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SOME CORE ASSUMPTIONS IN DEVELOPMENT ECONOMICS

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## ABSTRACT

The paper discusses development economics. The paper critiques it. It concludes by indicating those portions that are "salvageable" for positive analysis.

Development economics is concerned with the efficient allocation of resources in poor societies. It is distinctive in its stress on the temporal property of economies and in its concern with the making of efficient allocations over time. Within "conventional" economics, it is also distinguished by the stress it places on the role of the public sector.

As a social science, development economics makes several core assumptions, each of which is seriously flawed.

1. That inefficiency implies irrationality.
2. That the notion of the social welfare is a meaningful concept; that it can provide a guide to public policy; that it can be measured in economic terms; and that it is embodied in the choices of governments.
3. That rational people will make choices that lead to efficient outcomes and that these outcomes will be stable.

What should be retained for positive analysis is the assumption of rationality in choice and the method of equilibrium analysis. The paper concludes by illustrating the importance of these tools for research in anthropology.

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topics and perspectives. Any attempt to critique the field is therefore open to a persuasive rejoinder: that the critic is attacking an inaccurate characterization. To finesse this counter, I confine myself to what would appear to be the minimal agenda of the field; the various approaches taken in development economics and the different applications of it can be seen as variations on the themes which I explore. And insofar the field does make core assumptions, they will be evident in the manner in which it handles this minimum agenda. My criticisms should thus be well directed.

THE AGENDA OF THE FIELD

Like economics in general, development economics focuses on the efficient allocation of resources. It is concerned with efficiency at particular points of time. But what principally differentiates it from other branches of economics is its concern with the efficiency of allocations over time. In particular, the field has a central and distinctive concern with economic dynamics: with changes in per-capita incomes and with the changes in productive factors and their inter-relations which make these changes possible.

No less than their cohorts in other fields of economics, development economists are concerned with static efficiency. They critique trade policies, for example, in terms of the excessive costs which they engender. A common criticism is that poor countries employ too many resources in the production of manufactured commodities which they formerly imported from abroad. Such resources could more

INTRODUCTION

The purpose of this paper is three-fold. It seeks to outline "conventional" development economics. It critiques the field. And it indicates what should be salvaged from it for social analysis.

The principal argument of the paper is that development economics offers a weak foundation for social analysis. One road to such a critique has already been well traversed and will not be taken here: to move outside the economic paradigm, to indicate the range of critical variables which have been omitted by development economists, and to note how their conclusions are vitiated by the exclusion of these factors. Anthropologists have participated vigorously in this form of criticism and it would add little were I to recapitulate their contribution. An alternative and more powerful tactic is available, however, and it is one that I adopt: a critique of development economics mounted from within its own paradigm. The attraction of this approach is that it is more fundamental. For if development economics can be shown to be "bad economics," then it is in difficulty even before being falsified on other grounds.

Contemporary development economics spans an enormous range of

productively be spent, it is argued, in promoting the export of goods in which the country holds a comparative advantage; for through such specialization the country could both finance needed imports and still have resources left over with which to undertake further productive activities. The classic critique of import substituting industrialization is, of course, that of Little, Scitovsky and Scott. It has been extended and deepened in the volumes produced by the National Bureau of Economic Research under the editorship of Krueger and Baghwati.<sup>1</sup>

Particularly notable is the relevance of this literature to the study of rural societies. For a major theme is that the trade policies adopted as part of the effort to promote domestic industrialization impose, in effect, a tax on agriculture. The over-valuation of domestic currencies which serves to cheapen capital imports for industry serves as well to penalize export agriculture; and the protection of domestic industries raises the price of manufactured consumer items, thus shifting the terms of trade against the rural sector.<sup>2</sup> One consequence is an undermining of the incentives to farmers and a contraction of the agricultural economy. Another consequence rapidly follows. In efforts to counteract the decline in agriculture, governments create new production incentives in the form of subsidies for farm inputs; and an important effect of such policies is the promotion of large-scale, mechanized production. Not only do the trade regimes thus tend to weaken the agricultural sector; but they thus also tend to lead to the adoption of policies

which transform the structure of rural society.<sup>3</sup>

The concern of development economists with efficiency is also marked by the criticism of marketing policies in third-world countries. They criticize these policies for the economic distortions which they create. A common charge, for example, is that governments intervene in markets and impose uniform prices and that they thereby waste resources. Because prices are uniform over space, regions of the country enter production which would stay out of production were prices to reflect real transport costs; and because they are uniform over time, governments fail to reduce prices when goods are not scarce and so must devote resources which could more profitably be spent in other endeavors to the carrying of large inventories.<sup>4</sup>

These criticisms too have been strikingly advanced in the analysis of agriculture. Jones, Dodge and other, for example, have noted the tendency for Zambian agriculture to move to the wide spread monocropping of maize due at least in part to the government's attempts to establish a uniform maize price throughout the nation. Places far distant from urban markets had once specialized in the production of high value crops, such as tobacco, coffee and groundnuts; with the rise in maize prices in distant locations, however, farmers moved out of the production of such cash crops and into the production of maize. Zambia therefore experienced shortfalls in the production of high valued crops. Ironically, despite the movement into maize brought on by the uniform pricing policy, there was no concomitant increase in deliveries of maize to the urban areas;

the costs of the policy uniform pricing, in terms of increased prices and declines in the production of other crops, produced fewer benefits, in terms of increased grain supplies, than had been expected. For uniform prices disregard the costs of transport and so provide no incentives for persons to move maize from a location where it receives a low price to a location where the price may be higher. There was thus little incentive for maize marketing to grow in proportion to maize production.<sup>5</sup>

Uniform prices over space thus lead to failures to allocate resources in a way that conserve for the costs of distance; they lead to inappropriate production decisions and to failures in transport. Similarly, uniform prices over time lead to failures to cut back on production when costs are low and failures to increase production when costs are high; they therefore exacerbate periods of glut and famine and require unnecessary expenditures in storage. An illustration of this phenomenon is provided by the Kenyan dairy industry. By not allowing prices to fall during the rainy season, when pasturage was ample and milk production "easy", the Kenyan policy of uniform prices led to over production and necessitated costly programs of milk storage and disposal. Conversely, by failing to increase prices in the dry season, the policy failed to provide incentives for farmers to spend resources on supplemental feeding so as to promote off-season milk production. The result was seasonal shortages -- shortages which were invariably attributed by the public to "drought" rather than pricing policies.<sup>6</sup>

These examples illustrate the emphasis on static efficiency which characterizes development economics. This emphasis is reflected as well in the tool kit of the development practitioner. Development specialists use, for example, econometric methods to measure the technical efficiency of firms, i.e. to determine whether, given their resources, they are utilizing that technology which enables them to produce the maximal output. And they have developed as well econometric tests of the price efficiency of firms, i.e. methods of determining whether at the margin producers are selecting inputs and producing outputs in proportion to their relative prices, thereby maximizing profits.<sup>7</sup> Moreover, development economists repeatedly utilize one of the most basic tools of the applied economist: the methods of project appraisal. Correcting for the distortions in prices which lead to inappropriate assessments of true scarcity, they seek to determine whether the proposed use of resources is efficient, i.e. 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.<sup>8</sup>

This concern with efficiency should not be surprising. Development economics is, after all, but a branch of economics. Moreover, the field is concerned with countries in which scarcity is a particularly dramatic fact of life. In areas where productive resources are extraordinarily scarce, misallocations are likely to have larger than average consequences. Particular care, then, should be paid to their efficient utilization. The emphasis is thus

appropriate and unsurprising.

