development strategies concerned more with aggregate economic growth than with equity.

In the mid-1970s the "basic needs" approach was popularized by the ILO and subsequently by the World Bank (Seers 1970; Streeten et al. 1981). This approach argued that development projects should give priority to increasing the welfare of the poor (the poorest 40 percent) directly, through projects targeted at improving nutrition, education, housing, health, and so on. Anthropologists were called upon, once more, to help with these projects, and their contributions were important (Cernea 1987).

By the mid-1980s, however, a growing number of economists began to doubt the emphasis given to equity and to shift to a more growth-oriented strategy. Currently, both approaches coexist, and policy makers seem to fluctuate between growth- and equity-oriented projects. The recent rise of supply-side economics, another name for neoclassical growth-oriented economic theory, in major First World nations has led to a shift in practice that gives greater weight to the "invisible hand of

the market" and to the benefits to be derived from GNP growth than to distributional issues.

The presumption of supply-side economists in international lending agencies and foreign aid organizations is that all countries ought to grow in economic activity and that, ideally, they should do so rapidly. Population growth has been a major driving force justifying the need to have a concurrent economic expansion to avert deterioration of standards of living. The fact that sustained economic growth has been a historical anomaly, and that where it has occurred it has been a product of unusual, unplanned circumstances, has not deterred development economists from trying to develop models and policies that can lead capital-poor nations to a path of sustained economic growth. A path of economic growth in contemporary societies, it is said, requires capital accumulation, in which current consumption is deferred and savings are invested in the further growth of capital. Presumably, the increased economic activity generated by capital investment leads to an expansion of employment and of markets for goods and services. As this process continues, further capital is accumulated and invested, leading to technological change to gain greater efficiency in the allocation of resources and to gain market share. This can be done through either favorable prices or product quality or both. Competition in technology leads, in turn, to educational improvements and greater specialization, which expands markets and demand for goods and services. In other words, the process becomes self-sustaining (Gill 1967:34).

This ideal model of development is rarely achieved. Under what conditions would a country dominated by an agrarian elite choose to part with its current privileges and conspicuous forms of allocating its wealth to, say, prestige give way to other forms of allocation favoring capital accumulation in technological innovation? In the absence of a large number of firms and competitors, such firms would opt for less risk, in the form of collusion through oligopolies. What would urge powerful elites to allocate significant proportions of GNP to education, science, and technology for all citizens? What would justify the technological modernization of agriculture when labor is abundant and cheap? What would move elites to change the tax structure so that they are more progressive and leave more of the income in the hands of the masses, who, as consumers, will buy the output of industrial growth, instead of having tax structures that favor leaving more of the income in their own hands, whose consumption will favor industrial growth of

oligopolies under government incentives and protection? These *moral* choices are not addressed by most of neoclassical economics, even though such choices are made daily by those in powerful positions (Etzioni 1988). The moral dimensions of economic decision making have been lacking from the neoclassical economic models, with their apparent focus on the maximization of an individual's utility and his lack of concern with the social order. In fact, most political systems have moral priorities that affect the ultimate economic decisions that are made. Economics has identified one important element in human behavior: the tendency toward selfishness of individuals—while overlooking that one of the tasks of any social and political system is to control and direct that selfishness in productive ways for the larger social good (Arrow 1983).

The Trouble with GNP as a Measure

Economics is most concerned with the efficiency of resource allocation over time (Bates 1983a:362). To deal with this concern it focuses on changes in per capita income and on changes in productive activities that make income changes possible (*ibid.*). The tool kit brought to bear on efficiency accounting of firms relies on econometric methods to determine whether, given their current resources, firms are using the technology that allows them to maximize output; whether they are selecting inputs and producing outputs in proportion to their relative prices thereby maximizing profits; and whether resources are being used to the point where the costs equal the benefits at the margin and whether the net benefits are greater than those generated by alternative uses of scarce resources (364).

The concern with *efficiency* is not surprising. Development economics is concerned with countries with scarce capital and scarce technology. The stress on capital is basic: capital can take resources out of consumption in one period of time so as to increase consumption at a later time, the productive possibilities of any group are determined by the capital at its command, and to increase per capita income one must increase the ratio of capital to labor (Bates 1983a:365). Harrod (1952) and Domar (1946) focused on the process of capital formation, while later theorists emphasized the stages of growth and the role of savings and investment in economic growth (e.g., Rostow 1961). Efforts to divert attention to people, or "human capital" as economists would have it, have appeared

(Schultz 1964) but they have failed to divert economic practice away from an emphasis on *real* capital.

