CONCEPTS OF SOCIETY AND PROJECT PLANNING

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ABSTRACT

Basic to traditional planning is a centralist concept of society and political decision making, and resource allocation ought to be guided by an activity's comparative impact on collective welfare. This paper shows that these traditional premises do not stand up to critical analysis. Society should be viewed as an arena where multiple parties (subsystems) convene in pursuit of particular interests, in necessary interaction with each other. Participation therewith ceases to be a soft issue, and proves to be a basic ingredient in resource allocation. Tied in with the traditional planning premises is the notion that project selection is normally neutral vis-à-vis the availability of investment resources. In the concept of a multisystem society as opposed to a centralist society, nonneutrality in this respect or nonfungibility of investment resources becomes an important issue in project appraisal.

INTRODUCTION

The collective interest or welfare of a society is featured as a key issue in most existing theory on project appraisal and planning. Priorities between projects and between alternative project configurations are held to depend ideally on their relative contribution to collective welfare. This paper opposes this traditional view. It argues that the collective interest cannot be defined unequivocally, and has, therefore, little role to play in resource allocation. This position follows from pointing out that society is essentially an arena where multiple parties convene, each in pursuit of particular interests, in unavoidable interaction with other parties' particular interests. Society is identified as an entity of interacting subsystems.

The paradigm of multisystem society has far-reaching and multifaceted consequences. This paper concentrates on the consequences for project appraisal and planning. Within this limitation two issues are examined:

1. Over the last two decades the plea for participation has increasingly gained momentum. Participation, long viewed in traditional planning as a soft issue, seems these days to have reached firmer ground. It will be shown later that the multisystem concept of society identifies participation as an organic part of resource allocation, as a matter of fact rather than normatively.

2. The selection of projects and a project's ultimate configuration are traditionally held to concern choice that is normally neutral vis-à-vis the availability of investment resources. Nonnormal conditions in this respect are considered rare indeed, and have drawn little attention in the literature. This paper argues that nonneutrality of project choice with respect to resource availability is a point of considerable importance as soon as one accepts the concept of a multisystem society. The opposite, traditional point of view, it is argued, is deeply embedded in the traditional concept of a naturally homogeneous and centralist society guided by the pursuit of a collective interest in allocating its resources.

These two issues have been singled out for discussion in this paper, first, because of their importance to project planning, and second, because they cannot be accommodated within the existing framework for project appraisal and planning.
cussed thereafter. This is followed by investigating the importance to be attached to the phenomenon of non-neutrality of project choice vis-à-vis resource availability commonly known as nonfungibility of investment resources. The paper finishes by summarizing some key end-products required from project appraisal under multisystem society conditions.

THE STRUCTURE OF SOCIETY AND POLITICAL DECISION MAKING

The Centralist Society in Traditional Planning

The traditional concepts of planning take a centralist view of both society and the processes of political decision making. In a strict hierarchy of decision making, the lower levels are expected to act, as it were, purely on the strength of delegation from above. Their decisions, ideally, reflect precisely the aggregate national objective function. What is required, in these views, for decision making on resource allocation to be efficient and successful is a great deal of coordination. This view has been stressed on many occasions by Tinbergen, perhaps the most authoritative writer in the traditional vein on the organization of economic policy, and many other writers in this field support these views (e.g., Altshuler, 1973; Blitzer, 1975; Frisch, 1976a, 1976b; Seers, 1972; Watanabe, 1975). Centralist society is also eminently present in the literature on project planning and appraisal, though usually implicitly. The degree of pervasiveness attributed to central authority does vary, but basic and common to all these views are the following three main features.

1. In traditional planning theory, central authority is considered the ultimate decider located at the top of a strict hierarchy of decision making. It has sufficient power at its disposal to make lower levels accept and execute its decisions. It also has the moral right and, even, obligation to do this, since traditional planning theory regards it as the guardian of social well-being and of the collective interest. Thus the decisions of central authority acquire moral precedence over lower-level decisions, as the latter can only represent particular interests.