The concern with static efficiency is a characteristic which development economics shares with other branches of economics. What distinguishes development economics is its concern with the temporal property of economies. Development economics stresses that the quantity of productive factors is a function of time; that their quality is a function of time; and that their productive interrelations alter with time.

The emphasis upon the temporal property of economies is most clearly seen in the stress placed upon capital. Capital is inherently intertemporal; it takes resources out of consumption in one period so as to increase consumption in another. Moreover, the productive possibilities of any group at any point in time is determined by the capital stock at its command; and to increase per capita incomes, one must therefore increase the ratio of capital to labor. Given the stress on the importance of increasing the per capita consumption which lies at the heart of development economics, it is therefore natural that persons in the field would place primary emphasis upon capital formation.

This emphasis characterized much of the early work in the field; many of the early growth models -- such as those of Harod and Domar -- were driven by the process of capital formation.<sup>9</sup> The later "stages theories" rested upon the assumption that growth resulted from savings and capital investment; this work is still best represented by Rostow's seminal contribution.<sup>10</sup> More recent contributions have

altered the materialistic bias inherent in these earlier works and affirmed instead the central role of people. They have emphasized the formation of "human capital" and stressed the role of investments in skills in the generation of economic growth.<sup>11</sup> The emphasis on capital formation has been criticized by some; but many who dissent from it do so only because they believe that the quality of capital is at least as important as the quantity, that is, that it must be of the "appropriate" kind in order to be productive.<sup>12</sup>

An analysis of capital quite naturally dominates a field which is so centrally concerned with the temporal property of economies. The concern is reflected as well in the emphasis placed upon the manner in which other factors of production alter as a function of time. Population studies and ecological analysis: both belong naturally in a field where factors such as labor and land are modelled as a function of time. Development economics stresses as well changes in the nature of production functions, i.e. changes in the way in which productive factors are combined. Inquiries into the sources of technical change and investigations of the determinants of innovative capabilities -- both naturally belong in a field concerned with the dynamic as well as the static properties of economies.<sup>13</sup>

As in the study of allocations made at single points in time, development economics stresses the analysis of the efficiency of allocations which are made over time. It is concerned in particular with the selection of optimal investment programs -- programs which withdraw resources from present consumption so as to enhance future

consumption possibilities. The analysis of optimal growth strategies is central to this field.

It should be noted that in elaborating on the central themes of their discipline, development economists have long engaged in a vigorous interchange with anthropology. The importance of this interchange is marked, for example, by the fact that anthropologists no longer can pretend that local communities stand in isolation from the economic forces generated by government policies. The significance of these policies for economic behavior has been underscored by development economists; and under the tutelage of those in development economics, anthropologists have come to appreciate their importance.

This interchange has not been one sided, however. Anthropologists have bolstered the foundations of the development economists' critique of government programs, for example, by demonstrating the rationality of peasant behavior and thus the susceptibility of peasants to the distortion of incentives induced by public policies. The works surveyed in the chapter by Ortiz illustrate this contribution. Other anthropologists have taken the opposite tact and underscored the limited applicability of the assumptions of development economics. Some have shown that income is not the sole force driving decision making by peasants, for example; problems of risk and risk management are also critical in peasant decision.<sup>14</sup> In these and other ways they have challenged some of the major premises underlying the analysis of static efficiency by

development economists.

The contributions of anthropology have been more marked in the analysis of economic dynamics. Anthropologists were among the first to examine the factors which promoted the degradation of soils and the growth of populations; Boserup's seminal work addressed both land use management and population growth and did so within a single framework.<sup>15</sup> The work of Allan on the carrying capacity of land, of Ruthenberg on rotational practices, and of Jacobs and others on pastoralist land use illustrate the continuation of interest in this area.<sup>16</sup> Anthropological studies have also scrutinized the role of capital and the way in which it can change with time; in particular, they have examined the ways in which capital is located, mobilized, and invested in societies lacking formal markets for this resource. Hill and Berry, for example, analyzed capital formation in the tree crop economies of West Africa, a theme I have followed up on in my studies of human capital formation among families in the Luapula region of Zambia.<sup>17</sup>

Anthropologists have also contributed to the study of the ways in which productive factors have been recombined so as to enhance the value of the output which they generate. Hill, Berry and Epstein -- all have examined the role of innovators and entrepreneurs in the economies of developing societies. And Boserup, Geertz, Ruthenberg and others have studied the dynamic properties of production functions, particularly in peasant agriculture.<sup>18</sup>

In this dialogue, there remains much for anthropologists to

learn from their colleagues in development economics. Changes in peasant production functions have been modeled, for example, by Gotsch; and the work of Hyami and Ruttan on induced innovation is insufficiently known.<sup>19</sup> Both studies emphasize the role of prices in inducing technological change -- something which anthropologists tend to underplay, placing as they do greater emphasis on the role of physical factor proportions.

Development economics is thus concerned with static efficiency. It is distinguished by its concern with the intertemporal property of economies. There is another characteristic, however, which deserves mention, and it too is distinctive. As a branch of "conventional" economics, development economics places an inordinate stress on the role of governments.

Development economists remain deeply skeptical as to whether private, decentralized decision-makers can make efficient intertemporal choices. Private decision-makers may discount the future at too high a rate, they contend; governments, as custodians of the interests of all generations, may therefore be better suited to choosing an appropriate level of savings. Moreover, optimal levels of capital formation, it is held, entail savings decisions made under conditions of imperfect markets; for there is a public goods property to intergenerational transfers.<sup>20</sup> Human capital formation is also subject to market failure; for investments in human capital generate external benefits and too little is therefore likely to take place if left to private choice.<sup>21</sup> In addition, much of the capital required

for the execution of optimal intertemporal programs has inherent public goods properties; it takes the form of infrastructure: roads, communications systems, and so forth. And even when investment decisions involve purely private goods, it is argued, these investments, to be productive, must be made jointly; private investment decision must be centrally coordinated and require firm mutual assurances, for, failing these, no decisions may be made at all.<sup>22</sup>

The inference drawn from all these lines of reasoning is that governments have a major role to play in the development process. Indeed, in no other field of "conventional" economics is government intervention so freely prescribed. As a consequence, as a technical field, development economics often becomes public sector economics; it becomes an exercise in planning. Rather than the private market, the government becomes the central mover in the creation and implementation of intertemporal programs. In no other branch of economics, perhaps, does the public sector play so overt and major a role.

#### DEFICIENT ASSUMPTIONS

##### Individual Rationality Equals Social Rationality

The basic commitment of development economics, I have argued, is to the efficient allocation of resources, both at a given point in time and intertemporally. Few would contest this central premise.



Efficiency, after all, is a necessary condition for the maximization of almost any conception of the social welfare; whatever one's normative commitments, these values will best be realized when society's resources are allocated in the most productive manner. It is not as an ethical standard, then, that this premise is deficient; rather, it is deficient as a guide to positive analysis.

