

# Decision Rules and Decision Roles

## Some Thoughts on the Explanation of Productivity and the Productivity of Explanation

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A problem is a question proposed for a solution. A valid problem implies four attributes of the solution: (a) it is not known, (b) it is worth knowing, (c) it can be known and (d) it cannot be known easily.

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### A. A PROVINCIAL PREFACE ON THEORY AND PRODUCTIVITY

The word "theory" has had a curious recent history in American universities. In the immediate years after the Second World War, "theory" was something akin to leprosy—to be avoided at all costs. Theory was considered a fruitless detour from the urgent tasks of reconstruction. Reinforced by the impulse nurtured in the New Deal, the man of thought was exhorted to be engaged in action, in real problems and people's purposes, and to forswear the effete affectation of "theorizing". When the shadow of the Cold War fell across the universities, an abrupt *volte face* occurred; the ratio of activeness to theorizing as a criterion for choosing problems and for distributing rewards shifted—partly as a reaction to the literal mindlessness of the earlier era and partly as protective colouring in an era when congruence between values and institutions was presumed. From purposes to functions, from conflict to equilibrium, the shift for university faculty in the social sciences was solidly towards "theory". Whole societies and the interaction of their parts replaced, as the popular objects of thought, concrete problems in obdurate environments. To theorize was safe and laudable; promotions, publications, and professional prominence flowed to those scholars who were judged "theorists". Indeed, by some hidden hand of academia, those of the previous era who thought theory "impractical" made their way abroad via foundations and aid programmes or into newly established schools of public affairs. But almost as abruptly as it began and triumphed, this era of theory petered out. By the mid 1960s, in good dialectical fashion, younger scholars had wearied of theory and, prodded by their students who valued experience over formal thought, had focused on the scholarly ignored subjects of domestic and world poverty. This emerging era will be marked by a marriage of theory and action and, as a small contribution to this fruitful pass, this essay is written.

As part of this change in orientation, as a celebrant of this marriage between action and theory, I believe social science knowledge is reforming know-

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ledge; that social scientists should use the fruit of systematic observation to increase the productivity of public and private choice; that the productivity of choice should be the subject of the social sciences, the source of their propositions and the test of their theory. Action is the best test of social science theory, and public policy is the most "systematic" form of action. By productivity of choice I mean more choice for less expenditure of resources and to increase the likelihood that the purposes of choice will be achieved. Not advocating a value neutrality, but a value relevance, I also believe that the knowledge one has and the purposes it serves are ethical questions.

The decade-and-a-half-long separation of theory and action was astonishing in many ways. That any scholar, especially if he were explaining observed behaviour, could believe that the replicability of explanation was not part of its verification is astonishing. That the everyday choices of public servants and the consequences of applying policies were not considered the sources of theory-building and the test of theory is equally astonishing. But most astonishing was the tolerance and even support of the man of action for the man of knowledge when so little was offered to him that could make choice more efficient and more effective. Systems hurtling through space, time horizons of generations and centuries, changes so comprehensive that a Stalin would envy their proponents' ambitions, the world encompassed in a four cell matrix or in an unpronounceable trichotomy, these were the hallmarks of that fading era.

Implicit in their theory, even though they were dealing with potentially applied subjects—developmental, economic, political, social and administrative—was a dominant criterion of "truth" for explanation. These social scientists shared with others in American universities a criterion, virtually an ethic, which I would call the criterion of exhaustive explanation. For these men of knowledge, the best explanation was one that covered the greatest number of cases; the more exhaustive the explanation, the fewer the exceptions, the more "true" an explanation of social phenomena was. All cases of entrepreneurship, all experience of industrialization, all crises of nation-building, all incidence of bureaucratic corruption, their thoroughness, if not their data, was beyond reproach. To accommodate the endless attributes enumerated and the veritable explosion of politics, a conception of system in which everything was somehow related, data banks, high speed computers, and statistical methods were pressed into the service of those who pursued this high standard. But the conclusions of these men of knowledge were hardly at the service of those who had to make difficult choices in the world we inhabit.

The world of real choices—by statesmen, by administrators, by citizens—is a world of costs and benefits, alternatives with different outcomes and likelihoods of success. The exhaustive explanations prized in the universities seldom could be translated into choices that people in various capacities and settings made; rather than beginning with the existential situation of choosing and moving outwards to the consequences of choice, the advocates of the exhaustive explanation began with possible consequences of choice and

estimated the likelihood that any choice was possible. These explanations, if applied, presupposed the possibility of transforming value systems of whole populations, that resources would be available for this purpose and all competing purposes suspended for the duration. The explanations dealt with vast impersonal trends—the "ization" trends—that took generations if not centuries. Their correlations, from flush toilets to per capita rates of this and that, dealt with the modal—what most likely would occur in the presence of what other traits. Apart from supporting the view that things were difficult, these social scientists made little contribution and sometimes detracted from the efforts made in low-income countries to choose more efficacious paths. By ignoring the costs of choice, by propounding "charge" explanations in a cost-free environment, the social scientists took little account of the time horizons people who choose have, the alternatives they must forego if a course is selected, and the political constituencies on which they depend.

Examples of exhaustive explanations relating to public administration might be those advanced by Lucian Pye and Fred Riggs.<sup>1</sup> By striking the highest level of generality of behaviour, by bringing into their explanatory ambit a vast interlocking system of institutions and values, by making proof of their position the collection of attributes from as many regimes as possible—all duly stuffed and labelled as "traditional", part of "the world culture", "prismatic", "fused", etc.—these scholars have removed their knowledge from assisting those who must act. From these theorists, provocative as they might be, choices go untutored, actions uninstructed, common sense verification ignored.

What I see emerging are social scientists interested in the level of action at which real choices are made, anxious to use existential situations in which costs and benefits of this world purposes are considered, and finding correct forecasts of the outcomes of choice verification of their positions. I also see a possible fruitful collaboration between men of knowledge and men of public action, and not simply a collaboration with regimes, but with anti-statesmen and the dispossessed as well.

In the place of the exhaustive explanation as a criterion, let me commend to these social scientists another criterion: the criterion of optimal ignorance.<sup>2</sup> Rather than basing an explanation of phenomena on as many cases and their common denominators as possible, raising the level of generality with additional cases, the criterion of optimal ignorance seeks as analagous a situation as possible and resists raising the level of generality except when what is commonsensically closest is uninformative. Rather than looking for an explanation on which to base action in the experience of all low-income countries or in politics through history undertaking industrialization, an advocate of optimal ignorance will look to the closest social, political,

<sup>1</sup> See Pye, Lucian W., *Politics, Personality and Nation Building* (Yale, 1962); Riggs, Fred W., *Administration in Developing Countries* (Houghton Mifflin, 1964).  
<sup>2</sup> "Optimal ignorance" was first advanced by Ilchman and Uphoff in *The Political Economy of Change* (University of California Press, 1969), pp. 256-72. For an extended treatment, see Ilchman, Warren F., "Optimal Ignorance and Excessive Education: Educational Inflation in India", II *Asian Survey* (1971), pp. 523-44.

economic, and agronomic "fit" in space and time. Rather than lengthening the chain of causation to early childhood and to vast historic forces relating to the division of labour, the advocate of optimal ignorance will minimize the number of intervening variables and make a first approximation of explanation by assuming "reasonable" behaviour. Rather than ignoring or underestimating the costs of acting on knowledge, the proponent of optimal ignorance puts the costs and consequences in previous, closest examples at the centre of explanation: the conflicts that ensued, the resources used, the time required for a reasonable degree of change, what was foregone, what subsequent decisions were made cheaper or more costly because of the change. Rather than seeking instruction for what is most likely to occur, that is the modal case, the criterion of optimal ignorance advocates taking into account above all the deviant case, the unexpected success or failure, the extraordinary occurrence. Exhaustive explanations, at best, give the "odds" that an event or development might occur, optimal ignorance finds instruction in what was done against the worst odds. In contrast to exhaustive explanations, optimal ignorance as a criterion asks what a person need not know in order to act and judges knowledge in terms of its economies and efficiencies for decisions.<sup>3</sup>

To apply the notions of economy and efficiency to knowledge is somewhat unusual in university settings, perhaps partly because of their aristocratic origins and their aversion to marketplace notions. Like motherhood, apple pie, and sinlessness, how can more knowledge be objected to; to know all is to understand all. On the other hand, commonsensically we all act on varying degrees of imperfect information and we all have points, depending on the problem and its seriousness, and on our and others' experience with it at which further conjecture and fact-gathering stop and action begins. But what is commonsensical should also be appropriate for the lack of common sense of social science, and to that end I commend two "laws" from economics as ways of differentiating between exhaustive explanations and optimal ignorance: the notions of diminishing returns and economies of scale.