Economists have been all too ready to give up on the search for better indices of social welfare. "As an indicator of welfare, national product is crude, but it is the best index we have. Some simple improvements can be made. Per capita product is doubtless a better gauge of welfare than total product. A factor can be added to count the part of growing product that the society takes in the form of additional leisure. *However the measure is improved, output cannot be equated with welfare but it can serve as a rough register of changes in welfare*" (Sirkin 1965:203; italics mine). This latter distinction is often forgotten by the practitioners of the art of economics. As the same author notes: "in an economy dedicated to the promotion of welfare of its members, growth should be defined as the increase of welfare. Since no direct measure of welfare nor any prospect of obtaining one exists, discussions of growth are conducted in terms of the increase of economic product" (ibid.).

The use of GNP and other measures of commoditization are a lot less crucial to measuring living standards than "freedom from drudgery, reduced exposure to risk of death, and an expanded range of choices open to individuals" (Hart, in Sen 1987:84). GNP might bear some marginal relation to living standards when a commoditized industrial economy is prospering, but it is less so when it is undergoing a recession or if an economy is only weakly monetized (ibid., 93). Yet it is in these latter circumstances that GNP tends to be used most often as an index and when it is most likely to mislead. It is perhaps more relevant to view human welfare in terms of "unaggregated characterizations of functionings and capabilities" and as "partial orderings of aggregated assessments" than as single number measures of opulence (Sen 1987:38). Thus, China, for example, has improved its overall per capita GNP considerably above India's, but it was unable to stave off devastating famine or offer freedom of the press and of expression to its citizens. Which one has a higher standard of living? Is a larger GNP merely an indicator of opulence? Or is it best seen as a constellation of freedoms—freedom from drudgery, freedom to live a long life, freedom to have rights to food guaranteed by society at large?

Despite the mounting evidence for the imperfection of the market, economists hold on to the presuppositions that prices are efficient allocators and that one can infer from aggregate decisions the rationality or irrationality of individuals. "Rational individual choices do not in gen-

eral lead to socially rational outcomes. . . . [This] has been explored most actively by political science" (Bates 1983b:375). Popkin (1979) and Bates (1983a), among others, have explored the importance of aggregation procedures in the study of agrarian societies.

One of the confusions emerging out of economic theory lies in a subtle shift in level of analysis. When economists observe that a *society* uses its resources inefficiently, for example, it infers that individuals in it are making irrational or inappropriate allocation choices. This view is totally unwarranted, since individual choices, even when rational, do not necessarily lead to socially rational outcomes. What is rational or adaptive to the individual may be, and often is, irrational or maladaptive to the aggregate, or social group. This shift in analysis is a result of the lack of theoretical articulation between microeconomics and macroeconomics (Thurow 1983:4) and a lack of attention to moral ends and values in individual decisions (Etzioni 1988). Economic decision-making models in anthropology may indulge in some of the same fallacies, as a result of borrowing economic models without a sufficient assessment of their implications in terms of social welfare (Barlett 1980; Gladwin 1989).

The reliance of economic policy on per capita GNP as a measure of social welfare reflects these conceptual problems. This preference, as we have seen, held during the 1950s and 1960s, had a temporary decline in the 1970s, when basic needs and equity seemed to be promoted, and returned in the 1980s under the guise of supply-side economics. Policies that lead to greater per capita GNP are evaluated as "socially successful." Per capita GNP, consisting of the sum of the total value of the output of an economy divided by the number of persons in that society (Sirkin 1965:7), is used to evaluate the well-being of individuals in it. This practice is based on a number of incorrect assumptions: first, consumption is not an adequate measure of individual wealth, especially in societies in which not all goods and services are cleared through markets (e.g., reciprocal exchanges, subsistence production, gifts, barter) or in which the proportion of total consumption attributed to government consumption of goods and services makes up a disproportionate amount of total consumption (e.g., government expenditures in armaments). Second, GNP per capita is meaningful only if every additional unit of income generates the same satisfaction from each person. This is patently not the case, since a poor person is likely to value an additional unit of income more than a very rich person (Marshall 1920). Third, increases in total and per capita GNP do not take into account that these

increases are not shared proportionally and that a 10 percent gain in income in the top 5 percent income group is likely to represent a larger proportion of total GNP than, say, a 10 percent gain in income for the bottom 5, 10, or even 20 percent of the population of a developing country.