The criteria is misapplied in at least two ways. In both instances, the inferential process begins by noting that resources have been inefficiently employed. In both instances, it derives conclusions concerning the rationality of individuals. Social irrationality -- i.e. the inefficient use of resources -- is cited as sufficient reason for inferring the irrationality of individual decision-makers. Noting the widespread inefficiency of resource use in the developing areas, particularly as a consequence of governmental policy choices, economic analysts frequently infer that people (especially policy makers) are engaged in irrational choice making.<sup>23</sup>

#### Misconceiving Rationality

In that ex-post evaluations are used to critique decisions taken ex-ante, such an inference is in error. Rationality requires that individual decision-makers choose their "top" or most preferred alternative. These alternatives will be ranked in terms of their value in enabling the individual to secure his or her preferences.

Rationality says nothing about the content of these preferences. Some models of rational choice, for example, posit

preferences which imply an aversion to risk while other do not; minimax models of rational choice require that alternatives be ranked in terms of their least favorable possible outcomes, clearly implying an extreme form of risk aversion and, for many purposes, a bizarre form of preference. Equally as important, rationality does not require perfect information. Quite the contrary; most models of rational behavior allow for imperfect estimates of outcomes and, granting that information is costly, many allow for the acquiring of "optimal" levels of information. The implication is clear: behaving rationally, people may well choose to remain ignorant. This accords with every day experience, for many of us cheerfully and profitably remain ignorant of forces which are too weak to affect us strongly or too impenetrable to be understood without an exorbitant expenditure of effort. And, when forces do make a difference, we often acquire information in its least expensive and often imperfect form, e.g. by talking to a family member, co-worker, or friend, rather than by becoming a well informed specialist on the subject.<sup>24</sup>

The concept of individual rationality is thus a narrow one. It does not impose conditions on the content of preferences. Nor does it require perfect information. It requires only that choice makers order alternative courses of action in terms of their estimates of the consequences for the values they seek to attain and that they chose that alternative which they expect to yield the most favorable outcome. Were the individual to systematically choose an alternative at the "bottom" of his or her ranking -- i.e. one that would secure

the least preferred result -- then that person would be behaving irrationally. The systematic choice of such self-defeating alternatives lies outside the realm of rational choice analysis; its analysis lies within the special domain of those sciences which study irrational behavior.

Perfect knowledge, then, is not required as a condition of rationality. But development economists review the past experiences of developing societies. They appraise project choices, compare retrospectively the performance of various economies and analyze the success of alternative development strategies. Evaluating choices retrospectively, development economists possess "perfect" information: they know how decisions worked out. When they employ that knowledge to critique the supposed rationality of the makers of the decision, they are implicitly assuming that the decision-makers themselves possessed such a "full information" vantage point. The decision-makers, of course, did not. And when they make decisions which proved to be socially irrational, that does not then necessarily mean that the decision-makers were themselves behaving irrationally. They could, in fact, have been behaving perfectly rationally and have been overtaken by unforeseen events or simply have been mistaken.

In no other social science discipline is the concept of rational choice so deeply embedded as it is in economics. It is particularly disturbing, therefore, that development economists should misuse this concept.

#### Social Rationality Implies Individual Rationality

Confusing "ex-post" and "ex-ante" decision making is thus one way in which the efficiency criterion is mistakenly employed in the drawing of inferences. Another source of error is the apparent belief that individual rationality is a necessary condition for the attainment of socially rational outcomes.

Observing the inefficient use of society's resources, development economists often infer that persons made irrational choices. This inference is not warranted, for, individual choices, even when rational, do not necessarily lead to socially rational outcomes. This point is foundational. It goes to the core of much of contemporary economics. And it is of great significance for other social sciences as well. It therefore warrants elaboration.

From at least the time of Adam Smith, the market has been analyzed as a mechanism for aggregating individual wants into social outcomes and has been extolled for its ability to do so in a highly desirable manner. The benevolent operations of the "hidden hand" is of course a well known construct. Among the desirable properties which the market is held to secure, efficiency in the allocation of scarce resources is of course foremost. But in the early 1950's several economists analyzed the properties of market economies and their results generated deep skepticism concerning the ability of markets to secure efficient outcomes. So basic are these results that they are referred to as the fundamental theorems of welfare economics.<sup>25</sup> A major finding was that the "hidden hand" could operate beneficently

only under an extraordinarily restrictive set of assumptions.

Rational actors, operating in market settings, would make choices which produce socially rational, i.e. efficient, outcomes only under the most exceptional circumstances. The obvious inference to be drawn is that there is little reason to expect that individually rational behavior, even by all members of society, will induce the efficient use of society's scarce resources.

The conditions under which individually rational choices aggregate into socially irrational outcomes have proven to be very general.<sup>26</sup> And many of the most interesting areas of contemporary economic research have focused upon them. One common situation is the existence of direct physical linkages between producers -- links which are unmediated by any market. Such conditions are referred to as production externalities. Where no market-like institution spans an externality, then economic incentives fail to induce rational actors to operate at levels of production that support a socially desirable use of society's resources. For example, a profit maximizing firm may use resources in a way that produces too much pollution (a "negative" externality) or a labor force with too few skills (a "positive" externality). In the presence of externalities, too few resources go into activities which produce beneficial external effects and too many into the activities which result in the production of harmful ones. Innovating market-like incentive systems -- e.g. imposing fines for pollution or selling "licenses to pollute" -- corrects the problem by making producers take into private account the social costs or

benefits of their production decisions. They thereby induce rational actors to make private choices which lead to the efficient use of society's resources.

Another common circumstance involves interdependence among the utility functions of individual actors. Such circumstances arise when the consumption choices of one person directly enter the utility function of another. This situation commonly occurs when there are public goods.

The provision of security is a classic public good: if one person safeguards a village from attack by building a wall around it, for example, then the action of that person enhances the security of all other villagers. Other examples would be the provision of clean water, roads, or a market place. Again, within broad limits, if the benefits of such services are provided to one person in a given locale, then they are generally available to everyone.

The reason that markets fail to lead rational individuals to supply a socially desirable level of public goods is that public goods generate perverse incentives. Because any individual can "free ride" on the efforts of others, no one has a particularly compelling individual incentive unilaterally to supply the public good. Each can credibly believe that he does better waiting for another to furnish the good and then consuming the benefits for free. Choosing rationally, individuals will therefore behave in a way that undersupplies the public good.

Non-competitive markets constitute a third circumstance under

which individual rationality leads to socially undesirable outcomes. When there are but a few large actors in a market, then each actor knows that his or her choice "makes a difference"; representing a large proportion of the transactions in the market, each actor's choices will affect market conditions in general. Under these circumstances, rational individuals will behave strategically; they will make choices out of a regard for the effect of these choices on other actors and for the response which the other actors, behaving rationally, are likely to make in return. The calculation of best strategies under such circumstances is likely to lead to decisions which, while individually rational, may be socially harmful -- decisions, for example, to collude, to form oligopolies, or to engage in restraints of trade.

The study of production externalities, public goods, and imperfect competition -- all have generated interest in economics precisely because they underscore those areas in which markets fail to lead individually rational choice makers into the making of socially rational decisions. From the point of view of economic theory, they are therefore compelling; they represent counter examples to one of the basic presuppositions in the field. They are also significant because they point out those areas where forms of social intervention may be required to correct the deficient operations of the market. They are thus "basic fare" in the economics of policy analysis. The study of these problems has inspired some of the most important methodological advances in contemporary economics, advances in game

theory being a case in point. And yet the significance of these creative areas of contemporary economics appears to have been lost on those development economists who see in the inefficient use of resources as prima facie evidence of irrational individual decision making. This fallacy of aggregation is startling and depressing, given the state of the economic arts.