2. Implicit in traditional planning concepts is a notion that planning must be socially efficient, while socially efficient planning seems to be defined as the maximization of the satisfaction of central authority’s objectives. Any decision making outside the boundaries of strict top-down delegation is considered a deplorable diversion, favouring particular interests at the expense of the collective interest. In the unfortunate event, therefore, of central authority not being capable of preventing such diversions, losses occur in terms of potential social plan efficiency (Tinbergen, 1964, p. 221).

3. As an implication of the first two features, a great deal of emphasis is put on the necessity for central authority to coordinate lower-level decisions, using the argument that “there is rarely, if ever, complete mutuality of interests among them” (Blitzer, 1975, p. 5). What is sometimes called consensus decision making maximizes in this view the satisfaction of the collective interest, constrained by the unfortunate occurrence of differently directed particular interests. The collective interest, in turn, “is the interest of the nation as understood by the government of the day” (Wiarda, quoted in Kuin, 1982, p. 8). Incomplete mutuality of interests is thus not viewed as a fundamental fact of life: it is considered rather to be a regrettable situation which central authority must as it were coordinate away as much as possible in order for decisions on resource allocation to toe the line of the collective interest.

Multisystem Society

The collective interest appears on reflection to be a less clear-cut and self-evident phenomenon than traditional planning theory takes it to be. Traditional planning, it would seem, subscribes to the idea that the collective interest can be defined unambiguously, provided that it is central authority undertaking to do so. Collective interest thus appears as something potentially objective, conditional only upon whether or not a particular body is responsible for its formulation. But ever since Max Weber, we have known that any scientific research is subjective-bound: to contribute to the generation of value-free knowledge, scientists should state their value systems when reporting on their research (see for instance Gerth & Mills, 1946). The operationalization of the collective interest as a notion to guide the formulation of economic policy cannot escape subjective-boundness, and will always reflect a particular rather than a collective or universal viewpoint. With even the best will in the world this is unavoidable. A penetrating discourse in this connection is given by Klerkkooper (1963), who identifies the existence of a collective interest as a fiction, logically and philosophically as well as from the point of view of policy formulation and analysis. His arguments can be summarized as follows:

1. Collective interest is not a particular interest.
2. Collective interest is not the addition of many particular interests, for these cannot be added.
3. Collective interest cannot easily be explained as derived from a certain form of society, for a society is defined by the organization of its cells, while the desired form of organization must conform with the collective interest of that society.
4. Collective interest cannot be the interest of a society abstracted from all the particular interests, for nothing would be left any longer if that were done. Therefore, whenever formulated, a society's collective interest abstracts from some particular interests but not from others.

5. This raises the twin questions as to which particular interests are rejected (or retained) and who makes this decision. As to the latter, this is normally held to be a national government. Corresponding with this, and to answer the former, the interest paraded as collective is the particular interest of, usually, a national government whose views on the desired structure of the national society concerned it represents.

Collective interest is thus unmasked as a decoy, although it is avowed by governments to be the light to guide and justify the formulation of economic and social policy. It is a notion used as an instrument of persuasion rather than an intrinsically tenable notion representing what it is popularly supposed to represent. Invoking collective interest to further a particular interest is a strategy that can only be employed by a power which is already substantial and recognized as such. We are dealing here with the power of power to entrench itself ever deeper in the processes of resource allocation, including the allocation of political power. The persuasiveness of collective interest as an instrument, and the access of governments (or, occasionally, other powerful bodies) to this instrument derives from its moral appeal. This moral appeal, in turn, is rooted in (a) the belief that the power to rule us is from heavenly descent, and (b) our feeling at ease with a fatherly authority that knows what is good for us and is capable of delivering whatever care goes with it.