GNP further distorts the welfare of individuals and nations through its inclusion of items such as military expenditures, which have grown in their proportion of total GNP faster than total GNP, averaging 7 to 9 percent, as compared to 2 to 5 percent for total GNP (Robinson 1979:124). When military expenditures are included, the meaning of GNP as a measure of welfare becomes very dubious.

To compound the problems introduced by the use of per capita GNP as a measure of social welfare, one can also point out the extremely poor quality of basic statistical figures issued by most countries (Hill 1986:32), based as they are on bad agricultural statistics to start with. Farmers, unlike professional economists, have a "disinclination to aggregate" the areas they operate and think of them individually in terms of the seed it takes to plant each field, the crops that each will support, or the history of its acquisition (*ibid.*, 37). When forced to aggregate, farmers will respond with figures, but their accuracy is highly questionable. Moreover, most farmers lack any incentive to measure and aggregate the output from their various small plots. Some of the output may be sold, some consumed, other bartered, and other saved for seed. Some of the products have no harvest season but are harvested throughout the year in small quantities as needed, as is the case with cassava and plantains.

Anthropologists also know that official land records are seriously out-of-date, underestimate the value of properties, and neglect to include items most likely to increase tax assessments. When these landholdings are worked by different wives, as is true in polygynous societies, the difficulty increases, as the male household head may not even think of the land as his or it may not be recorded as such in land record offices. This is not to say that males are always head of households but, rather, that in many cases census takers make the mistake of going to the apparent male head of household to seek information. In other societies farm plots may be put in the name of different household members to circumvent legal limitations on the number of properties a household head may own. Anthropology, despite its attention to the interdependence of individuals and societies, has not tackled this problem of aggrega-

tion in economics and contributed its own insights to the consequences of such interdependence on policy. The basic factor that leads to the problem of analytical shift in levels is the very interdependence of individuals. The greater the interdependence and the lesser the autonomy, the more the decision of individuals are likely to lead to socially undesirable outcomes.

Another major presumption biasing many macroeconomists' approaches to development is their apparent ignorance of existing inequalities in local systems (Hill 1986). The aggregation process leads to presumptions that the majority of rural people are an undifferentiated peasantry lacking in capital, technology, and investment strategies. It ignores the presence of stratification, of significant differences between households in access to the means of production, in differential levels of consumption, and differences in investment strategy. The persistence by economists of holding to aggregate statistics as a measure of individual well-being needs to be replaced with statistics that account for landholdings by households, that do not carelessly bundle all land owners, say, with less than five hectares into one class, when that class may lump a majority of rural peoples and when differences within that class may be significant to understanding individual well-being. Nor should such statistics leave out the significant role of trader/merchants, the landless, and other nonfarmers within rural communities (*ibid.*, 15). This problem occurs not only in Third World countries but in the First World as well. Errors in forecasting GNP change have fluctuated between 28 and 56 percent (Lee 1967:638). Estimates of current GNP are often found to be in error. Rosanne Cole of the National Bureau of Economic Research in Washington estimates that about 20 to 25 percent of the GNP forecast errors result from data errors (*ibid.*).

One cannot help developing a certain amount of uneasiness about the proportion of time which has been devoted to aggregate analysis over this span of years. The work done has been generally first-rate work, but it has tended to produce a preoccupation with aggregate analysis and a tendency to seek solutions to economic fluctuation problems in terms of aggregates. The current preoccupation with aggregate analysis has induced relatively little theoretical or analytical work with the kinds of facts the [National] Bureau has gathered and published . . . what is needed and, hopefully, what is about to happen, is an approach to the study of economic fluctuations and

growth which incorporates the detail of information typified by the Bureau. (450–51).

But, having criticized GNP, and especially per capita GNP, as a measure of social welfare, what might anthropology suggest be put in its place?