It should be noted that just as development economists fail fully to appreciate the importance of problems of aggregation, so too do anthropologists. Frequently, for example, the properties of social allocations -- their equity, their fairness, or the recognition they extend to certain values: age, wealth, scholarship, or courage -- are attributed to the values held by individual members of a society. The reasoning that undercuts the inference of individual irrationality from social irrationality extends to this case as well: choices made by individuals out of a regard for the values they hold do not in general aggregate into allocations by society which support the attainment of these values. This is the lesson of much contemporary research in economics. And the clear implication is that any literature in anthropology which explores the "value basis of societies" must be treated with the utmost suspicion.

Any literature, moreover, which explains institutions and social practices in terms of their "rationality" also rests on faulty underpinnings. Explaining social practices by "rationalizing" them -- i.e. by discovering the sense in which they would be chosen by rational individuals -- merely recapitulates the basic fallacy of

aggregation. An example is provided by Posner, who in a recent article examines the ways in which kinship and lineage systems serve as mechanisms for social insurance.<sup>27</sup> When Posner and others who have pursued this line of analysis imply that kinship institutions exist because they efficiently fulfill the needs for security against random losses, they then commit fallacy of aggregation. Precisely because everyone would be better off in a society which provides security, it is in no one's particular interest to organize it; for the benefits would then be reaped by all members of society and each member would therefore do better letting someone else meet the costs of organizing and then enjoying the benefits for free. The equilibrium result is thus the non-existence of the institutions; and the source of this inefficient outcome is the public goods problem -- the existence of perverse incentives which lead rational individuals to make socially undesirable decisions.<sup>28</sup> Posner's argument is thus undercut. So too are the arguments of a host of others: the anthropological ecologists who explain the organization of hunting and gathering societies in terms of the "rationality" of their members, those who examine the relations between patrons and clients as a form of insurance, or those who account for the formation of state systems in terms of the superior prosperity which centralized political institutions can provide.

Rational individual choices do not in general lead to socially rational outcomes. Outside of economics, the importance of this foundational result have been explored most actively in political

science. Legislatures and electoral systems, like markets, serve as means for aggregating individual preferences into social outcomes, and the implications of these systems for the use of society's scarce resources have been explored by a host of scholars in the discipline.<sup>29</sup> Some, like Popkin and myself, have extended this research by examining the importance of aggregation procedures in the study of agrarian societies.<sup>30</sup> But no one to my knowledge has fully explored the implications of the aggregation problem for anthropology in general.

This is regrettable, for it is anthropology, of all the social sciences, which insists on the interdependence of human agents. And the basic factor which generates the problem of aggregation is the interdependence of rational actors, be it in their utility functions, as in the case of public goods; their production functions, as in the case of externalities; or in their interactions in the market place, as in the case of imperfectly competitive markets. The lesson of contemporary economics, in short, is that it is precisely when people are interdependent that individually rational behavior is likely to produce socially irrational outcomes. And anthropology, of all the social sciences, is therefore most strategically poised to reap the intellectual rewards posed by the paradox of aggregation.

In any case, the importance of the aggregation problem was first recognized in economics. It has provided the basis for much of the recent creative work in that field. Development economists often reason, however, in ways that suggest a failure to understand its

significance. This is disturbing.

#### Income as a Welfare Measure

Another set of problems derives from the implicit maximand of much of development economics. The measure of valuation employed is often a function of the gross national product: GNP itself, the per capita value of GNP, or changes in the real value (or real per capita value) of GNP. Policies which do better as measured by these criteria are commonly designated "successful" development strategies. The measures are thus used to choose among public policies. But their use in that fashion rests upon extraordinarily shaky foundations.

To employ any measure based upon the value of the gross national product as a welfare measure is to employ a criterion which is based upon the sum of the incomes of all members of society. Such usage makes a variety of critical assumptions. One is that a person's income is an adequate measure of the individual's welfare. Naturally, this is not the case. It is certainly not the case in societies where goods and services are exchanged through channels other than markets; the welfare of people in subsistence economies or in economies where social reciprocity is of great significance would not be adequately measured by this criterion. Nor is it the case in developed societies, where such factors as physical externalities -- air and water pollution, the spread of carcinogens, noise pollution, etc. -- make a significant impact upon people's welfare but cannot be bought and sold in the market place and thus are not correctable through the

expenditure of income. Moreover, in every society, there are critical non-economic values. Where these are significant to people, choices which increase people's incomes but reduce the extent to which they share in these other values can make people worse off. But this fact would not be captured where a person's income is taken as the measure of their welfare.

Even allowing income to be a measure of individual welfare -- and I make that allowance only for purposes of further argument -- a second problem arises: that of aggregation. GNP refers to the summation of all individual incomes. But incomes can be added into a composite welfare measure only if an additional unit of income generates the same satisfaction for each person; failing that, one is, in effect, adding "apples" and "oranges". Summation thus requires that, at the margin, a unit increment of income be valued the same by all persons. Such an assumption must of course be rejected. It is particularly untenable in situation where there are disparities in income, for it may well be the case that additional income is valued more by poor persons than by rich ones. As a composite welfare measure, then, GNP is particularly inappropriate in the context of developing societies. Given the extent to which this index is employed in development studies, it is even more startling to realize that the use of GNP as a welfare measure requires that in adding the welfare of individuals into a single composite measure, the welfare of each individual may be weighted in proportion to their income. A ten percent gain in the welfare of a very rich person, after all,

represents a larger change in the gross national product than does a ten percent gain in the welfare of the poorest person; and development economists often select as best those policies which lead to the greatest gain in the gross national product.

At minimum, this critique suggests that development economics would do well to avoid the confusion of income with welfare. Indeed, most branches of economics do not subscribe to that equation; people are assumed to maximize utility rather than income. Fortunately, contemporary development economics has tended to move away from its restrictively economic viewpoint and to recognize the importance of other values. Nevertheless, significant problems remain.

Scholars do now acknowledge that people have preferences not only with regard to their incomes but also over the distribution of income; they recognize as well that people have preferences over the certainty and reliability of their incomes as well as with respect to their magnitude. The growing emphasis on policies which would secure a more equitable income distribution, even at the cost of growth, and the wider acceptance of the need to diversify and to reduce dependency upon particular markets -- both signify this shift in perspective.<sup>31</sup>

There is thus a movement from income to utility as the relevant maximand in development economics and this is certainly welcome. Nevertheless, the problem of aggregation remains. It does little good to join the ranks of scholars such as Goulet who unblushingly expand the range of "core" values to include "life-sustenance", "self-esteem" and "freedom."<sup>32</sup> For some people may

disagree with the relative weights he assigns to different values and with the trade-offs he is willing to make among them. Having dethroned GNP as a measure of what are the best policies for society, then, what value system are we to put in its place? And, in the face of differences among individuals' values, how are we to know what is socially best?

#### The Values of Government Equal the Values of Society

Confronting such questions, development economists make two heroic assumptions: that the concept of society's "welfare" or "best interests" exists and that the values of society will be those values articulated by its government. An illustration is offered by a development economist with whom, otherwise, I am in great sympathy, Michael Todaro. "Economics," he writes "cannot be 'value free' . . . Once . . . subjective values have been agreed upon by a nation or, more specifically, by those charged with the responsibility for national decision making, then specific . . . public policies can be pursued."<sup>33</sup> The assumption, in short, is that something called the values of society can be distilled from the values of its members and that the values of the government reflect this composite called the social welfare.