The former is quite simple, obvious, and central to any thinking about productivity: if all other resources are held constant, varying one resource will elicit better utilization of the other resources up to a point; thereafter productivity of their mutual interaction will decline. Consider a public administrator about to embark (with appropriate resources, but one) on a programme to stop the smuggling of gold and electronic goods. The one resource in short supply and which will add value to the others is information: information about who the smugglers might be, their points of contact and exchange, how much coercion they will endure before desisting, etc. The more information the public administrator has, the more likely compliance will be achieved or efficiency attained—up to a point. Thereafter, another case, more data, will produce proportionately less new compliance. At some point the

<sup>3</sup> See, for example, Geiger, Theodore and Roger D. Hansen, "The Role of Information in Decision Making on Foreign Aid", in Bauer, Raymond A., and Kenneth J. Gergen, eds., *The Study of Policy Formation* (The Free Press, 1968), pp. 329-80; Wilensky, Harold L., *Organizational Intelligence, Knowledge and Policy in Government and Industry* (Basic Books, 1967).

cost of an increment of new information will exceed the value of one less smuggler, especially if resources must be diverted from compliance-seeking to information-gathering. The criterion of optimal ignorance imposes upon explanation the calculus of the value of additional information in relation to its productivity. Indeed, the study of statistics is based on just such an assumption.

Perhaps less self-evident is the application of the notion of economies of scale to the level of generality one chooses in explanation. As in economics, to vary all resources proportionately in production results in mixes that permit considerable economies of scale; these economies could not be achieved at a proportionately smaller mix; nor are they assured if the mix gets too large. Diseconomies of scale are as important to discover as economies. In the case of optimal ignorance, we are looking for the point of maximal economies of scale provided by a level of generality of knowledge, mixed with appropriate levels of resources. If too low a level of generality is selected, then too little of what is included will be translatable to another setting; if too high a level of generality is selected, then diseconomies will arise from too large a relevant constituency and probably too many intervening variables that must be accommodated by policies. Consider the problem of a planner designing a programme to increase tax revenues: what should he know about tax collector and tax payer behaviour that will dictate the level of resources required for a successful programme? Let us take the tax collector as an example: the level of generality at which we choose to know him increases or decreases the likelihood of success by creating too many exceptions to policy. Each level of generality has different costs and productivities. You may "know" the tax collector at various levels:

- single tax collector in Y district in nation Z
- all tax collectors in Y and neighbouring X districts
- all tax collectors in nation Z
- all public servants in nation Z
- all public servants in nation Z and in its immediate neighbours
- all public servants in poor countries
- all public servants everywhere—"the bureaucratic mind"
- all people in urban settings of poor countries—"the modernizing elite"
- all people in poor countries—"the traditional mind"

Each level of generality embraces a larger number of persons; knowledge of personal characteristics declines and knowledge of general characteristics increases; personality is replaced by role; personal prejudices and propensities by national character, the "world scientific culture", etc. Most technical assistance experts assume their national colleagues choose the lowest level of generality; most technical assistance experts seem to choose the highest level.

The level that is chosen depends on the end in mind, the degree of success required or wanted, the resources available, the time horizon that is tolerable, and the alternative purposes that may be forgone and their political economy. Thus, we find, given a level of resources and a particular time horizon, the following matrix:

Figure 1:

GIVEN A LEVEL OF RESOURCES AND TIME HORIZON:

results conform to "knowledge" or explanation (degree)      results don't conform to "knowledge" or explanation (degree)

LEVEL OF GENERALITY

High (degree)  
Low (degree)

A  
C

B  
D

It should be obvious that A is preferred, though the cost, time and knowledge required to achieve it probably preclude it. With no sanctions against those who assert unactionable hypotheses, the social scientist in America seems to produce B but calls it A. Ilchman's decision rule on optimal ignorance is different: if A is impossible (as it almost always is), when in doubt stick to C.

Let me illustrate this with the issue of civil service corruption. In a very provocative book on development administration Fred Riggs argues that corruption is a result of the values and behaviour in a "prismatic society" and will be reduced when such a society reaches a more "diffracted" stage.<sup>4</sup> The public bureaucracy is marked by "heavy weightness" and, as there are no checks on public servants to prevent them from being venal, they are able to dominate profitably other political, social and economic groups. As developing societies become more differentiated, a plurality of competing groups, especially parties and interest groups will arise. Even more important, differentiation may result in "constitutive" politics in which a strong legislature will be able to check the bureaucracy.

Choosing, thus, a level of explanation of corruption which involves all of human history at various degrees of specialization of the division of labour, Professor Riggs gives us certain clues how to act if we accept his knowledge. In the first instance, we should probably despair because the reduction of corruption may be impossible if our polity is in a "prismatic trap". But if we persisted in our wish to reduce our regime's corruption, Professor Riggs would advise us to invest in an opposition party or two and in interest groups that would check bureaucratic self-serving; and to pursue simultaneously a development policy where specialization was accompanied by rising per capita income. Not only would the policies involve great expenditure of resources and take an extraordinarily long time, but they would foreclose the possibility of our pursuing other political ends at the same time, as they, too, might require resources or be mutually exclusive in their objectives. Moreover, the induced political competition might thwart our policies and even lead to the ousting of our regime. Indeed, increased political competition might just as easily see a rise in bribery and corruption as a way of avoiding immobilism. Finally, as Professor Riggs can only deal with an "either-or" framework, his knowledge will not be useful in a situation where the elimination of corruption might be desired, but where its achievement is too costly and would take too long. Some corruption there will always be—regardless of degrees of "diffract-

4 Riggs, Fred W., op cit.

edness"; some corruption we might even find helpful. An explanation much lower in generality (incentives for honesty, strategic postings, higher salaries, etc.) might bring the extent of civil service corruption down to a more acceptable level.

Exhaustive explanations exhaust. They have also contributed to another feature of western social sciences thinking on low income countries that should be commented upon. This feature we might label "intellectual neo-colonialism". In searching for a level of generality that would explain development or the other "ization" problems, the one most frequently chosen has been the tradition-modernity dichotomy. This dichotomy, which has itself a two or perhaps three century tradition, divides the world conveniently into two and three clusters, though empirically all the proponents of the dichotomy ended up only with degrees of "middleness". A result of this has been a powerful tool for ignoring what is salient and malleable in the world of choice and for rationalizing the world's political and economic stratification.

Intellectual neo-colonialism is so-called because it legitimates holding others in subjection, either directly or indirectly by diminishing their confidence in their own mastery. The prevailing dichotomy contributed to these ends by asserting and implying several "truths". First, poor countries are poor because they are not modern; second, rich countries are rich because they are modern; third, poor countries are poor because they are traditional and the way to riches is by replacing the mutually exclusive traditionality with modernity; fourth, by implication, failure and success in this worldly enrichment came to those who were by dint of character and the genius of institutions, deserved; finally, also by implication, failure to achieve this standard is the responsibility of the poor—their defects in character and in institutions kept them from it, though the rich will lend a hand towards overcoming character defects and improving institutions. Not only did the social scientists of modernity make the task difficult and long-term but they also took the heat off the former colonial powers by asserting that their wealth had some inward origin. Like 19th century evangelical ministers preaching to the London poor that their poverty came from their bad habits, these 20th century social scientists legitimated intervention on the one hand and negligence on the other. Moreover, they—and I have contributed my own to intellectual neo-colonialism—have used a tool so appealing in analytic strength, but so gross that those who might wish to overcome subjection through the use of the knowledge find too little of their world illuminated in order that they might act. Ironically, only the Marxists and Gunnar Myrdal pointed out that the poverty of some might be directly related to the wealth of other nations.<sup>5</sup>

Let me illustrate this in relation to public administration by referring to a pioneering work. On the basis of the explanation provided by Lucian Pye of Burmese public servant behaviour, I can only conclude the civil servants in

5 Myrdal, Gunnar, *Economic Theory and Under-developed Regions* (Duckworth, 1957), Part 11; Baran, Paul A., "On the Political Economy of Backwardness", *The Manchester School* (January, 1952); Fanon, Frantz, *The Wretched of the Earth and On Dying Colonialism* (both Grove Press, 1963 and 1970).

that polity are incipient schizophrenics who are unable to resolve the dilemma between the traditional world and the call of the world culture, and hence are unable to act in a trusting, problem solving, developmental way.<sup>6</sup> Suffering from a veritable defect in character arising from a nationally homogeneous child-rearing pattern (which succeeds in every case), these public servants hide information, nurture dependence, instigate factions, and cannot take decisions. Through technical assistance and/or through a "charismatic breakthrough" which assists in resolving the identity crisis, the Burmese civil servant will be helped toward the fruits and ways of the world culture.