Anthropological Approaches to Development

Anthropology has clearly stood apart in the social sciences in defending the importance of local institutions as representations of a society's moral order. While modernization and loss of local autonomy has undermined many of the moral systems of so-called traditional societies, many of them have survived and still stand in counterpoint to the homogenizing forces of economic development based upon simplistic indices of welfare. One of their valuable features as moral orders is that they frequently are made up of multiple moral systems that coexist and litigate with one another for supremacy with regard to their moral authority. An important potential area for unique anthropological contributions could very well be the exploration of culturally specific systems of moral preference and human welfare embedded in local institutions. Their ethical valuation of what constitutes welfare would be a starting point in developing indices that are morally appropriate to different societies. DeWalt has suggested that anthropology, and especially that branch of it associated with ecological approaches, has identified some of the fundamental problems with recent development approaches:

1. Models of economic growth run counter to ecological processes, making economic growth unsustainable in the long run. The growth of economies has been at the expense of the physical environment, thereby undermining their long-term productive capacity.
2. Development models place too great an emphasis on growth rather than on its purpose—what the growth is for. This leads inevitably to an abuse of resources and to lack of attention to moral ends.
3. Growth inevitably leads to greater hierarchy and greater losses in system maintenance. As greater proportions of the population must devote themselves to regulation of the system, controls become so complex and interconnected that there is a loss of

control, and efforts at control have counterintuitive consequences leading to system disorder.

4. The loss of cultural diversity implied by development leads to the loss of a pool of available solutions, which further destabilizes the system and reorders it along new lines (DeWalt 1988).

While human populations always surprise us with their resiliency, the rate of change is such that the periods of destabilization are severe and frequent enough to entail high mortality and morbidity, before stability is reestablished.

These disorders of development call for amelioration, and anthropological findings suggest positive ways to proceed in dealing with the four disorders above.

1. It is not uncommon for economic development activities to destroy native habitats. This is the result of the compartmentalization of decision making in organizations, the lack of specificity of development processes, and an uncritical emphasis on growth in economics that cannot even conceive as desirable a period of stable relations in the exploitation of resources. This is a deep cause of modern humanity's disorders, since it fails to couple our use of resources with their sustainability or renewability, with the relative impact of different technologies on different ecosystems, and ignores local-level expertise. The latter results not only in cultural loss and marginalization of local peoples but also in costly mistakes that waste capital and degrade the physical environment (cf. Johnston and Kilby 1975).

2. The emphasis on growth of capital and the lack of moral ends of such growth results in profound disorders in human society. While it is acknowledged that the goal of development is a "better living standard," some economists have managed to keep their attention not on these ultimate ends but, instead, on intermediate ends and on their achievement, measured purely in terms of capital growth. The problem is that intermediate ends can never be satisfied. If "a better life" is the goal, then indices of development based on stratified data measuring improved nutritional status, birth weight of neonates, infant mortality rates, life expectancy at birth and at age twenty, growth rates of prepubertal children, rates of morbidity and mortality, prevalence of parasitic and infectious diseases, calorie and protein availability per household, water availability per household, death rates from violence, and disaggregated stratified income statistics and occupational structure

would be better than those emphasizing growth in aggregate product. No perfect measure of living standards is likely to be attained, but one that emphasizes human freedom is closer to it than one that is purely based on total output or per capita access to material goods.

The accuracy of the infant mortality rate (IMR) as an index of level of literacy, income level, nutrition, standard of living, housing, and health care availability has been recently noted (Wallace and Taha 1988:158) and deserves some comment here. The IMR is a useful index not only of the health status of infants but also of the socioeconomic conditions under which they live (WHO 1981). Data on the IMR is available in most countries at the national level and by region, permitting at least the same level of aggregate analysis currently dominated by GNP. IMR has an inverse relationship with GNP per capita: countries with a GNP of \$1,000+ showed an IMR in the range of 28–95, while the \$500–999 group had a range of 75–115, that of \$250–499 had a range of 65–180, and the group of less than \$249 had a range of 105–180 per 1,000 births (Wallace and Taha 1988:160). The advantage of IMR over GNP is also its weakness; i.e., it is a composite index that includes a variety of factors relevant to the evaluation of the socioeconomic well-being of a population and not simply the degree to which their activities have become monetized—as is the case with GNP. It also means that the causes of its changes may be difficult to tease out; i.e., is an increase in IMR due to worsening water supplies, higher fertility, an economic downturn, or something else. Thus, while IMR may be better than GNP as an index of “general socioeconomic well-being,” it requires supplementary indices to target direct policy interventions. (See table 7.1.)