Common sense tells us such assumptions are not valid. For those working in the developing areas, the experiences of Vietnam, Iran, or Chile -- to name but a few examples -- suggest the magnitude of the separation between popular aspirations and government policy.

And Watergate brings the lesson even closer to home. The equation of the government's values with those of society thus makes little sense; indeed, in the light of recent history, it violates good taste. And insofar as development economists generate planning models to more efficiently implement the objective functions posited for them by third world governments, there should remain grave doubt as to whether these economists are in fact helping to maximize the social welfare.

More relevant to the theme of this essay, however, is a second grounds for critiquing the tendency to equate governmental policies with the social welfare. There exists in economics a foundational theorem, one which was cited by the selection committee when they conferred the Nobel Prize upon its author, Kenneth Arrow. In light of the critique just mounted above, it acquires particular significance. For it states that one may be able to derive a social welfare function for a society; that is, one may in fact be able to distill from the preferences of individuals an ordering of alternative for society such that one alternative can unambiguously be revealed as socially best. But, the theorem states, if this is true, then there is for sure a dictator -- a member of society who can secure his wishes as the social choice even when his preferences are unanimously opposed by all others members of society.<sup>34</sup> The convergence of the lessons drawn by common sense and the results of formal theory is startling. Inferring what is socially best from the preferences of governments is only "safe" when the governments are dictatorships.

Anthropologists are not, of course, immune to this critique.

They too advise governments; and they too take reassurance from the conviction that governments articulate the social welfare. Particularly when governments are democratic governments, anthropologists are tempted to believe that the policies they implement are in the best interests of society. But the obverse of the Arrow theorem undercuts the foundations of this belief. If the achievement of a social ordering is possible only given the existence of a dictatorship, then it is impossible when no dictator exists -- i.e. when there is a democracy. Under a democracy there is, in general, no way to determine what is "socially best". It is possible only in non-democratic systems; but then of course, the determination then reflects not the preferences of society's members but of a small subset of them: a dictator, an oligarchic elite, or the bureaucracy itself. The dilemma is basic and profound.

As with the development economists, anthropologists should have drawn the lesson of recent history: there is no necessary relation between the preferences of governments and the welfare of societies. Unlike the anthropologists, however, development economists have little reason to be forgiven for having ignored one of the most important theoretical results in contemporary social science -- the Arrow Theorem -- for it is a result which originates in their own discipline. The theorem undercuts the rationale for much of what development economics attempts to do, but it is rarely cited in the development literature. That development economists ignore it suggests a measure of isolation from what has been one of the creative



and important currents in the field of economics -- a level of isolation which should be deeply troubling to those who turn to economics for insight into the development process.

#### Social Equilibria are Not Economic Equilibria

We have already noted that there is a pervasive tendency among development economists to regard efficiency as a natural end state -- as an allocation of resources which will characterize the interaction of rational human beings. Closely linked with this tendency is a second: the tendency to presume that economic equilibria will determine social outcomes. The techniques employed in planning analysis or project appraisal, for example, rely upon the belief that all agents will make those choices which maximize their economic objectives; none will then have any incentive to alter their choices, for then they will be worse off; and those allocations of resources which sustain such universally maximizing choices will, as a consequence, be stable.

Now, in general, there is no reason to believe that economic equilibria are efficient; as we have seen, one of the major lessons of contemporary economics is that only in special cases is that true. Even granting that they may be, there is certainly no general reason to believe that social or political equilibria will correspond to economic equilibria. As a positive theory of how people are likely to behave, presuming that they will make choices in accord with the conditions which characterize economic efficiency therefore has little

to recommend it as a means of scientific analysis. Unfortunately, such a presumption is pervasive in development economics.

The problems with this approach are strikingly illustrated in the analysis of policy formation. That this is so is troublesome, for it is precisely at the level of policy analysis that development economics strives to make its major contribution.

Public policy in developing areas leads governments to intervene in markets. Yet governments in developing countries do not intervene in ways that increase efficiency; indeed, they often prefer forms of public intervention that are inefficient, for inefficiency can be politically useful. Moreover, the techniques they employ often involve disequilibrium prices. The behavior of governments in policy formation thus violates two of the premises which characterize attempts to explain their behavior in terms of economic analysis.<sup>35</sup>

To illustrate these arguments, consider the interventions of governments in developing areas in, say, the markets for foreign exchange or for credit. In these markets, governments commonly set disequilibrium prices, ones which create excess demand; they over value their currencies, for example, or subsidize rates of interest. Such policies are inefficient. Nonetheless, from a political point of view, such policies are expedient: they are in equilibrium and they are perfectly rational.

The political, as opposed to the economic, rationality of these forms of intervention is suggested by the nature of the political resources generated by the disequilibrium pricing policies.

Governments lower prices below their equilibrium level; the result is excess demand. At such prices, markets do not clear and some other means of allocating the goods in question -- be they foreign exchange, credit, or what not -- must be employed. Most commonly the form employed is rationing. In the face of artificially induced shortages, public authorities confer access to the scarce resource upon those whose political support they seek to attain or to reward. They thereby build a coalition of political followers -- a coalition whose members owe their privileged standing to the policies of the regime in power.

Typically, many such measures have concentrated benefits; they are reaped by the few who gain special access to the regulated market. The costs, however, tend to be diffuse. In the case of foreign exchange, for example, the costs are spread across all who seek to consume imports or local goods made with imported materials but who now cannot do so because the foreign exchange has been allocated to other uses. Being tied to the government in power through their dependence on divisible and excludable benefits, those who possess rationed access to the scarce resources have already been organized as a group supportive of the regime in power. But those who bear the costs of the policy remain a diffuse and disorganized collection of interests, aggrieved but politically in disarray. The policy choices are therefore politically stable.

Such forms of government intervention are common place. They take place not only in the markets for credit and foreign exchange but

also in agricultural markets, markets for land and housing, and markets for subsidized inputs and technologies. The policies are not economically efficient; and they do not employ an equilibrium set of prices. But such policies are politically expedient; they are politically rational. And, at least in the short and intermediate run, they have proven to be politically stable as well. Despite their obvious economic costs, they continue to be chosen by governments and the pattern of relative privilege which they sustain remains firmly in place in many developing nations.

These policy choices thus represent a political equilibrium. It is not the form of equilibrium one would expect, were one to subscribe to the analytic premises of development economics. And any approach that is surprised -- and disappointed -- by the findings which it observes is simply not providing adequate insight into the behavior it was designed to analyze.

#### QUO VADIMUS EX HOC?

Development economics, then, makes a variety of assumptions which weaken it at a very fundamental level. These assumptions include:

- 1) That inefficiency implies irrationality.
- 2) That the notion of the social welfare is a meaningful concept; that it can provide a guide to public policy; that it can be measured in economic terms; and that it is embodied in the choices of governments.

- 3) That rational people will make choices that lead to efficient outcomes and that these outcomes will be stable.

The primary argument of this paper is that these assumptions are wrong and that development economics therefore has provided a disappointing source of social scientific theory by which to explain what we commonly observe in the developing areas.