My empirical observations are quite different, though they do not relate to Burma, which I have never visited. In the first place, apart from logical grounds, I contest the thesis that hiding information, nurturing dependence relationships, instigating factions, and avoiding decision have any greater incidence in one sort of cultural setting than another. If they do, I doubt if they would neatly fall into the dichotomy Professor Pye advances. Second, rather than feeling that there existed a radically different standard of efficiency in the Third World, I have found that, given the resources available, probably existing service there is being performed for less by the public service than efficiency levels in most industrialized nations. Indeed, any input-output comparison of the Government of India with the United States Federal Government on a common service will probably show the Government of India producing more for less; the per unit cost in the United States is not due only to wage differentials. By the time there is hired the vast middle echelon of the public service, adequate space and amenities provided them, sufficient secretaries properly skilled and endowed with the typewriters and other equipment secretaries consider minimal secured, when the vast infrastructure of Xerox machine, telecommunications, filing, and security arrangements are assured, then cost per unit of service in India seems trifling.<sup>7</sup> That it takes about \$65,000 to make one American professional effective in a low-income country should not be surprising, given what American organizations assume as prerequisite. But it should be surprising that these professionals consider themselves able to comment on the productivity of their host country's public service.

If I can be pardoned a rather far-fetched analogy, I often think of the public service in India or in any one of its states—and they vary in relation to the argument I made above—as somewhat like peasant agriculture. Given the inputs at their disposal and the margin next to which they live, they are among the most rational allocators in existence—efficient, though not effective; able by one miracle to produce that irreducible minimum; unable, by any technique of social organization, to raise the level of output more than five or ten per cent. If they followed the advice of the USAID "administration extension officer", they might not have enough wherewithal to achieve what they have

6 Pye, Lucian W., op. cit.

7 An earlier resume of the literature on productivity is, Ilchman, Warren F., "The Unproductive Study of Productivity: Public Administration in Developing Countries", *Comparative Political Studies*, I (1968), pp. 227-50.

in the past achieved. There must be for them the administrative equivalent of the Green Revolution, costly new inputs that increase both efficiency and effectiveness dramatically with minimal risk. These inputs might be in the realm of Xeroxy, data storage and retrieval systems, and telecommunications. Cheap air conditioning might make the difference to administration that miracle wheat made to Indian agriculture.

To have called this phenomenon "intellectual neo-colonialism" probably sheds more heat than light and perhaps in this setting the issue is already *passé*. Nor do I want to suggest that those who, by this description, appear to be neo-colonial do so with intent; I had no ulterior motive when I made similar judgements; I used the only intellectual technology available to me at the time. But heat may be the only way to make possible viewing the Third World without a priori assumption, to be able to see more clearly to aid those who make public choices to choose more optimally.

#### B. THE KNOWLEDGE OF PRODUCTIVITY

From the productivity of knowledge, let us turn to our knowledge of productivity and especially to two ways to account for variable productivity of the public service, decision roles and decision rules. Both come under the rubric of administrative theory and administrative behaviour. Fortunately, the word "administrative" was used. Had the word been "organizational" I would need to make a different argument as the literature I would rely upon and the empirical referent would not be the same. The concern of those who study and write about organizations is how organizations survive and adapt; the dependent variable when assessing a structural arrangement or a behavioural pattern is the contribution of the subject to the survivability or adaptability of the organization; if the organization survives and even flourishes, it is assumed the independent variable—the structural arrangement or the behavioural pattern—was a cause; and then to make the whole thing a tautology, organization scholars then argue that its survival is a cause for the persistence of the arrangement or pattern.<sup>8</sup>

Administration, on the other hand, is organized action towards the achievement of some end; as such the dependent variable is not whether the end survives, but the degree to which it is achieved and with what cost. As should be readily apparent, especially if one is concerned with the productivity of the knowledge of productivity, the degree of productivity necessary for an organization to survive and adapt is much less than almost any organization, public or private, produces. Otherwise we would have more failures to study.

Accepting productivity of the public sector in low-income countries as the goal we wish to maximize, what does the administrative theory literature say about the subject that might be of assistance to men of action in their difficult choices and to men of knowledge as part of their on-going enterprise to build

8 I more fully develop a critique of the organizational viewpoint in "Conventional Administration and Comparative Wisdom: the Comparative Administration Group and its Contributions", *Sage Professional Papers in Comparative Politics* (1971).

theory? What we mean by "productivity" is crucial. Although we are often assured that much of the province of the public service cannot be thought of in productivity terms (cost per unit of diplomacy?) the general notion of productivity is, I think, applicable.<sup>9</sup> One of the problems, however, is to differentiate between efficiency and effectiveness as the meaning of productivity. Often the idiom of efficiency is used when the analyst is discussing effectiveness, or vice versa. Those who write about productivity in terms of efficiency usually use the engineering concept that, within the parameters of diminishing returns and economies of scale, the more that an organization produces with the same quantity of input as used in an earlier level of output, or the more it can produce the same output with less input than used previously, the more efficient the organization is. By definition, the more efficient the organization, the more productive it is. Others, especially those who exhort people in organizations to work harder or in poor countries to do better, use productivity in the sense of effectiveness. Disregarding diminishing returns and economies of scale (and hence the input side of efficiency) the more an organization increases its output, the more effective that organization is. Increasing output is associated with attaining goals; the more a goal is met, the more productive the organization is.

The two definitions suggest a matrix:

Figure 2:

		EFFICIENCY	
Productivity		+	-
High	+	A	B
EFFECTIVENESS			
Low	-	C	D

The law of diminishing returns is a recognition that one can increase effectiveness with declining efficiency (cell B) and, as occasionally used in the literature, diseconomies of scale are thought to provide a case in which efficiency increases but effectiveness declines. Logically, and exploration of any work on the production function will agree, Cell C does not exist. Wherever efficiency is increased, effectiveness also increases.

It might be helpful to consider productivity—either effectiveness or efficiency—in a more abstract way. In doing so, I am using a notion of political economy developed by Norman Uphoff and myself.<sup>10</sup> The notion implies a broadened conception of resources and assumes that their mix in a decision can be more or less productive in achieving compliance, depending on the relative amounts of resources and the demand for them. Programmes that fail usually have too few of the desired resources for those administered or too many undesired ones. They also fail because, regardless of volume and value resources, they are never mixed in a productive fashion or brought efficaciously to the point of exchange. Both conditions we will label "unproductive" and accept the

9 See Mosher, Frederick C., and John E. Harr, *Programming Systems and Foreign Affairs Leadership, an Attempted Innovation* (Oxford, 1970).

10 Ilchman and Uphoff, *op. cit.*

faultiness of the "mix" or of the mixer as accounting for low productivity; and the fruitfulness of the "mix" or the genius of the mixer for high productivity. Virtually the whole administrative theory literature is based on the assumption that whatever is, is less than it could be. But keeping that rather compulsive imperative in mind, let us describe algebraically productivity:

Figure 3:

$$P \left( \begin{array}{l} \frac{\text{input}}{\text{output}} = \text{efficiency} \\ \frac{\text{output at } t^1}{\text{output at } t^2} = \text{effectiveness} \end{array} \right) = f \left( \frac{a, i, e, s, c + ai}{t} \right)$$

- P = productivity
- a = authority
- i = information
- e = economic goods and services
- s = status
- c = coercion
- t = time (timeliness)
- ai = administrative infrastructure  
(combination of authority and information)
- d = delay

Productivity is a function of the mix of resources as they are affected by timeliness and cumulative investments in administrative infrastructure as mitigated by delay. Much of the literature of productivity of public administration has dealt with resource shortages and their impact. For low-income countries especially, the inadequate authority or information have been explanations for variable levels of output. As all the resources depend for their value on their "mix" for those who will consume them, the element of time is important. The value of resource is affected by the timeliness in which it is combined with others—too soon or too late has its costs in their mutual interaction.

Economic resources before sufficient authority comes is like water coming before fertilizer in agricultural production. Like any productive enterprise, however, the stock of resources at any one point in time is less important than their flow over time and determinant of the fruitfulness of their flow is the existence and quality of administrative infrastructure. By this term, I mean those accumulated investments in procedures and persons, hierarchy, space and equipment that transform the resources into decisions. Much of the literature on the productivity of the public sector in low-income countries argues that resources are not in short supply, but that the infrastructure is inadequate to process resources.<sup>11</sup> Often sizeable investments in infrastructure (which are always saved from current consumption in the hopes that their pay-offs will reduce the costs of production in the long run) result in lowered productivity because investments only elaborate hierarchy, make procedures more cumbersome, multiply decision points so that delay (d in the formula)

11 An excellent example is Waterston, Albert, *Development Planning: Lessons of Experience* (Johns Hopkins, 1965).

interrupts the flow. Just as timeliness of the supply of resources can affect their value, so can delay impede the work of administrative infrastructure. For instance, it might well be in India that the heavy investment in telecommunication to replace the complex system of notes and peons or a more rational filing system than one which orders events by date of decision, would reduce delay in the processing of resources and affect the timeliness of their value.