3. The growth of hierarchy and system maintenance resulting from economic development leads to system disorders due to the counter-intuitive system responses, resulting from attempts to control them. This is a well-known general systems’ problem (Rappaport 1982). Solutions may or may not be developed someday to cope with this situation. Until then the prudent course ought to be to reduce interdependence, promote local autonomy, and design local/regional development with full use of local knowledge as part of the design. “The present scale of world trade is another of the entropic trends brought on by centralization and concentration” (DeWalt 1988:117). While this might reduce rates of growth of capital in the aggregate, it may very well level off the current inequalities between groups in developing societies. “All individuals constantly scan their environment to determine how successfully they

TABLE 7.1. Infant Mortality Rate and Child Death Rate according to GNP per capita

GNP per capita	Country	IMR	Child Death Rate	
\$249 or less	Chad	140	37	
	Ethiopia	155	25	
	Mali	180	27	
	Zaire	105	20	
	Burkina Fasso	150	36	
	Malawi	165	29	
	Niger	145	27	
	Range		105–80	18–37
\$250–499	Median		140	
	Somalia	155	47	
	Rwanda	130	25	
	Togo	100	25	
	Ghana	95	15	
	Madagascar	65	23	
	Sierra Leone	180	50	
	Kenya	80	13	
	Sudan	120	23	
	Liberia	110	17	
\$500–999	Range		65–180	
	Median		125	
	Zambia	90	20	
	Egypt	100	14	
	Zimbabwe	80	14	
	Morocco	95	22	
	Cameroon	100	16	
	Botswana	75	13	
	Range		75–115	13–22
	Median		97.5	18
\$1000+	Mauritius	28	3	
	Congo	80	10	
	Tunisia	85	6	
	Libya	95	11	
	Range		28–95	3–11
Median		85	10	

Source: Adapted from Wallace and Taha 1988:160.

are coping and where they rank with others in their social field. Self-esteem is the emotive summation of this scan. It is constructed from, among other factors, the success or failure in occupying roles and the degree of acceptance or rejection of one’s social identity. . . . Loss of self-esteem can produce health and behavioral impairments” (Appell 1988:57). Among these are more frequent visits to the medical dispensary

and even political violence (Aberle 1962; Rasl and French 1962; Gurr 1970). These impairments are exacerbated by the erosion of social support mechanisms, such as networks of friends and kin, who provide access to emotional and material resources in times of need. Modernization has been found to erode these mechanisms, such as the system of exchanges, kin networks, and obligations of reciprocity. There is growing evidence of the role of social support in reducing stress-related syndromes in First World settings (Raplan et al. 1977; Balshem 1985; Fleming-Moran 1988).

4. The loss of cultural solutions to local problems resulting from the homogenization promoted by development and the erosion of moral ends is behind many of our current disorders. "Decentralization, local autonomy and contextual development could help to reverse the process of cultural wastage. A reemphasis on local culture will encourage the kind of cultural diversity that we should recognize as important in evolutionary terms" (DeWalt 1988:118). The growing conflict between north and south is but a representation of a deeper conflict between those who advocate centralization of capital and those who see the process as a form of neocolonialism rather than a way to achieve the alleged goal of development—a better living standard.

The need to move away from the trajectories of development of the past forty years is evident all around us. Resources have become more unevenly distributed, and scarcities are created through export of local resources to the centers of capital. If systems are to be adaptive in the long run, higher orders of control in hierarchical systems must keep their ordering functions at a high level of abstraction or aggregation (Rappaport 1982:154). Thus, "compatibility between people and the physical environment" seems a moral goal appropriate to development and change. Specifics will have to be left to lower-level orders of the system that take into account both past history and current status. This also means that higher levels in the hierarchy of social systems stop mandating details, as they do in current national economies, or meddle with instrumental values (155). These values are left to lower-level orders, in which case locally based moral ends in economic behavior can return to play a more important role in organizing the production and distribution of local resources. Growth of capital consistent with this compatibility with the physical environment and with instrumentalities left to lower-level system orders (i.e., decentralization) might remain an objective, but it would now be subordinated to questions of

long-term survival and well-being—a higher moral end than simply capital growth. Capital has no moral content, but, in the absence of effective moral ends, capital growth has proven to subvert the values of many a society and undermined local systems of resource sharing and access.