Viewed from a more distant perspective, it is possible to see the problems of development economics as stemming from a confusion of normative and positive analysis. Given a set of values, economic analysis does indeed provide a fairly powerful set of theories as to what choices have to be made so as best to attain them. Moreover, it provides a criterion -- that of efficiency -- for critiquing and evaluating suggested proposals for their attainment. This normative role for development economics remains intact, even granting the validity of the criticisms put forward in this paper.

Nevertheless, as presently constituted, development economics provides little insight into how people actually behave or how collective allocations actually get chosen. There are certain premises which should, however, be salvaged for use in efforts to develop such theories. In this section I isolate these premises and attempt to illustrate their usefulness.

One premise is the presumption that people are maximizing agents. Our critique suggests not that we abandon this premise but rather that we expand our notion of what is being maximized to include

more than the narrow set of values represented by monetary income. One of the most important lessons of anthropology, certainly, is the realization of the diversity and richness of human values. This insight should not be lost.

It would also be wrong to abandon the use of equilibrium analysis. To clarify, three important points must be made. One is that equilibrium analysis does not assume the existence of an equilibrium, much less the uniqueness of an equilibrium. Very commonly, indeed, efforts to analyze the outcome of social processes -- i.e. to solve for their equilibrium -- will yield a proof of the non-existence of an equilibrium; alternatively, even when existence is proven, it may be impossible to prove uniqueness. In other words, the use of equilibrium analysis does not imply a conviction that the world is "in equilibrium"; nor does it imply an adherence to a belief that the world is "static" or determinate. To equate the use of equilibrium analysis with subscription to one or the other of these positions is simply to raise a false issue.

A second point is that I am not advocating the use of equilibrium analysis at the macro-level. I am advocating its use in the analysis of particular, micro-level problems. By an equilibrium I mean a situation in which no party has an incentive unilaterally to alter its behavior. The patterns we observe in developing areas and which we seek to explain represent, after all, regularities in choice making. And it is the lack of incentives to depart from prevailing patterns of choice that defines an equilibrium.

Lastly, I am not advocating the use of equilibrium analysis in a purely economic fashion. Rather, I feel that the notion of what determines an equilibrium should be expanded to include social and political institutions and not merely markets. Such institutions provide critical settings within which maximizing choices get made. They offer choosers values in addition to economic values: membership, office, prestige, etc. They provide access to resources other than income or productive technologies: to power, followers, networks, or systems of rights and obligations. And they provide frameworks within which bargaining takes place and strategies are developed; they define, in short, the "rules of the game" which determine the values of outcomes which can be sought by alternative courses of action.

To illustrate these points, let me take two examples. One arises in the literature on West Africa at the time of the impact of colonialism. Contemporary scholars, while sometimes romanticizing the facts, nonetheless have credibly argued that pre-colonial chieftaincies were "democratic," in the sense that within ruling lineages there existed a variety of "candidates" for chiefly office and that their capacity to gain popular support was often decisive in gaining succession to the throne. They have also argued that it was the colonial powers -- particularly the British -- who instituted rigid codes of genealogical succession and that their reasons for doing so included not only their failure to understand the nature of African societies but also their desire for predictability in the

public affairs of the traditional kingdoms.<sup>36</sup> It was left to Ferguson and Wilks to see the ironic property of the British "solution": that it increased, rather than decreased, predictably in public affairs. The detection of this irony represents an implicit use of the maximization postulate and equilibrium analysis in a non-economic setting.<sup>37</sup>

The underlying model is that of Anthony Downs.<sup>38</sup> Downs' model rests on the premise that both citizens and seekers after office are maximizers; both make choices so as to fulfill objectives. People have preferences over public policies. They seek to secure policy stands by public officials that are in accord with their preferences; to do this, they support those candidates whose policy stands are closest to their own most preferred position. Candidates seek office; to attain office, they take stands on issues so as to secure the support of a majority of the citizenry. Citizens and candidates: these maximizing agents are the basic actors in Downs' model.

Figure 1 illustrates a three person citizenry. Policy stands are represented along the horizontal axis; they can be thought of as falling, say, along a "radical-conservative" direction. And people's preferences are represented as smooth, single-peaked curves which take on greater value as they reach higher levels along the vertical axis. To illustrate the concept of equilibrium, assume that there are two candidates, one of the left (candidate A) and one of the right (candidate B). Clearly the candidates for office have strong incentives to adopt policy positions that lie at the middle of the