The algebraic statement can be useful in exploring any administrative situation. Taking two points in time for the same service or two settings at the same time for the same service, outputs can be compared, using direct or surrogate indicators, in terms of either efficiency or effectiveness. What resources were in short supply? How did timeliness affect the way resources were used? Assuming equivalent resources in quantity and value, what differences in output (over time or in relation to input) seem attributable to administrative infrastructure? Where is the transformation of resources delayed in administrative infrastructure? What has been the comparative investment in administrative infrastructure? Indeed, employing ordinal valuations, shadow "this and that", and some imagination, it would not be too far-fetched to construct an administrative input-output table in which the supply and utilization of resources could be traced, shortages and surpluses forecast, and structural bottlenecks identified.

Now, if it is found that the level and mix of resources should have been adequate in most situations and that administrative infrastructure was no factor, then a case of high or low productivity of structure was no factor, and a case of high or low productivity of a public agency must be explained on other grounds. There seem to be two grounds that have been considered by administrative theorists: high or low productivity is either caused by those who do the mixing of resources or by the mix that was chosen. In many respects, these are mutually exclusive explanations as well, one assuming the other has zero value. Holding resources and infrastructure constant, it is either the public administrators as persons or their juxtaposition structurally that cause low or high productivity, assuming that the appropriate parties otherwise would know what to do; or, assuming no significant differences can be achieved by different people or by relating them in a different manner structurally. The only difference can come from different choices about the same objectives, the decision premises were wrong. The former is the use of decision roles as a device for explanation; the latter is the use of decision rules for the same purpose.

A student of public administration or a public administrator need choose neither. It may well be that most cases of high or low or adequate productivity can be handled within the framework of the "equation"; the amount and mix of resources and variable investments in administrative infrastructure are sufficient explanations to guide action: more resources of the right kind and value; more investment in personnel and their skills, setting, and equipment. But if a student of public administration or a public administrator finds them wanting, then choice of either supplementary position calls forth different

research and action strategies. Which position is chosen probably depends on one's values and a sense of probability of pay-off. I might add parenthetically, that university people almost never choose the obvious resource and administrative infrastructure position. If the decision role position is selected ("it all depends on who mixes the resources"), which is a sort of behavioural-structural way to answer a question, the strategy for research and action is to invest time and resources in recruitment and training the right people (heavy emphasis on personality and the development of attitudes and values). A certain cynicism, condescension and compulsive anxiety seem to mark those in this camp. If the decision rule position is selected ("it all depends on how and what you decide"), which is an approach drawn from economics and game theory, the strategy for research and action is to invest time and resources in training, planning, and "operations research-like" activity. Those who are attracted to this camp evince a strange mixture of earthy bargaining instinct and considerable utopianism about man's possible perfectability.

Before discussing the contributions of administrative theorists to an understanding of decision roles that might increase public sector productivity in low-income countries, let me take one of two final detours into the murky world of methodology. There seem to be two major ways for social scientists to view the world; one way might be called "essentialist", the other "existential".<sup>12</sup> The former is dominant and has a hoary tradition going back at least to Plato. The objective of this method is to label the universe, to separate out pure essences by reducing phenomena to their elemental quality, to determine whether a thing is X and not Y or how much "X-ness" before it becomes "Y"; to classify by phylum and genus all things. The *modus operandi* is definitional, ideal typical, taxonomic: there are six kinds of democracies; tradition has five characteristics; this is an example of bourgeois liberal democracy and that of proletarian plebescitary democracy; the Soviet Union is no longer a totalitarian state, but is now Statist autocracy; there are twelve requisites to modernization; development has four stages, etc. To handle the vast number of attributes, three "technologies" have been adopted: the ideal type that chooses an essence out of existence in order to compare worldly manifestations (e.g., "legal rational bureaucracy"), the four call matrix in which all particularities of phenomena are emptied out except for two most general characteristics, and the co-efficient of correlation ("what is the probability that essence a will occur simultaneously in space or time with essence b?"). While most of the work is a catalogue and almost always tautological because it is definitional—by definition—essentialist social science is necessary. My doubt, especially when I am concerned about knowledge and action, is whether it is sufficient.

I have made this detour because the administrative theorists who talk about decision roles are essentialists, almost down to the last scholar. But apart from what they are, let us see what they do. Role is not a new way for social

<sup>12</sup> This is more fully developed in Uphoff, Norman T., and Warren F. Ilchman, *The Political Economy of Development* (University of California Press), forthcoming.

scientists to talk about human interaction in organized settings; it dates back in the United States to the work of George Mead,<sup>13</sup> Robert Park,<sup>14</sup> and Ralph Linton.<sup>15</sup> But it was after the work of Talcott Parsons and Robert Merton that role became a staple technology for those studying public and private administration.<sup>16</sup> Parsons' definition is sufficiently standard to use as a model:

The role is that organized sector of an actor's orientation which constitutes and defines his participation in an interactive process. It involves a set of complementary expectations concerning his own actions and those of others with whom he interacts. Both the actor and those with whom he interacts possess these expectations. Roles are institutionalized when they are fully congruous with the prevailing cultural patterns and are organized around expectations of conformity with morally sanctioned patterns of value-orientation shared by members of the collectivity in which the role functions.<sup>17</sup>

This definition has two important elements that have been important to administrative theorists considering Third World Countries. First, there is a mutuality of expectations between these who are in the role and those with whom they interact. And, second, the role is not institutionalized until it is congruous with prevailing cultural patterns and value orientations. This produces as most essentialist thinking does, a four cell matrix:

Figure 4—

		ROLE OCCUPANT	
		Agree Occupant feels 'authentic' in role defined by others	Disagree Occupant feels inauthentic in role defined by others.
Role Set (Others with which role occupant interacts; taken as equivalent of prevailing cultural patterns and value orientations)	Agree role occupant is 'authentic'	A	B
	Disagree role occupant is not 'authentic'	C	D

On the theoretical level, this gives several possibilities for analysis: the consequences of an uninstitutionalized role and a committed role occupant; the consequences of an institutionalized role and an uncommitted role occupant; the joys of an institutionalized role and a committed role occupant; the disaster of uninstitutionalized role and uncommitted role occupant. The intellectual device that is used to analyse these possibilities has its counterpart in physics of friction or resistance, and what is determined is the degree of friction between the role occupant and the role set. The greater the friction,

13 Mead, George H., *Mind, Self and Society from the Standpoint of a Social Behaviorist* (University of Chicago Press, 1934).  
 14 Park, Robert E., "Behind Our Masks", *Survey*, 56 (1926), pp. 135-9.  
 15 Linton, Ralph, *The Study of Man* (Appleton, 1936).  
 16 Parsons, Talcott, *The Social System* (Free Press, 1951); Merton, Robert K., *Social Theory and Social Structure* (Free Press, 1949), Chapters 6-7; Parsons, Talcott, "Suggestions for a Sociological Approach to the Theory of Organizations", *Administrative Science Quarterly*, 1 (1956), pp. 63-85; 225-39.  
 17 Parsons, Talcott et al., *Toward a General Theory of Action* (Harper Torchbook, 1962), p.23.

the greater the conflict; the less the friction, the greater the harmony!! To resolve the problem of friction, either the role occupant leaves the role, or the role gets changed or the occupant adjusts to the role. Ideally, a role may be thought of as a friction-free perpetual motion mechanism! Scholars who pursue this problem spend much of their time determining the attributes of a role, the attributes of its being accepted, and the attributes of modal role occupants. Their question: if role and its occupant diverge, who is changed the most? If it is the occupant, then productivity is usually positive; if it is the role, then productivity is usually low or negative.

It should be readily apparent how easy it was to adopt role as a focus for research on public "native" administrators in low-income countries: faithful image of British civil servant and "traditional society", ENA "native" graduate and primordial norms; professional roles looking to rational planning in society marked by fatalism and "the limited good"; the search for roots for a civil service in a patron-client society. Apart from an American Political Science Association study report,<sup>18</sup> the first U.S. administrative theorist to try role as a device to explain variable output (the dependent variable was always tacit) was Morroe Berger in his *Bureaucracy and Society in Modern Egypt* in 1957.<sup>19</sup> His aim was direct and his method empirical; he sought:

... to see differences in the public bureaucracy of Egypt and that of most Western States. . .compare one group of Egyptian civil servants with another, the older with the younger, the administrative with technical workers, those more exposed to western influences with those less exposed . . .the degree to which the Egyptian higher civil service approaches Western norms of professionalization and bureaucratic behavior.<sup>20</sup>

While Berger was disappointed in his results, he set a high standard: a serious survey research and a thoughtful set of scales.