In consideration of this, we are forced to admit that if the collective interest is to be interpreted as the representation of what is good for the collectivity, it has little to offer to the formulation of economic and social policy. This means that the monolithic centralist society of traditional planning theory becomes an untenable proposition, and is revealed as a naive assumption rather than as a deliberate and well researched structure of society. Society, instead, appears rather to be deeply diversified and characterized by an intricate and complex pattern of internal interrelationships. One concept which may accommodate the objections raised above against traditional planning theory with respect to the structure of society and political decision making identifies society as an entity of interactive subsystems. The subsystems interact because the pursuit of their particular interests requires them to cooperate and, therefore, to negotiate with other subsystems which pursue their own particular interests. The nature of this interaction and the unequal power relationships are discussed in the next two sections.

**MULTISYSTEM SOCIETY AND PARTICIPATION**

The specific configuration—and later operation—of any given action or project will reflect the effective power relationships between the subsystems involved in the design and operation of the action, and the particular interests pursued by them. Relative effective power, though, is not an immutable given. A subsystem may be forced by other subsystems involved to deviate from what it in fact views as the optimal solution or configuration. In that event, the subsystem concerned will weigh the desirability of going ahead with the now suboptimal activity against the inherent reduction in objective satisfaction. The greater the reduction, the greater the reluctance of the subsystem to remain involved. The more the configuration of the action or project threatens to violate a subsystem's acceptance boundaries, the more a subsystem can be expected to muster countervailing power.

Given the resources and networks that a subsystem can call upon, the relative effective power it will exercise is, therefore, a function of the trade-offs involved. Such trade-offs are not limited to those that would prevail in the situation where the other subsystems are assumed to stand by in benevolent neutrality. They equally include those connected with retaliatory action likely to be taken by the other subsystems if the subsystem concerned were to refuse a particular solution. A subsystem's countervailing power might be sufficient to reach an acceptable configuration of the action or project at hand. However, it also might not, in which case the subsystem will likely fight the unacceptable solution with the effective means at its disposal. These means may be formal or informal, active or passive. In many cases, such a situation will ultimately lead to failure of the project from the point of view of the initiator(s), a failure which at the same time signals success to the refusing subsystem(s). To illustrate this, consider an initiative by central government to transform small-scale farming in a certain area. The reasons behind this initiative derive from central government's objectives and the options it has available for action. Apart from central government, however, other subsystems will be critically involved in the project, notably the small farmers. The objectives pursued, the resources available and the resource employment opportunities at hand will be different for each subsystem. As a result, the optimal configuration of the project will normally vary with the subsystem according to the viewpoint from which the project is appraised. For the project to be viable, a
compromise configuration will have to be established. Such a compromise solution must remain within the acceptance boundaries of all subsystems involved, while at the same time offering sufficient reward to each subsystem to proceed with the project. If central government were to push too hard, these conditions may be violated to the extent of leaving important characteristics of the subsystem of small-scale farming inadequately accounted for in the design of the project that the government intends to field. This would force the farmers to find means of obstruction so as to prevent being dragged into a project they do not want. If the trade-offs involved are modest, the farmers might respond passively by failing to cooperate, but if the trade-offs touch at the heart of the farmers’ survival system, the response is likely to be far more active and even violent.

Subsystems should not be confused with classes. *Class* generally refers to large social groupings of more or less permanent existence. In the concept of multisystem society, *subsystem* is reserved for the smaller and more precise condition of a critical involvement with a specific (inter)action. The subsystems of society are therefore volatile. They come into being in precise connection with an emerging issue, action or project. They dissolve again once the issue is settled. For instance, if the pavement of a street has to be broken up, and there is still a choice as to whether it be this or the other side, *this* and the *other* side will be subsystems of society in connection with the pavement project. They cease being subsystems once the project is over and done with, although they may emerge again as subsystems to some other project.

Even under totalitarian conditions, society is fragmented by conflicting interests and competing opinions. These fragments or subsystems are at the same time condemned to coexistence and mutual interaction. The importance of the administrative structure is in the provision—with regard to both nature and quantity—of (a) the channels by which particular interests are communicated; (b) the units that are given formal voice; and (c) the relationships among these units. If these provisions are few or otherwise inadequate, the differences in interest are likely to translate themselves into tensions that may be amorphous yet deeply entrenched in society. As a retaliation, such tensions may induce serious and widespread repression.