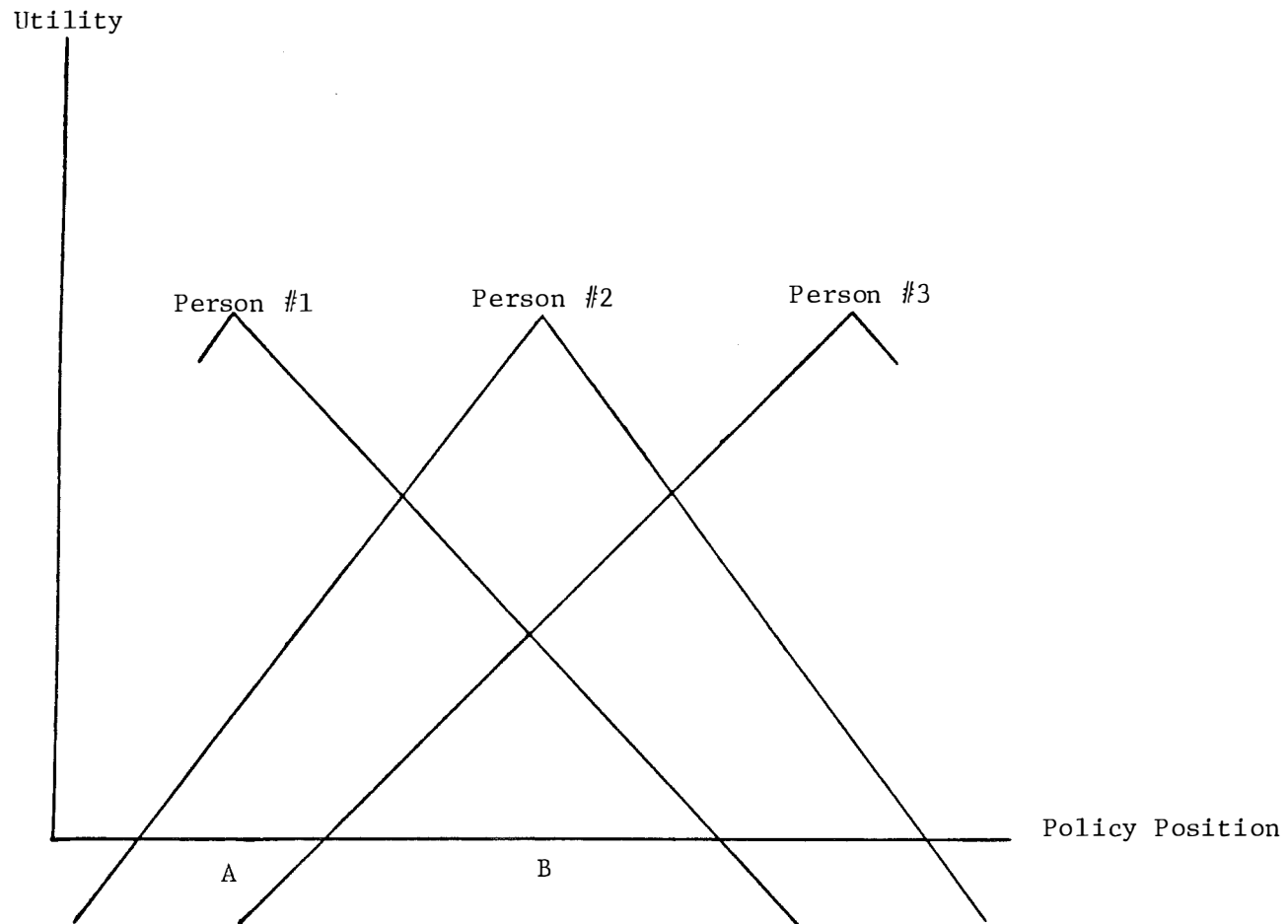


Figure 1. A Representation of Preferences in a Single Division

horizontal axis. Say, for example, that A were to remain at the left and B were to take a middle position, as in figure 1. Candidate A's stand lies at person 1's most preferred position; A gets person 1's support. B is at person 2's most preferred position; B gets person 2's supports. But candidate B also gets person 3's support vote, for person 3 prefers B's position to A's. B is closer to person 3's position and B's policy stand therefore lies at a higher level of B's utility curve than does the policy stand of A.

The lesson is obvious. Candidate A does not want to loose. Therefore A, in response to B's choice of strategy, does best by moving to the center in an effort to attract the support of a second person. Insofar as people choose candidates whose policy position they prefer and candidates seek to attain office by winning majority support, there is thus a predictable, equilibrium outcome: the candidates will move to the center. The candidates who gain the support of a majority will therefore be those who adopt as their policies the position of the "median voter".<sup>39</sup>

The historical lesson is clear. When the British constrained competition and created a genealogically determinate order of succession, the incentives creating predictable policy outcomes were destroyed. Who succeeded to office was determined; but the public policies endorsed by the holders of office were not. An element of randomness was therefore introduced into public affairs and the objectives of the Britain "reforms" defeated by the measures which they chose to secure them.

The assumption of maximization and the methods of equilibrium analysis can thus give insight into micro-level problems. As a further illustration, we can turn to another example. I choose one of the classics: Evans-Pritchard's analysis of the problem of social order. Using the work of Evans-Pritchard, supplemented by the work of Howell, it is possible to reconceptualize this analysis in the form of equilibrium analysis.<sup>40</sup>

Among the Nuer, cattle are the basic form of property. To secure wealth, the Nuer invest resources in breeding and raising cattle. Another way of acquiring wealth would be theft. Every indication is that the Nuer are tempted to steal, and Evans-Pritchard states "cattle are their dearest possession and [the Nuer] gladly risk their lives to pillage those of their neighbors."<sup>41</sup> The strength of their desire is further suggested by Evans-Pritchard when he recounts: "As my Nuer servant once said to me: you can trust a Nuer with any amount of money, pounds and pounds and pounds, and go away for years and return and he will not have stolen it; but a single cow -- that is a different matter."<sup>42</sup>

The puzzle, from Evans-Pritchard's point of view, was that despite the potential for theft and disorder, the Nuer in fact tended to live in relative harmony. Insofar as the Nuer raided cattle, they tended to raid the cattle of others; raids within the tribe were relatively rare phenomena.<sup>43</sup> Somehow the Nuer appear to have avoided the potentially harmful effects arising from the unbridled pursuit of self-interest. And they appear to have done so even while lacking

those formal institutions so common in Western societies which specialize in preserving the peace and forestalling violence: the courts, the police, and so on.

In discussing Evans-Pritchard's analysis of the problem of social order, we can credibly abstract his account in a number of forms. In this essay, I will portray it in the form of two-person, non-cooperative variable-sum game, traditionally known as the prisoners' dilemma.<sup>44</sup>

All that I have said thus far suggest that such an abstraction does little violence to Evans-Pritchard's analysis. All that is required is that we conceive of the situation of two property-holding units, each of which desires to increase the number of its cattle, and the incentives which face them. Call the units families I and II, and assume that both hold ten cattle. Each family can choose between two alternatives: using force or remaining passive and nonviolent. Each knows that the other family faces a similar choice. And each knows what the results of their choice will be.

Both families know that should both adjure the use of force, each will continue to enjoy the possession of ten cattle. But both also know that raiding is profitable. Should family I raid family II's herd whilst family II failed to resist, it could appropriate eight of family II's cattle, we shall assume; similarly, should family II raid family I and family I not forcibly resist, family II could gain eight cattle at family I's expense. Both also know that in the face of a raid from each other, there are gains to those who resist,

even though they may pay a price in physical suffering. For purposes of argument, assume that wounds, the breakdown of herding during the course of battle, and property damage result in losses equivalent to the loss of six cattle. In any case, this outcome is to be preferred to not using force to protect one's herds, for then eight cattle are lost to the predatory party.

The situation is summarized in Figure 2 below. The choices for family I are listed on the left: F designates the choice of force and  $\bar{F}$  designates the renunciation of force. The choices for family II are similar and are listed at the top of the table. The entries refer to the outcomes for the paired choices of families I and II, the value of the outcomes being expressed in terms of numbers of cattle, and the value to family I being listed first and the value to family II being listed second.<sup>45</sup>

		II	
		F	$\bar{F}$
I	F	4,4	18,2
	$\bar{F}$	2,18	10,10

Figure. 2

The nature of the dilemma is clear. It is rational for each family to choose to use force; as can be seen from Figure 2, each does best employing force no matter what the choice of the other.

Moreover, it is also clear that the use of force by both families represents an equilibrium and that this equilibrium is unique. When both use force, it is in neither's interest to renounce it; were family I unilaterally to abjure the use of force, then its holdings would drop from 4 cattle to 2 and the same is true for family II. No other pair of strategies is in equilibrium; in all other cases, one or the other family does better by unilaterally changing its choice of strategy. The equilibrium is thus unique. What is peculiar and compelling, however, is the nature of this equilibrium: under it, both families are worse off. Had they renounced the use of force, they could each have ten cattle but they now get only four. Individual rationality thus leads to a socially irrational outcome, an outcome under which all persons suffer. Put another way, all would be better off living peacefully, but none can afford to live that way. The structure of the prisoner's dilemma thus captures the fragility of social order.

In analyzing the origins of order in decentralized societies, Evans-Pritchard pursued two lines of inquiry. One was to look at the role of mechanisms for conflict resolution and dispute settlement; these mechanisms, in effect, were employed by the Nuer to curtail the natural tendencies set in motion by the incentive structure characteristic of the prisoner's dilemma. The second was to conjecture concerning more basic and fundamental institutions -- ones that did not control socially dangerous behavior but rather operated at a deeper level and altered, in effect, the very structure of

incentives which so threatened the cohesion of Nuer society. The "deeper" institutions arose at the level of religion and the moral order. Elsewhere I have analyzed both kinds of social controls and shown how they alter the nature of the payoff matrix which captures the incentives leading to the prisoner's dilemma.<sup>46</sup>

This example illustrates the use of the assumption of maximization and equilibrium analysis in non-market settings. It also illustrates an earlier point: that rational choices by individuals can aggregate into socially irrational outcomes -- outcomes which no one prefers. In defiance of the hypothesis of the "hidden hand", equilibria, when they exist, can correspond to outcomes which are abhorrent to all members of society.

#### A RESEARCH AGENDA

There are a multitude of other potential applications of this form of analysis, and these stand as candidates for a research agenda which could generate increased interaction between economics and anthropology.