His successors were less empirical, though perhaps more lively. Rather than using long, open-ended questionnaires and scales, these scholars began using a much more deductive method, laced with observation. Among U.S. scholars, the work of Lucian Pye, Fred Riggs, Richard Gable and William Siffin shared a somewhat common theoretical basis.<sup>21</sup> By tacitly dividing the world into two clusters of opposing characteristics and using a continuum between each "pure" cluster, they suggest that there were institutionalized roles (made up of these mutually exclusive attributes) and authentic role occupants at either end; in the middle there were varying degrees of role and personality conflicts.

18 Comparative Administration Group, *The Sayre-Kaufman Outline, A Research Design for a Pilot Study in Comparative Administration* (Bloomington, January, 1966). First circulated in 1954.  
 19 Berger, Morroe, *Bureaucracy and Society in Modern Egypt, A Study of the Higher Civil Service* (Princeton, 1957).  
 20 Ibid., p. 8.  
 21 I am thinking particularly of the essay by Riggs in Siffin, William, *Toward the Comparative Study of Public Administration* (Indiana University Press, 1959), pp. 23-116; Riggs, Fred W., *Administration in Developing Countries* (Houghton, 1963); Riggs, Fred W., *Thailand, Modernization of a Bureaucratic Polity* (East-West Center Press, 1966); Siffin, William J., *The Thai Bureaucracy* (East-West Center Press, 1966); Gable, Richard, "Culture and Administration in Iran", *Middle Eastern Journal* (1959).



Figure 5:

## Cluster X (attributes)

ascriptive  
particularistic  
affectivity  
functional diffuseness

## Cluster Y (attributes)

achieved  
universalistic  
affective neutrality  
functional specificity

The public servant was either fulfilling, as a "cluster Y" person by chance or education, an uninstitutionalized role in the "cluster X" nation of his birth; or he was a "cluster X" person in a "cluster Y" role which had been transplanted by chance of colonialism. Like iron filings attracted by two magnetic poles, wherever the civil servant landed on the magnetic field, that registered the strength of the attributes. Needless to say, so the implication of the analyses goes, the greater the "middleness" the less productively resources will be mixed and the lower the productivity.

In general, this version of decision roles is in less currency today among younger scholars, partly on the grounds that I alluded to earlier. An especial deficiency of the approach has been the failure to link clearly role conflict and productivity. To my knowledge, the link has remained implicit and has never been tested empirically. It has been shown that you cannot work from the attributes and predict where the incidence of holding the derivative views would be; state civil servants in the mid-West of the United States turn out to be more Egyptian than the Egyptians of Berger's study.<sup>22</sup> I think this is also the burden of James Scott's *Political Ideology in Malaysia*, an empirical study of civil servants which demonstrates the adaptive, problem-solving behaviour that had been earlier deemed by social scientists as being "pre-rational", "irrational", "non-modern".<sup>23</sup> From ordinary observation in India, I would contend that persons holding similar views (cluster Y) can act in diametrically opposed ways; persons who espouse cluster Y ways can and do act in ways characteristic of cluster X and vice versa; and that it is extraordinarily difficult (to my knowledge, it has never been done and certainly not in the Third World) to move from abstract value to public servant decision behaviour. In short, this version of administrative theory has low productivity for action. If one cannot act on it, can the theory then be true?

A variation on decision roles as an approach to productivity of civil servants in low income countries is to assume that role occupants feel authentic in their roles and that their roles are sufficiently institutionalized, but that one role and its occupant conflicts with another role and its occupant or that the role occupant is occupying competitive roles himself. For the last decade, with varying degrees of formality, this approach has been taken by administrative theorists and administrators alike. What are the consequences of the

22 This, I have been told, is the major finding in a doctoral dissertation by Professor Catharine Papasthopoulos. I have been unable to verify this.  
23 (Yale University Press, 1968) *passim*.

conflict between the law-and-order civil servant and the development-oriented civil servant, between the military and politicians, and so on? The same role definitions and basic mechanisms are there; there are also "touches" of the tradition-modernity approach. In each case, it is assumed that the conflict arises from different role definitions and not from an existential dispute that need not be explained on role grounds. Moreover, it is assumed—and I suspect that this follows from the ideal of the perpetual motion friction-free machine—that conflict wastes resources and reduces productivity. Although there are several articles, there are, to my knowledge, very few studies of this form of role conflict. One attempt, though not altogether successful, is my own study of the ideology of those who call themselves economic planners in low-income countries.<sup>24</sup> Developing the ideal type of "rational productivity bureaucrat", I assessed the factors that gave rise to this role and the variations of the role depending on the kind of regime the planner served (military, single-party, competitive party regimes), the ratio of "planning" to "finance" as the concrete experience, and the social background ("old elites" and "new elites") of the planners. As for their "ideology", the rather unexceptional conclusion was that planners are anti-political in a way that made them very political and that their conflicts with politicians had some characteristic role outcomes—withdrawal, subversion, etc. More generally, I found that:

Industrialization and modernization are deeply held values, and the costs of these processes tend to be minimized by the planners. Their explanations of causes of backwardness stress the pervasiveness of values hostile to development and imply the need for substantial transformation before the processes can become self-sustaining. The planners see the agents for change among themselves primarily and certain elite sectors willing to break away from traditional methods. Although varying in source, the planners find certain key sectors unaware and unsupportive of their efforts and many other sectors detrimentally taking advantage of development programmes. Despite problems defined in cultural and political terms, the planners feel that economic programmes and planning—the more comprehensive the better—are the most trustworthy guides for action. The agricultural sector must be "educated" for innovations, though structural reform and force are also advocated. Both the desired increases in resources of foreign aid and the desired allocation of resources by government are defined largely in technical terms with an explicit rejection of premises that might be labelled "political". Most planners feel that the achievement of a self-sustaining industrialization and modernization process is a long-run task, stretching into the next generation. And many planners hope to emulate regimes which achieved industrialization in a hurry, through the use of centralization and coercive mechanisms, and few planners include their political structures among the characteristics of the countries to admire in their development.<sup>25</sup>

With unexceptional conclusions, I could only recommend that politicians beware. Such is an example of the guide to action that administrative theorists can make using decision roles as an approval to explain productivity; in other words, not very productive.

24 Ilchman, Warren F., "Productivity, Administrative Reform, and Anti-Politics: Dilemmas for Developing States", in Braibanti, Ralph, ed., *Political and Administrative Development* (Duke University, 1969) *passim*, pp. 504-5.  
25 *Ibid.*, pp. 504-5.

More productive for action (and hence for theory) than decision roles are decision rules. But our discussion of decision rules must await the last detour into methodology. While the distinction between essentialist and existential social science is more analytical than concrete and while without a modest exercise of essentialism no existential thought is possible, the distinction between the two has value, especially in relation to the productivity of knowledge of productivity as it applies to the public sector in poor countries. Largely because it makes possible the perspective of decision rules, I find the modes and objectives of existential social science happily conducive to relating men of knowledge to men of action, to nurturing the fruitful, dialectical relation between the constructing and testing of theory and the action of public servants in implementing policy.

Whereas essentialist social scientists seek to describe the universe in which people might or might not choose, the existential social scientist is centrally concerned with the act of choice and the consequences of choice for the chooser and those with whom he lives. Both traditions value analysis, but the essentialist thrives on description and the existentialist on prediction; the former exhausts the *ex post facto*, the latter takes from the past with an eye to its *ex ante* potential. Existential social science is situational; the predictions it offers are by analogy from the outcomes of previous choices to the possibilities of choices yet to be made; not whether or not a choice will be made, but whether, if a choice is made, with these resources, that outcome is likely. Existential social science is situational in that it draws on real purposes, the resources to be committed in real action, real constraints to success of purposes in terms of the purposes of others and the resources at their disposal. Essentialist social science is not avowedly normative; existential social science is. The objective is to improve performance, to minimize the negative consequences to values from action. Essentialist social science, because it deals with modal cases and with description that is true by definition, can only say what else is present in most instances when a desired trait exists, without suggesting which "causes" either or whether the attributes are related or not. Existential social science, because it seeks causal knowledge and because it finds especial interest in the exceptional outcome, is able to speak to the situation where a similar outcome is in doubt and can comment on the question so important for men of action—how much is enough, given our purposes and our resources? An essentialist finds himself equipped to speak only in terms of when something *is* or *is not*.