In the concept of a multisystem society, comprehensive project appraisal would deal with a project from the point of view of each major subsystem involved. By scanning the various alternatives, the appraisal would yield, for each major subsystem, the formal optimal project configuration and an insight into the subsystem’s trade-offs connected with less attractive solutions. During the—implicit or explicit—intersubsystem search for a viable compromise solution, each subsystem will negotiate and muster effective power in accordance with both the nature of the subsystem involved and the severity of the trade-offs. The cohesive ingredients of multisystem society are thus particular and mutual interests. At no point “can one discern a process which transcends mutual interests into general interest. Government, in this optique, is only one of society’s subsystems, though often an initiating one” (van den Toorn, 1984, p. 4–14).

**PROJECT SELECTION AND THE AVAILABILITY AND COSTS OF INVESTMENT RESOURCES**

**Fungible and Nonfungible Resources**

The discussion of fungibility versus nonfungibility of investment resources in this section is generic, and concerns an unspecified single subsystem.

Suppose a common situation in which a number of projects compete for a resource the availability of which is insufficient to permit their simultaneous implementation. Suppose, further, that this resource is perfectly transferable between the projects concerned and can be employed in any project. As projects are selected for implementation and register their resource claim, the resource involved will be gradually exhausted until it is used up. Project selection under these conditions determines which projects will be in and which will be out. It serves to localize the precise allocation of the resources concerned, while affecting neither their availability nor their cost. This situation is generally known as a condition of scarce and fungible resources, with *scarce* indicating the limited availability of the resources relative to demand, and *fungible* indicating their transferability between the projects considered. The employment of such resources in a project always implies an equivalent diversion away from other potential use. Their cost to the project concerned is therefore equal to the value of the alternative use foregone, and is charged at the time when the resources are used in the project.

Investment resources are, however, not always transferable between projects. Either their availability or the time at which they are available or their cost may be specifically tied to one or more projects. This situation is generally known as a condition of nonfungible or project-tied resources. The World Bank makes a useful distinction between two types of nonfungibility or tiedness with respect to resources of foreign origin:

- partially tied resources: in this case, the foreign factors used in a project would be available for other uses but not at the same terms as in the project;
• tied resources: in this case, the foreign factors would not be available for other uses (World Bank, 1980, p. 4).

The use of nonfungible or project-tied resources does not imply forgoing their alternative use elsewhere, as is the case with fungible resources. When the nonfungible resources are required in the project, they are made available from sources external to the economy concerned. They are thus additional to the availability of the resources involved without the project, and are not obtained from sacrificing their useful employment elsewhere in the economy. Consequently, the cost to be charged to the project in connection with the use of nonfungible resources “is not the purchase price now, but the interest on and the repayment of the loan, which will arise only later” (Little & Mirrlees, 1974, p. 176).

The cost of nonfungible resources is thus determined by the precise terms of the contract under which they are acquired. A time stream of interest payments, principal repayments, and other charges appears in the project appraisal in lieu of entering the resources according to the time they are used in the project as would be the procedure in the case of fungible resources.

The Importance of the Fungibility and Nonfungibility Issue

The literature on project planning and appraisal has paid little attention to the problems connected with nonfungible resources. Whenever the reasons are made explicit, it is usually argued that a single project does not normally influence the total availability of investment resources. For example, in connection with project funding from taxes and domestic borrowing, Little and Mirrlees (1974, p. 176) conclude that “it would be rare for the project evaluator to have to worry about these complications [nonfungibility] because we think that it can be reasonably assumed in almost all cases that one particular project will not affect total taxation or borrowing.” In the same vein, the World Bank (1980, p. 4) instructs its project evaluators that “loans or credits from the Bank or other international or official donors are . . . always considered to be untied resources.”