The current high standards of living of the First World nations belie distortions in distribution that are as serious as those one finds in the Third World. There is evidence that, despite enormously higher GNP and GNP per capita in First and Second World nations, these nations have also experienced a decline in living standards and a growing gap between households experiencing growth of income and those experiencing decline. The destruction and pollution of the environment that has accompanied economic development in First and Second World nations has led to a growing concern with environmental impact. Despite the evidence that such a process is not unilineal or marked by obligatory stages and experiences, efforts to take environmental impact into account is being resisted by developing nations, who interpret this effort as an attempt to restrain their development. Those who stand to benefit from the individualistic paradigm of classical economics in the Third World oppose efforts to introduce social system and global system considerations in their economic behavior.

Anthropological findings would suggest that a less aggregative, more community-centered approach to development must be given priority. The moral goals of communities need to become part of the goals of development, and such goals are best seen as long-run in nature. Long-run goals, in turn, imply a recognition that economic growth cannot take place at the expense of the destruction of the physical environment or be built on the backs of a majority of the population, which sees its well-being diminished despite per capita GNP increases.

Efforts to decentralize decision making for development and to disaggregate the measurement of development projects have been undertaken on and off in the past forty years. Yet, they have not been sustained for long, nor have political groups benefiting from maintaining centralized control supported local level development. Recent efforts to emphasize basic human needs and mandates to focus on the poorest of the poor are consistent with the kinds of goals development should have. These efforts have been subverted, however, by the recent rise of monetarist, supply-side economics in policy circles of First World nations. The return of this kind of economics has been associated with

greater income disparities in First World nations as well as Third World nations. That this has been the case is not surprising, the economic policy built as it is on the primacy of individual satisfaction, without acknowledging disparities in power. The presumed goal of individuals—to maximize utility—is not necessarily the proper goal for nations.

Anthropology takes a moral position that economic growth is justified only if the results are enhanced well-being for a majority of the population, if it occurs with consultation and participation with local peoples and if the physical environment's long-term productive capacity and nonproductive value is assured. To know if that is the case, indices that are capable of measuring changes in well-being of society's strata are necessary. Income alone is an insufficient index. It must be supplemented by other indices known to reflect the well-being of individuals and populations: normal rates of growth of children; a low incidence of infant mortality; low parasite loads; low incidence of malnutrition; and normal neonate birth weight. None of these should be used in the aggregate but, rather, stratified on the basis of criteria such as geographic region, ethnicity, and income decile. The disaggregation of data must be a fundamental starting point for reindexing the measures of development. The disorders of the modern world come from an increasing interdependence of the world's economies without an accompanying effort to deal with the misinformation communicated by aggregate data such as per capita GNP and other bad statistics that are fed to the Food and Agriculture Organization (FAO) of the United Nations and other international organizations demanding to know the state of the world.

Indices will also have to reflect sensitivity to the special conditions of the populations whose welfare concerns us. The impact of development is different in India than it may be among relatively isolated Amazonian Indians. In societies experiencing their first contact with the modern world the indices that are most important to monitor are epidemiological indicators, given the impact made by the epidemiological transition on these populations. Great pandemics of measles, the common cold, influenza, chickenpox, and tuberculosis tend to follow the initial period of contact with diseases from more densely populated areas, and high rates of mortality result where permanent medical services are not provided. Many areas of the world's tropical forests today are experiencing just such a change as a result of development activities of nations, as they seek to integrate their forested lands into the national drive toward development. Economic planning has not given adequate attention to the changes in

welfare that accompany these initial contacts between relatively isolated native populations and the state (cf. Wagley 1951; Ribeiro 1957; Salzano and Callegari-Jacques 1988; Coimbra Jr. 1989).

Simultaneous with this severe depopulation accompanying cultural contact are a severe erosion of the capacity of these populations to produce enough food and a host of nutritional deficiencies accompanying disruption of their traditional access to resources. The lack of food, when addressed through imports, can lead gradually to an erosion in the food habits of the population which, in turn, can lead to a number of nutritional deficiencies arising from a diet with an excess of carbohydrates, salt, and fat. Thus, epidemiological indicators must be supplemented with nutritional indices of adequacy.