One which would be climactically controversial and therefore fun would be the development of rational choice models for "Polyani-type" economies. As the Polyani school points out, there are many societies in which markets are not complete. In such societies, certain goods or services can not be traded or exchanged. Alternatively, factors may be exchanged but at prices that are set outside the market, i.e. either by political fiat or by custom; as a



consequence, the prices are invariant. It may also be true, the Polanyi school points out, that prices, when they exist, are not uniform; they vary according to the social category of the parties to the exchange.

These characteristic patterns are well known by anthropologists. Less well known is that these patterns correspond closely to those observed in regulated industries in advanced industrial economies. The study of industrial regulation is a well developed branch of applied micro-economics.<sup>47</sup> In regulated industries, certain factors may not be exchanged -- e.g. atomic fuels in the nuclear energy industry or air routes in commercial aviation. Prices are set and maintained at fixed levels for long periods of time and are subject to change through political, rather than market, mechanisms. Frequently, different prices are set for different categories of consumers; home owners are charged different rates than industries for the use of telephone or electrical services, for example. The models that have been developed by economists for the analysis of the behavior of regulated industries should be explored by anthropologists seeking to analyze the implications of the "Polanyi type" restrictions upon economies.

Another area ripe for analysis is the study of the formation of institutions. In fulfilling human wants, people sometimes use markets. They more commonly use organizations. When they employ the one instead of the other is a question sporadically explored in economics; and it is one that should inspire a fruitful interchange

between economics and anthropology. An area in which this question is examined by economists is in the study of the firm. Firms represent means of combining productive factors through organizations rather than markets, and it is an interesting problem in economic analysis as to why they arise.<sup>48</sup> Another area is in the study of incentive systems. Problems of monitoring inputs (such as labor effort) or outputs (such as quality of service), economists have found, yield incentives to substitute bureaucratic controls for decentralized, market-like mechanisms. Popkin has recently applied this literature to the analysis of the nature of organization arising about the production and marketing of different kinds of crops in Southeast Asia, and his work deserves close attention.<sup>49</sup>

Not only should the research agenda be marked by the application of rational choice analysis to the origins of institutions; but also it could be marked by the systematic investigation of the ethical properties of institutions. A critical subject in contemporary economic research -- and one studied as well by contemporary moral philosophers, such as Rawls -- is the normative content of social decision procedures.<sup>50</sup> Arrow's theorem, mentioned above, represents a seminal contribution to this research. Other investigators have examined the possibility of devising social systems for choosing optimal levels of public goods.<sup>51</sup> Still others have designed procedures for resolving conflicts of interest in ways which the contesting parties would regard as fair.<sup>52</sup> Works in anthropology, such as those of Colson, suggest that there is much to be gained from

regarding "traditional orders" as institutional frameworks which have been intentionally innovated and chosen.<sup>53</sup> And there has long been a tradition in anthropology of interpreting "traditional societies" as institutionalized forms of a moral order. Another area, then, wherein anthropology and economics could interact to their mutual benefit would be in the investigation of the ways in which institutions can be structured so as to preserve ethical properties in the choices made by human societies.

#### CONCLUSION

The major message of this paper is that development economics is seriously, indeed fundamentally, flawed. While it provides a normative framework for evaluating the performance of developing areas, it provides little basis for studying the way in which people behave or choices get made in developing areas. This criticism does not originate from an external vantage point, moreover; rather, it originates from within the economic paradigm. Development economics has failed to pay attention to much that has been proven and learned in contemporary economics.

I have also argued, however, that portions of the apparatus of this field can and should be preserved. In particular, with suitable modifications, the assumption of maximizing behavior and the use of equilibrium analysis should be retained as essential tools for positive analysis. These tools have been applied to the study of politics, regulation, and administration. They should be applied by

anthropologists to the analysis of choice and allocation in other non-market settings. In particular, through the study of the nature and performance of social institutions commonly investigated in anthropology, they can be used to open up new lines of positive and ethical analysis -- lines of inquiry which have briefly been sketched in the concluding portions of this paper.

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36. See, for example, Walter Barrows, Grassroots Politics in an African State: Integration and Development in Sierra Leone (London: Africana Publishing Co. 1976).
37. Phyllis Ferguson and Ivor Wilks, "Chiefs, Constitutions, and the British in Northern Ghana," in West African Chiefs: Their Changing Status Under Colonial Rule and Independence, ed. Michael Crowder and Obaro Ikime (New York: Africana Publishing Co. 1970).
38. Downs, op. cit.
39. For a critique of the Downsian model, see Brian Barry, Sociologists, Economists and Democracy (London: Collier-MacMillan, 1970). The limitations of this model are explored in chapters 11 and 12 of Riker and Ordeshook, op. cit. For an attempt to examine the dynamic properties of models of electoral competition, see Gerald H. Kramer, "Electoral Stability: A General Analysis," Paper presented to the 1980 Annual Meeting of the American Political Science Association, Washington D. C.
40. This discussion is drawn from E. E. Evans-Pritchard, The Nuer (Oxford: The Clarendon Press, 1940); see also P. P. Howell, A Manual of Nuer Law (London: Oxford University Press, 1973). The discussion follows Robert H. Bates, "The Preservation of Order in

- Stateless Societies: A Reinterpretation of Evans-Pritchard's The Nuer" Frontiers of Economics, ed. Gordon Tullock (Blacksburg, Virginia: Center for the Study of Public Choice, 1979).
41. Evans-Pritchard, op. cit., p. 16.
42. Ibid., p. 49.
43. P. P. Howell, op. cit., pp. 200-201.
44. The best introduction remains R. Duncan Luce and Howard Raffa, Games and Decisions (New York: John Wiley and Sons, 1957).
45. It should be noted that, by all accounts, the Nuer do translate physical pain and suffering and even death into cattle equivalents. See Evans-Pritchard, p. 127 and Howell, pp. 25-48.
46. Robert H. Bates, "The Preservation of Order," op. cit.
47. A useful overview is contained in Paul Joskow and Roger Noll, "Theory and Practice in Public Regulation: A Current Overview" in Studies in Public Regulation, ed. Gary Fromm (Cambridge: The M.I.T. Press, 1981).
48. Kenneth Arrow, The Limits of Organization (New York: Norton, 1974). Armen A. Alchian, "The Basis of Some Recent Advances in the Theory of Management of the Firm," Journal of Industrial Economics (November 1965): 30-41. See also R. H. Coase, "The Nature of the Firm", Economica 4(1937): 386-405.

49. Samuel L. Popkin, "Public Choice and Rural Development: Free Riders, Lemons, and Institutional Design" in Public Choice and Rural Development, ed. Clifford Russell and Norman Nicholson (Washington D. C.: Resources for the Future, 1981).
50. See John Rawls, A Theory of Justice (Cambridge, Mass.: Harvard University Press, 1971) and Brian Barry, Political Argument (London: Routledge and Kegan Paul, 1967).
51. See, for example, Theodore Groves and John Ledyard, "Some Limitations of Demand Revealing Processes," Public Choice 29, 2 (1977): 107-114 and Nicholas T. Tideman, "Introduction," Public Choice, 29, 2 (1977): 1-14.
52. See the discussion of arbitration schemes in chapter 6 of Luce and Raiffa, op. cit.
53. Elizabeth Colson, Tradition and Contract (Chicago: Aldine Publishing company, 1974).