Although the work of existential social scientists is variously described, it can be summed up as "decision theory". The applied aspect of their work is the propounding of decision rules, though by my standard, the distinction between applied and pure is false for the social sciences; there are only applied and applicable social sciences.

Decision rules are short-hand guides to choice with high probabilities of success—success in accurately matching an event yet to occur; success in estimating the outcome of an event in terms of achieving a certain value and the consequences of that achievement for other values. Decision rules are ways

we adopt in our own everyday thinking about action in order to reduce uncertainty; they are the operative codes of experience. As experience is situational, decision rules are the existential probabilities on which we act to realize our purposes. The criterion of optimal ignorance we discussed earlier in this paper has two decision rules for "acting" on evidence: (1) stop collecting cases when certainty reaches a point commensurate with your resources and purposes; (2) choose the level of generality of behaviour that approximates the resources available, the time horizon acceptable, and the value of the purposes foregone. Decision rules are descriptive and normative; descriptive in the event-matching sense, normative in both the sense of trying to improve performances and judging values in relation to each other.

To have drawn such a stark contrast between existential and essentialist social sciences may do a disservice to my cause of demonstrating that the way to be of assistance as an administrative theorist is to offer decision rules that arise from theory and observation and are tested by action. This disservice comes because I must now demonstrate the contribution already made by decision theorists to the development of decision rules valuable for development. But this I cannot do, apart from pointing the readers to the work of operations researchers.<sup>26</sup> In the more conventional field of decision theory drawn from economics and organization study, the results so far do not substantiate my case for the superiority of decision rules over decision roles, that the kind of mixes of resources public servants choose are more critical for differences in productivity than the public servants who mix them.<sup>27</sup> The poor showing results for several reasons. First, there has been a divorce between normative and descriptive decision theory, which is ultimately specious and diversionary.<sup>28</sup> Second, the work has been done by economists using "closet assumptions" (complete transitivity, common valuations, no coercion) and by organization theorists who unfortunately thought that decision could be thought about in isolation from action, though they have been successful in applying their models to rather simple chess and stock portfolios.<sup>29</sup> Third, they have talked about decision—like voting, stock purchases, games of chance, and nuclear deterrence—which have little analogy to choices about improving the lot of those who live in the Third World.

Although he would not call himself a decision theorist, there is one significant exception to the above, Albert Hirschman. *The Strategy of Economic Growth* contains, I believe, the most fruitful decision rules for increasing the productivity of choices on development investments and technique. They not only approximate events but they take account of consequences for values of the choice.<sup>30</sup> Above all, Professor Hirschman knows their limiting cases, and

26 For a profound introduction to this approach, see Churchman, C. West, *Challenge to Reason* (McGraw Hill, 1968).

27 Good summaries of this literature may be found in Bauer and Gergen, eds., *op. cit.*, Chapters 2 and 3.

28 Simon is no empiricist in the conventional sense of the word; he advocates a behaviourally-substantiated ethical position.

29 See, for example, Clarkson, Geoffrey P. E., *Portfolio Selection, A Simulation of Trust Investments* (Prentice Hall, 1962).

30 Hirschman, Albert O., *The Strategy of Economic Growth* (Yale, 1958).

the decision rules can be tried as part of their continuing verifiability. For the productivity of choice that involves public servants in the actual implementation of projects, however, his major contribution is *Development Projects Observed*.<sup>31</sup> Here he advances the decision rule of the Hiding Hand. At the risk of losing the quality of his rule, let me summarize it as: when choosing development projects, it is probably better to overestimate benefits and underestimate costs than the contrary, as, once embarked, it is likely that emergent problem-solving will handle the unforeseen. He goes on:

Just as the Hiding Hand principle states that the to-be-experienced difficulties should be hidden at the moment of the decision to go ahead with the project, so it implies that these difficulties should not appear too early after the execution of the project has started, for, at least within a certain range, the propensity to tackle the difficulties will be roughly proportional to the effort, financial and otherwise, already furnished. Therefore, a given level of difficulties may be wholly discouraging for the prosecution of the project if it turns up early, while it would be tackled with alacrity and perhaps solved if it arose at a later stage.<sup>32</sup>

In many other instances, Hirschman constructs a decision rule that is a guide to choice. He argues: "Projects whose potential difficulties and disappointments are apt to manifest themselves at an early stage should be administered by agencies having a long-term commitment to success of the project."<sup>33</sup>

As a general introduction to decision rules, which is all we can offer now, I would suggest that there are three kinds of decision rules: rules for the search for problem-solving alternatives, rules for choosing alternatives, rules for translating alternatives into action. As human activity is never so neatly segregated, and people are using decision rules from all three levels constantly and simultaneously, it should be apparent that the decision rules for each diverse activity apply often to other activities as well.

Perhaps the best known decision rules relate to the first category: rules for the search for solution. These rules have been debated endlessly in the context of planning and *laissez faire* and are by now quite familiar. While the rules are often advanced as behavioural models of how most people most of the time choose, they are also prescriptive. People who advocate one decision rule claim that others are utopian, while the latter charge the former with conservatism. More often the charge has been turned aside with the insistence that the proponent has been misread.<sup>34</sup>

The first rule for searching for solutions to problems is the rationalist or optimizing decision rule: when confronted with a problem, carefully consider all alternatives possible and select the best, taking care to observe second order consequences and interrelationships. Theoretically, this decision rule should have the highest pay-off when one is searching for solutions to problems, but

31 Hirschman, Albert O., *Development Projects Observed* (Brookings Institution, 1967).

32 *Ibid.*, p. 18.

33 *Ibid.*, pp. 20-1.

34 For example, Simon, Herbert, *Administrative Behaviour* (McMillan, 1950), Chapter 4, and Stigler, George J., "The Economics of Information", *Journal of Political Economy*, 69 (1961), pp. 213-35.

its standard is thought to be out of realistic proportion, given "bounded rationality" within which people make choices.<sup>35</sup>

A second decision-rule was propounded as an alternative—first as a behavioural description, then a normative prescription. Rather than maximize, Herbert Simon said, people "satisfice". This has resulted in the decision rule called incrementalism. The rule states: as a comprehensive evaluation is impossible, investigate only those solutions and means that differ incrementally (to a limited degree) from existing policies; better than seeking a rational solution (as few problems are ever solved), try one route at a time, handling unforeseen consequences in subsequent increments.<sup>36</sup>

The third decision rule is a combination of the two and called by its proponent "mixed scanning". It argues as a guide to choice about searching for solutions that most productive searches come from semi-rationalistic scanning of all possible alternatives without details and then by elimination, choosing the most acceptable solution.<sup>37</sup>

Each of these decision rules is advanced with a productivity claim: if followed, the most productive search will result. Each holds under different conditions and has different limitations in relation to these conditions. In a sense, the whole debate over them is pointless. The decision rule you select as a public administrator is related to your purpose, your time horizon, your resources, the amount of expected opposition and their resources. For instance, if your resources were substantial, time horizon quite long, purpose grand, opposition negligible, the rationalist decision rule would probably be best. But, as those conditions seldom hold, the other two are probably most productive.

When choosing among alternatives, especially when they seem to have equally acceptable consequences, I would advance a political economy decision rule: the alternative that should be chosen should maximize the mutual efficiencies of political and economic resources. Perhaps some discussion of this is in order.

Owing to the isolation of political science from economics in the recent past, two distinct and discreet perspectives have emerged—an economic perspective concerned with the most efficient use of economic resources, and a political perspective similarly concerned with the use of political resources. From each perspective, the other's concern is seen more as a constraint than as a variable. The political economy perspective, in contrast, incorporates both and seeks to evaluate potential trade-offs. The difference in perspective can be illustrated by suggesting a matrix of different policy choices judged as optimal, acceptable or unacceptable from an economic or a political point of view.

Whereas an economist would arrive at choice B and a political scientist at choice D, a political economist would with his modes of analysis aim at a

35 Simon, op. cit., Chapter 4.

36 Lindblom, Charles E., and David Braybrooke, *A Strategy of Decision* (Free Press, 1963).

37 Etzioni, Amitai, *The Active Society* (Free Press, 1968), pp. 274-312.

Figure 6:

	Politically Optimal	Politically Acceptable	Politically Unacceptable
Economically Optimal	A	B	C
Economically Acceptable	D	E	F
Economically Unacceptable	G	H	I

policy corresponding to choice A. What is sought is an aggregate optimality. Choice A might be less desirable in economic terms than B and less so in political terms than D, but the total benefit achieved would be greater than that from either of these other two choices.