Development activities, such as road building, often promote the creation of malaria-breeding sites through poor drainage and impounding of seasonal streams (N. Smith 1981). Monitoring changes in morbidity and mortality can help identify areas for necessary intervention to reduce greater losses if the problem goes unaddressed. Malaria, throughout much of the tropical Third World, is the major scourge of populations. Also important are trypanosomiasis, schistosomiasis, filariasis (including onchocerciasis), leishmaniasis, and leprosy (Shimkin 1989).

In more densely populated areas, especially in cities, the scourges tend to be different and are related to poverty, crowding, and poor sanitation (especially clean water supplies). Tetanus, pneumonia, diarrhea, whooping cough, measles, and polio are the most important (ibid.).

With achievement of a modicum of development the population enters into a different set of problems associated with sedentarism, high-fat diets, more salt and alcohol, and greater psychological stress. Hypertension is the end result, especially among the urban elite (ibid.).

The first need of Third World nations is to increase production of food staples. This is a political objective, with important welfare consequences for members of a nation. Food reduces the vulnerability of a nation politically and provides a degree of financial discipline (Robinson 1979:132). Food production is the most effective form of import-saving investment. To import food means to borrow to eat, and the debt incurred remains after the food has been eaten—and no goods and services have been produced to pay for the principal or interest. Many countries fell into the trap of believing those who preached "comparative advantage" as a principle that applied to all economic activities,

even staple food production. For some nations, indeed, food self-sufficiency is out of the question, but it is possible to develop more resilient social and political systems by strengthening the agricultural sector. The priority assigned to industrial development has paid off handsomely for First World economies, with their abundance of capital and technology, but less often for many Third World nations.

Correction of the disorders brought about by misapplied indices of development will require that items of real welfare become the indices and that policies seek to bring about positive changes in those dimensions: health, education, and nutrition. The disparities in consumption present today are intolerable—all the more so because through the media we are all too aware of the injustice of famine alongside conspicuous consumption.

When the indices begin to utilize disaggregated data and, by consequence, to value distributional questions, then it may be possible to see policies that favor security of land tenure over aggregate output increases. This, in turn, will lead to a lessened emphasis on export crops and greater emphasis on staple crops—thereby enhancing food security, the diet of the farming households, the fabric of social and cultural life in rural areas, and other positive values of system maintenance and gradual evolution. This does not mean that the agricultural sector be given an entirely free hand. A tax structure that resists land concentration and encourages intensity of land use needs to be implemented to increase the burden to those who reduce the welfare of others through less intensive food staple production. To find the pattern of prices that will induce the required pattern of cropping is a complex matter with no easy answers. Each country will have to experiment and adjust its indices until it finds the point that succeeds in increasing welfare to the majority of its people.

Conclusions

Economics developed as a discipline from the powerful concepts generated by Adam Smith. To him the market was a powerful mechanism that aggregated individual wants into social outcomes. The hidden hand of supply and demand—i.e., the market—permitted prices to represent the optimal flow of goods and services at a given time. The ideal conditions of free markets are, in fact, rarely present, and this has become increasingly clear in the past four decades. Governments have always

interfered in the operation of markets: by providing public services, by facilitating the flow of some goods but not others, and by implementing preferential tax policies. Public goods can generate negative incentives, too, by encouraging free riders, who would opt to obtain goods for free, or undersupply public goods (Bates 1983b:373).

In addition, even economists have begun to question the validity of the equilibrium price-auction model of microeconomics (Thurow 1983). In the basic model of microeconomics it is impossible to find over- and underemployed resources. By the same model inflation either cannot exist, or it makes little difference. The price-auction, or neoclassical, model bears little resemblance to the real economies we observe today, and, unfortunately, the tide of economics has been to become increasingly distanced from real economies in favor of abstract ideal models of how economies ought to work given the assumptions of a price-auction model.