At the level of a national economy, nonfungibility will indeed be the rare phenomenon that the literature on project planning takes it to be, since a national economy is a comparatively large, widely diversified, and complex entity. As a result, individual projects are normally marginal activities, while at any time a great many projects are being implemented, prepared, or are under consideration. Fungibility of resources between these projects or groups of projects will be the rule in these conditions, nonfungibility the exception. To the centralist tradition in planning theory and practice, the national economy acts as the basic frame of reference for project planning. Virtually all the literature on project planning reflects this centralist tradition (van den Toorn, 1984, section 7.3), which helps explain why little attention has been paid to the problems connected with the involvement of nonfungible resources. To a planning theory based on the concept of multisystem society, the subsystems of society that are critically involved with the project constitute the frame of reference for project planning. One of these subsystems will often be the national economy, in which, as argued above, nonfungibility is indeed a rare phenomenon. At the same time, however, other smaller, less diversified and simpler subsystems will be involved. If nonfungibility is rare at the level of the national economy as a result of its relatively large size and its diversity and complexity, the reverse equally holds true: the smaller, less diversified and simpler the subsystem from the point of view of which a project is appraised, the greater the likelihood and the significance of the involvement of nonfungible resources. It is unlikely, for example, that project choice within a farming system is neutral vis-à-vis the availability of some critical resources in the system.

The conclusion must necessarily be that, when one exchanges the traditional centralist concept of society for a planning theory based on the concept of multisystem society, the importance of the fungibility issue increases appreciably. From the viewpoint of smaller subsystems in particular, nonfungible investment resources will often be involved in project development. Nonfungibility thus becomes an organic point of attention—certainly to the planning analyst and the decision maker in smaller subsystems—but also at the level of the large national (or government) subsystem of society. For if indeed participation and subsystems critically determine project configuration, profitability and selection, the tradeoffs in any particular subsystem matter to all the other subsystems involved in the project, including the national subsystem.

Nonfungibility and Participation: An Illustration

To clarify further some of the above and to link the fungibility issue to participation in multisystem society, let us return to the case in which a central government undertakes to transform small-scale farming in a certain area. Development funds will be a resource required in the project, from the points of view of both the national economy and the small farmers.

To the national economy, the total availability of investment funds is unlikely to change whether the project is implemented or not. The project will just divert the funds it requires from their use elsewhere in the economy. Always supposing that the central govern-
ment’s decision to initiate the project is rational from the economic point of view of the national subsystem, the project will be expected to yield a surplus of benefits over costs, with the funds involved charged in accordance with the benefits foregone elsewhere in the subsystem.

To the small farmers though, the situation is likely to be different. Small farmers notoriously suffer from poor access to capital markets. It is therefore quite conceivable that the small farmer subsystem’s access to investment resources is critically determined by project choice: opting to take part in the project, that is, to cooperate with the national subsystem, is quite likely to alter the small farmers’ access to investment funds, either in terms of volume or costs or other key aspects of finance such as collateral, or any combination of these. To the small farmers therefore, a substantial part of the funding must be considered nonfungible, and should be valued accordingly. The small farmers would not perhaps understand the terminology we use here, nor indeed apply the economic arithmetic of standard project planning and appraisal techniques. At the same time, however, the small farmers will be keenly aware of the opportunities and risks involved in connection with the project. They will intuitively recognize the nonfungibility of the funding resources on offer and (intuitively) appraise the project accordingly. Their appreciation of the power relationships involved will allow them to assess the effective power and means they should be able to bring to bear on the intersubsystem negotiations that will follow.