This point cannot be adequately understood through such typological models, however. Optimizing in political economy terms goes beyond "splitting the difference" between economic and political optima. Since political economy embraces the entire range of resources used in public exchange, there are situations where combinations of resources have variable efficiencies in achieving public ends quite different from the efficiency suggested by either conventional economics or political science. Let us illustrate this with an example.

Consider a situation in which public resources available for expenditure on education can be used to improve the quality of education offered (by hiring more teachers, by training them better or by other means) or to increase access to education, that is, the quantity of education made available. For the sake of discussion, let us consider the first use as basically economic in as much as better education could be expected to raise labour force productivity, and the second use as political in that expanded enrolments would be expected to increase support for the regime and involve more people in the common values of the nation. Neither direction is purely economic or political, but some combination of these. Moreover, each has some social advantages or disadvantages as well. But let us describe these uses, respectively, as economic and political.

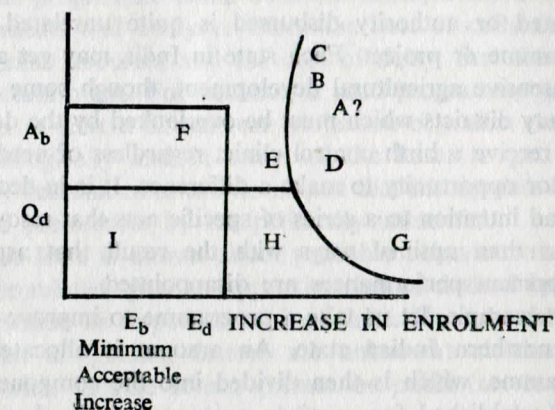
An analysis and evaluation of alternatives from an economic or a political perspective would be incomplete, at least for policy purposes, where one wants to ascertain the allocation of resources which is optimal in some aggregate sense. The following graph clarifies the problem of choice if one has a limited amount of economic resources to apply toward making an educational system more productive, by improving the quality of instruction and/or increasing enrolments. The co-ordinates identified on the graph correspond to the choices represented within the matrix above.

At B, there is the greatest improvement in quality satisfying the minimum "political" requirement of increase in enrolment, while at D, enrolment is increased maximally subject to the "economic" constraint of some minimum improvement in quality of education. Our interest is the location of point A, which lies somewhere between B and D. Political economy would not suggest splitting the difference and locating it midway between the two sub-optimal points.

Figure 7:

Improvement  
in  
QUALITY (Q)

Minimum  
Acceptable  
Improvement



Whether one emphasizes improvements in quality or increases in enrolment will depend on the value attached to each relative to the other. Under conditions of low labour productivity and adequate regime support, A will be closer to B than to D; if political stability is a short-run problem, resources should be allocated so that the combination of improvements and increases is that represented by locating A closer to D. The exact location would depend on the situation, on the interaction between resources and needs, between political and economic factors. That neither political nor economic calculations in themselves would offer sufficient guidance to choice is evident from this example.

The third level includes decision rules to translate choices into programmes, projects and action. While I clearly think pursuing the political economy decision rule is more productive than others, it is to this third level of implementation that scholars and administrators should turn. There scholar-administrator collaboration could assess the productivity of these rules; then I feel that considerable savings in resources can occur. A decision rule at this level is a definition of a particular condition that warrants certain kinds and amounts of resources to be granted and the division of the funds on the basis of that definition. Presumably each implemental decision rule contains a model of likely compliance for other values. For instance, to divide a programme for its implementation into areas based on population is to use numbers of people or their density determinative condition for action.

The implementation of all programmes and projects require decision rules. Some projects, especially those defined closely in space and purpose (a steel mill somewhere producing a particular grade of steel) require fewer decision rules than broad programmes for, say, increasing agricultural production, raising general literacy, or reducing rates of mortality. Many decision rules for implementation are enshrined in general laws: how tenders are to be let, ratio of local populace to others in employment, methods of reporting results, etc. Other decision rules are formulated for programmes and projects by politicians and/or officials and represent a mixture of real or potential political pressure, technical estimates, administrative convenience, and such chance

factors as the "past" and incompetence. Often the rule by which money is allocated or authority disbursed is quite unrelated to the purpose of the programme or project. Each state in India may get a "package programme" for intensive agricultural development, though some states lack the potential of many districts which must be overlooked by the decision rule; every block must receive a birth control clinic, regardless of need, availability of alternatives, or opportunity to make a difference. It is in decision rules that translate a broad intention to a series of specific acts that resources are used, I believe, in less than optimal ways with the result that aspirations for a level of development performances are disappointed.

For example, let us take a programme to improve the quality of cowherds in a northern Indian state. An amount is allocated by the plan for this programme, which is then divided into the component programme often by ratios established for previous programmes. In the case of distributing improved bulls for insemination, their number is determined by the amount allocated to that programme after other programmes have been financed (not in relation to the number necessary to make an improvement in the next generation) and distribution is a fixed number to every block (regardless of the existing cow population and its quality or the potential for a dairying industry). As five-year plan reviews usually deal in large aggregates the loss of resources entailed by the decision rules adopted in this instance are obscured; their consequences ultimately cannot be obscured.

When unguided by thoughtful attention to the productivity of decision rules, civil servants, who are more often than not those charged with their formulation, blend into the decision rules the constraints of administrative convenience, the outcomes of technical analysis, an appraisal of the political forces at work and potentially mobilizable. Political figures take their cases to departmental officials and to planners to mould decision rules that would advantage their constituency. It might be possible to identify strategies to see their political use; for instance, a local politician able to secure irrigation water for his constituency can then use its availability, when adequate water is the criterion for choice, to get his constituency included in programmes for improved soil, soil testing, godown construction, and various speciality services.

What are the functions of these middle level decision rules? It must, first, be stressed that no programme could exist without them except on paper. Nor can there be a decision rule to have no decision rules for allocation, for this will simply mean that the strongest politically will always win. Once a decision rule is formulated, political and inter-agency conflict can be minimized. Individual cases may be decided in relation to the rule and its existence forces the conflict to a higher level where programmes and priorities are affected. In practice, decision rules probably ensure a greater distribution of resources and keep the politically strong from monopolizing programmes. Decision rules can also be substitutes for proper feasibility studies, either when data are not available or their cost too high. A decision in one Indian state to declare all areas above a certain altitude to be backward for purposes

of specific development programme made common sense in the absence of more precise measurements and analysis. Often the cost of collecting data is so high, both in actual resources and the cost of delay, that the ad hoc decision rules have certain merit. For instance, a road programme probably should be premised on at least a fifteen-year projection of traffic. As this is difficult, both methodologically and in terms of the haste to get a road programme under way, decision rules are developed that incorporate hunches on traffic patterns and preferences by the politically influential.

In some instances, so little is known about probable behaviour that decision rules, however formulated, give an approximation of desired behaviour and permit their alternation as responses to them arise. How should a state plan for tourism when all guiding factors are unknown: destination or transient passengers; what income levels; private or public sector accommodations; indigenous or foreign tourists; sight-seers or recreation? If all decisions were to be weighed on their merits then no programme would be possible, government servants would be swamped with evaluating future contingencies that often could not be measured or might never come about. Decision rules can be costly in so far as they divert resources from their more productive use; in the state of knowledge existing in most regimes or in the vortex of political forces, decision rules may be an important conservator of resources.

Decision rules are based on a datum concerning a unit in time or space and this datum defines the occasion for an allocation. Evaluative decisions entail a judgement on a particular datum as progressive or backward for which a reward or punishment is meted. But even choosing an otherwise neutral datum or condition may imply an evaluation. Population is not necessarily a neutral basis for decision rules in a country where "population" is a sign of social backwardness.

New and on-going programmes alike need decision rules. The argument that it is especially important that new programmes and projects have appropriate decision rules for implementation can be appreciated when it is realized that decision rules even more divorced from purposes of the project or programme apply to on-going ones. Such rules as "10% off all programmes", "funding to the same level as last year or under the last plan", "cut back to level of spending", etc., are the decision rules often applied to on-going programmes and projects. For the most part, these rules are even more divorced from the purposes of the programme. To assume that programmes should receive the same amount as the previous year is to recognize no phasing of a programme which requires differential amounts over time. Like decision rules for new programmes, these rules are designed by politicians and civil servants, to reduce political and inter-departmental conflict and to substitute for the costly or impossible task of evaluating afresh a programme or project on its merits. If the decision rule is wrong at the outset, its impact is compounded over later budgetary and planning periods. Once decision rules are decided, it is difficult to have them or their effects rationally reassessed.