It behooves anthropology to work with those economists who have begun to acknowledge the contradictions of current economic theory and practice—and to work toward new theories in which the real behavior of individuals, and the real behavior of regional and national economies, is taken into account. They will be without a doubt less elegant models, but perhaps they will better represent the behavior of real systems. One such effort is represented by the work of the so-called socioeconomists, led by A. Etzioni (1988), who have proposed a reconceptualization of economics that takes into account the social responsibilities of *Homo economicus* (1988). Also notable is the work of many agricultural economists, welfare economists, the new institutional economists, ecological economists and political economists, whose work shares anthropology's concern for the majority of the world's population and the importance of local variation and resource distribution.

Many current practices in international economic development seem to encourage that national elites collude with international organizations in order to obtain capital—by agreeing to megaprojects that put Third World nations in debt, the projects benefiting a small number of construction companies and elite groups capable of obtaining the large contracts. Less often do multilateral development banks encourage decentralization of capital, control of information by local populations, participatory approaches to decision making, and self-help. This has been left largely to the NGOs and other grassroots organizations, which,

in so doing, have in many cases collided with Third World states over political and social policy. Left out of this whole effort at development are the populations in greatest need, those rarely, if ever, favored by development efforts. The continual emphasis on aggregate measures to evaluate the success of development projects leads to counterintuitive results: aggregate development and individual underdevelopment. Clear examples of these outcomes can be seen in Brazil, where GNP rose from about \$270 in 1965 to more than \$1,840 in 1986, while the share of GNP by the 50 percent poorest went in that same period from 17.71 of the total to 11.81 percent. During the same period the share of the richest 5 percent went from 27.69 percent of the total wealth to 39 percent of the total (Malan 1979:39). This trend toward concentration of wealth continued unabated throughout the 1980s.

The only way to turn this situation around is to explicitly de-emphasize the use of aggregate indices and to develop stratified indices that reflect the situation of the majority of the population. Thus, in a country in which 80 percent of farmers own less than ten hectares of land, indices may need to account for the majority of categories in the range from zero to ten hectares, using as many as five intervals in this range instead of "standard" intervals that swamp the important variability within the majority group. Categories such as landless, craftsman, merchant, etc., should not be left out of the accounting in the rural sector, since the individuals who fill these categories are responsible for marketing output, supplying inputs, and making technology available in rural areas. In other words, the indices need to be able to account for the local-level differentiation present in national economies.

On each of these strata data on measures of health and nutrition are among the most sensitive to well-being. It is presumed that the greater the income, the better the health and nutrition of a population. If that is the case, why not use these measures to establish the success of development projects? It is more difficult and time-consuming but, in the light of what we have said earlier, can one trust aggregate income figures as indices? In the task of generating these indices on a country-to-country basis and in monitoring the success of this kind of individual-level development, anthropology has an important and necessary role to play. Not to engage these thorny issues simply guarantees that a certain kind of economics will continue to be the sole judge of what development is and how it should proceed. It is clear that anthropology disagrees with current practices and that it has alternatives to offer.

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Chapter 8

*Hunger Vulnerability
from an Anthropologist's
Food Systems Perspective*

Ellen Messer

Since 1985 the American Anthropological Association Task Force on African Hunger, Famine, and Food Security has been organizing anthropologists to provide information to diagnose, redress, and prevent famine in Africa (Huss-Ashmore, Curry, and Hitchcock 1989; Ashmore and Katz 1989, 1990; Shipton 1990; Downs, Kerne Reyna 1991). The premise behind providing rosters of anthropologists knowledgeable about Africa and hunger problems and symposium publications on their ideas and methods is that anthropologists have unique perspectives and capabilities that might improve performance of intergovernment (IGO) and nongovernment organizations (NGOs) to monitor and respond to hunger problems.

At the same time that some anthropologists promote anthropological perspectives, we also find ourselves employed in interdisciplinary enterprises that address hunger problems, whether academic research and outreach programs such as the Alan Shawn Feinstein World Hunger Program at Brown University, privately funded think tanks such as the Center for the Future, or international agencies such as the International Food Policy Research Institute or the World Bank. These interdisciplinary efforts offer distinctive frameworks for assessing, monitoring, and overcoming hunger problems. They benefit from anthropological inputs but rarely cover ground in precisely the terms that anthropologists might, as they seek to incorporate also the viewpoints and views of geographers, economists, and people in other disciplines who, collectively, also direct them.

In this chapter, I share some of the advances of our World

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