Empirical evidence bears out the above. Development Alternatives (1980) report that the degree of participation by the parties critically involved in the design and operation of rural development projects is highly and positively correlated with the successful implementation of such projects. Government planners and decision makers the world over have been disagreeably surprised on numerous occasions by unanticipated negative decisions reached by their target groups. Such decisions are communicated to the national subsystem as disappointments reached by their target groups. Such decisions are communicated to the national subsystem as disappointing project adoption rates, sabotage, and slow progress generally. It is conceivable, and even likely, that the decision makers and their staff in the initiating (often national) subsystem have been disappointed due to their failure (a) to recognize participation as a hard ingredient to project design and resource allocation, and (b) to recognize that nonfungibility and its consequences often play an important role in “project appraisal” in the smaller and usually not so articulate subsystems of society.

**Measuring and Valuing Nonfungibility**

Economically, resource costs will normally differ according to whether the resources concerned are fungible or nonfungible. Unless the resource costs are higher under nonfungible than under fungible conditions, which is rare, the involvement of non fungible investment resources will raise net project returns compared with the same project under fungible conditions. This is sufficient reason to caution against exalted assumptions of nonfungibility, because “there is a clear danger of approving an otherwise [economically] unacceptable project on the basis of an erroneous judgment that concessionary funds for the project would not be available for other purposes in the host country” (World Bank, 1980).

Besides the justified fear that intrinsically unacceptable projects can be artificially made to look attractive by exalted assumptions of nonfungibility (see World Bank, 1980), there is a difficult problem of measurement involved. Projects are often interlinked in several and not always tangible ways. In addition, complex political and economic interrelationships often exist with respect to the sources of investment resources. The extent to which the availability of a particular resource would change as a result of selecting one project instead of another is under these conditions a hard question to answer. To answer this question one should be able to estimate reasonably accurately (a) the availability of the resource concerned over time with and without the project under consideration, and (b) the terms on which the resources would be available under these two conditions.

For large and diversified subsystems in particular, these estimation problems will be considerable indeed and sheer speculation will not always be avoidable. Measuring the involvement of nonfungible resources in these cases tends to boil down to the analyst indicating (a) whether nonfungibility plays a part; (b) which resources are involved; and (c) the order of magnitude of nonfungibility of a particular resource. As regards the valuation of nonfungible resources, similar indications are usually possible, but in both instances better estimates will normally be unobtainable. In actual cases, which, as said, are rare, testing the stability of priority ranking and of the absolute profitability of the projects concerned for a reasonable range of different proportions of nonfungibility will have more practical value than a great effort to produce a single figure.

In smaller and less diversified subsystems, measuring and valuing nonfungibility of investment resources is likely to be rather more manageable than in the large and complex subsystems discussed above. It may be generally conjectured that, as subsystems get smaller and less complex, (a) nonfungibility of investment resources will occur more often and should receive increasing attention in project appraisal, and (b) nonfungibility of investment resources can be measured and valued with greater precision.
The concept of multisystem society as discussed in this paper leads to the identification of (a) participation as a hard-core issue in resource allocation, and (b) nonfungibility of investment resources as a less rare phenomenon than traditional planning takes it to be, particularly in smaller, not very diversified subsystems. The previous paragraphs, in addition, argue that participation should be taken seriously in project appraisal, more or less independently from the subsystem from the viewpoint of which the appraisal is primarily carried out. Participation and nonfungibility of investment resources should be combined in project appraisal by indicating (a) the subsystems critically involved in the design or implementation and operation of a project; (b) the resources required in project planning, implementation and operation specified per subsystem involved; (c) the availability of the resources concerned in each subsystem; (d) the estimated degree of nonfungibility of these resources and the approximate economic consequences in each subsystem; and (e) the main alternative development opportunities reasonably available in each subsystem and the main developmental trade-offs involved.\(^6\)

A practical problem project appraisers must be prepared to face if they conclude that nonfungible resources are involved (particularly with respect to larger subsystems) will be the considerable debatability of the assessment on the part of potential funding agencies. World Bank (1980) bears witness to this, as indeed does empirical experience in this respect.\(^7\)

### ENDNOTES

1. See for example Development Alternatives (1980). In their evaluation of some 60 USAID projects they point to the strong correspondence between substantive participation by the parties involved (in design, establishment and operation) and project success (see also Uma Lele, 1975).