Within the classification of neutral decision rules, there are two rules. The first is the rule of equity, where each unit—a person, a village, a block, a state—receives an equal share; each block will receive a primary health centre, each village a primary school, each person six years of free education, and each state an agricultural university, etc. Equity, in this case, may only specify frequency and not necessarily equity in the physical unit. A second rule we will call the rule of factor proportions. This rule uses some factor of social, political, technological, cultural, geographical, or economic life and contrasts it with some other, usually its opposite. For instance, the number of proportions of rural to urban residents, the number of residents per space or density, youth to total population or older persons, etc., might be the factors used to determine the appropriateness of an allocation.

Evaluative decision rules depend on what judgements are being made. In development programmes, there are two general decision rules: the rule of backwardness and the rule of progressiveness. Each rule embodies its object. The rule of backwardness is a decision rule which rewards need or punishes some conditions as undesirable. Per capita income, literacy, unemployment, social amenities, even the way the unit had been treated in the past, can serve as factors signifying an allocation. A unit possessing one or more of these characteristics, however defined, is either then given or gets withheld some resource. The measurement or determination is also through time. Some rules of backwardness do not require relative backwardness but perhaps only an absolute decline of a desirable factor or increase in an undesirable one. The rule of backwardness is adopted when implemented programmes seek to “develop regional balances”.

The second decision rule implying a valuation is the rule of progressiveness. Here the decision is to reward or punish some attributes termed “advanced”. Often the two evaluative rules serve as each other’s opposite. When some “backward” condition is rewarded, some “progressive” condition is being penalized, and vice versa. Often also the decision to reward some social, political, technological, economic, geographical or cultural feature or features, is described in dynamic terms like “natural advantage”, “absorptive capacity”, “critical thresholds”, and “rates of growth”. As these phrases imply, the measure of progress is not only comparative between units, but also comparative over time for the same unit. In a programme to increase agricultural production, the decision rule on allocating funds might either reward districts with the highest yields or those which have shown the greatest increases over some relevant time or a range of other indicators that suggest future potential if tapped properly.

What are the factors that contribute to the adoption of various decision rules in India? Some rules are dictated by constitutional arrangements, such as the distribution of primary educational opportunities or the favouring with social amenities, areas with large scheduled caste and scheduled tribes populations. Many rules arise out of dominant party ideological commitments, such as support for traditional crafts and middle peasantry, or out of political necessity. In the latter case, opening of government colleges or health centres

on an equity basis is the only feasible way of handling a situation in which demand so exceeds supply. Administrative necessity is also a factor. Some types and degrees of backwardness are such that professional staff cannot be induced to go there, thus adding a qualification to decision rules which are designed to aid backward areas. Finally, rational appropriateness is a factor guiding the choice of some decision rules; the decision rule may be close to the purposes of the programme or the costs and availability of information are of a level where a decision rule is cheaper if not optimal in each case.

Many of the problems arising from the use of inappropriate decision rules have already been implied, but they perhaps should be enumerated explicitly. Let us stress, however, that decision rules are necessary for the implementation of programmes and projects in the absence of taking a case on its merits—the antithesis of “programmes”, an impossibility given limits to time and other resources, including “understanding” of any empirical situation. Though decision rules are not necessarily inherent in the programme or project itself, or only at the most general level, their ramifications affect the performance of programmes or projects. The most obvious consequence of inappropriate decision rules, and perhaps even the definition of “inappropriate”, is the waste of resources entailed. A decision rule to give resources for increased agricultural production to those districts where greatest increases have been registered in the previous two years may reward farmers who have exhausted their potential while another decision rule might have tapped unused capacity. To give equal amounts to each unit may well result in too little to achieve the purposes at all everywhere or too little to make a difference where a difference could be made. Such decision rules can even work at cross purposes to the programme or project. A decision rule to allocate to backward regions may strengthen the forces for backwardness, rather than initiate desirable changes.

Such results arise frequently from the best intentions and often derive from the problems of technology of planning and the underlying model for allocations. These unintended results can arise from problems inherent in the measurements used. Density as a decision rule may be defined in many ways and every definition encompasses a variety of life styles and social forces. A decision rule based on density might lump together for a common programme Trivandrum, Bombay, Kanpur and Calcutta. Such vastly different places, regardless of sharing a common density range, might frustrate the intentions of a programme using such a decision rule. Likewise, the use of a measurement for literacy, and equating languages of different difficulty.

Other problems arise from distortions that occur in statistical method. Some are avoidable, such as the definition of the data collected, and others are more intractable such as problems of aggregation, extrapolation, and trend analysis. But the central problem comes from the underlying model of decision rules. The model assumes that whatever factor is used has a sufficiently common meaning wherever found and a common result—within limits—will occur from treating this factor. A variation on this that is related closely to development is the underlying model that places a factor in a stream of

development, movement in one direction or another affected in fairly uniform ways by similar stimuli.

When resources are wasted in the process of implementation, planning of basic objectives gets discredited as a process. Although planners may be engaged in both processes, their record in bringing about planned developments may well be determined less by the initial choice of programmes and projects than by the decision rules adopted to implement them. From the Indian experience, certain propositions can be advanced about the impact of decision rules on planning. Each proposition is only a supposition and needs empirical substantiation. First, the closer the decision rule is to the purpose of the programme the more likely the objectives will be maximized. Second, the more a programme or project contains the details of its own implementation (e.g., specifying in time and space the participants, etc.) the less likely an alien decision rule will be used. Third, the more politically controversial the programme, the more likely neutral decision rules will be used; the most controversial will probably require the rule of equity. Finally, the most controversial and hence most likely to have equity rules are programmes and projects which can be participated in by persons on the basis of some universalistic and non-achievement oriented characteristics: education, health and water supplies are examples.

If an input-output analysis were done on this paper, it would probably suggest that there was little efficiency. It would seem that an enormous input was required for me to say: a collaboration between administrators and scholars can be fruitful; that a common criterion of explanation to use in this collaboration is the productivity of knowledge for choice; that this criterion should follow "optimal ignorance" rather than "exhaustive explanations"; that optimal ignorance is the application of diminishing returns and economies of scale to information and explanation; that a result of much U.S. social science pursuing other criteria is intellectual neo-colonialism; that most explanations of productivity of the public sector use resources and administrative infrastructure as the most reasonable causes; that alternative explanations can use decision roles to explain productivity or decision rules; that the former is essentialist and not very productive in improving choice and that the latter is existential and is potentially more valuable, especially if political economy is used in choosing alternatives and implementational decisional rules are close to the objective of the policy. Perhaps the explanation for my inefficiency is my role. Had I been a man of action, I am certain I would have been more brief and brevity would have been my decision rule.

## Civil Conflict and External Involvement in Eastern Africa

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In the first decade of the African redemption and independence movement there was a powerful sentiment abroad that Africa should not become the cockpit of great power conflicts and intrigues. There was a decidedly racial thrust to the feeling that Africa must not be allowed to become the object of a "second scramble" now that official colonialism was coming to an end.<sup>1</sup> One of the most vociferous advocates of an Africa free from entangling alliances, Kwame Nkrumah, warned that "a world war could easily originate on our continent if African states make political, economic and military alliances with rival powers outside Africa".<sup>2</sup> Nkrumah firmly believed in what has been referred to as the "Africa Monroe Doctrine" a principle "which asserts that there are certain African problems which should be solved by Africans themselves".<sup>3</sup> He also warned that tribal, religious and border conflicts could lead to a further balkanization of the continent, a development which foreign elements might wish to use as a pretext to recolonize Africa.

In the late fifties there was a great deal of optimism about the facility with which Africa could work out its diplomatic conflicts. As Ali Mazrui noted "the bonds of a shared continent, of a shared colour and of a shared colonial experience held the promise of inter-African cordiality if not inter-African intimacy".<sup>4</sup> Events in the Congo and Nigeria were to bring home to Africa and the world the tenuousness of the "we are all Africans" concept, and the ease with which the cold war could make its sinister influence felt at the very heart of the continent.

This paper will not attempt to describe in detail the various civil conflicts that have developed in all of Eastern Africa or to theorize about their nature. Its main aim will be to examine some of the root causes of these crises, and to evaluate their potential for provoking the sort of international collision about which Nkrumah warned. It will also attempt to identify those powers which have become involved in or provoked conflicts in Eastern Africa and

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- 1 Julius Nyerere, "The Second Scramble", in *Freedom and Unity* (Oxford, 1967), p. 204.
- 2 Kwame Nkrumah, *Africa Must Unite* (Heinemann, 1967), p. 172. Also *Challenge of the Congo* (Nelson, 1967).
- 3 Ali Mazrui, "Moise Tshombe and the Arabs: 1960 to 1968", *Race*, Vol. X, No. 3 (1969), p. 292.
- 4 *Ibid.*, p. 286. Cf. also "On the Concept of 'We are all Africans'". *American Political Science Review*, Vol. LVII, No. 1 (1963).