2. Other significant implications can often be handled within this framework. Subsystem specificity of prices, for example, would not call for a new price theory. The derivation of subsystem-specific prices could be undertaken in accordance with the measurement procedures and instructions customary in project appraisal from the national-economic point of view. The only change required would be to substitute the national economy for the subsystem concerned. An interesting consequence of the multisystem concept of society as far as project appraisal is concerned is the elimination of the odd distinction between economic and financial prices. In customary project appraisal, the former indicate the prices in the national economy, the latter those of some disaggregate party to the project. The national economy represents the decisive point of view, whereas disaggregate parties, at the most, may exercise some constraining power. In the multisystem concept of society, a subsystem is a subsystem irrespective of the power relationships involved. Prices are always subsystem-specific and represent the scarcity relationships in the subsystem concerned. The need for any artificial distinction such as between "economic" and "financial" prices thereby disappears.

3. Subjective-boundness of the formulation of the collective interest does not deny the metaphysical possibility that collective interest may indeed exist for mankind. It does deny, however, the possibility of an objective formulation of it.

4. Multisystem society as opposed to the centralist society of traditional planning theory finds support not only in the philosophical thought of Kleerekoper, but also with political scientists (e.g. Bauer & Gergen, 1968; Dahl, 1976; Hoogerwerf, 1972; Leys, 1972); management scientists (e.g. Hofstede, 1980; Simon, 1958, 1964); development economists (e.g. Killick, 1976; van den Toorn, 1984; Ull-Haq, 1976); and in evaluation studies (e.g., Development Alternatives, 1980).

5. In some cases, a somewhat more adventurous procedure may be possible and useful. One such may be as follows: (a) the availability over time of the resource concerned is estimated alternatively with and without the project being implemented; (b) the difference between these two time streams is discounted at the national discount rate and aggregated, so as to arrive at the present value of the nonfungible part of the project's claim on the resource concerned; and (c) the ratio of this present value to the present value of the project's total claim on the resource concerned is used to compute both the nonfungible and the fungible part of the project's resource claim for each year of the project's investment period. Another possible procedure would consider the expected resource allocations instead of the expected resource availability and otherwise proceed as discussed above.

6. This paper, so far, has discussed the points raised in economic terms. There is, of course, the difficult issue that neither benefits nor costs can be expressed solely in economic terms if the appraisal and particularly a multiproject appraisal, is to serve planning policy from a multiobjective, multiresource point of view. Multi-criteria appraisal, though, would not alter what is said in this paper about multisystem society and the twin consequences of that concept for participation and nonfungibility of investment resources. The application of multicriteria analysis would complicate the appraisal by, ultimately, revealing the trade-offs involved in terms of the multiple criteria applied. In multisystem society these criteria would be subsystem-specific. Multicriteria appraisal is a large chapter nowadays in management science. For multiproject planning in developing countries (though not necessarily only in developing countries), the author has developed a multicriteria planning method called "utility-based trade-off analysis" (van den Toorn, 1985). This method has been applied successfully over the last eight years in a considerable number of sector studies.

7. Some of the problems involved can be exemplified with the aid of a recently completed feasibility study on a substantial hydroelectric project in conjunction with an aluminium smelter in West Africa (Sir Alexander Gibb & Partners/Teuroconsult, 1985). The funding agencies argued from the point of view of the international economy, parading the myth of the collective interest (the international economy), while the consultant argued that three different subsystems were involved in the project: the national economy, the (international) aluminium industry, and the funding agencies. Nonfungibility of investment funds was argued by the consultant to be an important issue in the national economy of the country.
involved, with significant and positive economic consequences. The funding agencies did not accept this, and no agreement was reached in this respect between the consultant and the funding agencies. The end of the game was that the intersubsystem negotiations rejected the large project and the funding agencies agreed to fund the national economy agreed to implement a much smaller hydroelectric project without an aluminium component.

REFERENCES


