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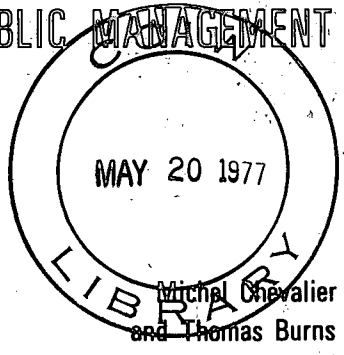
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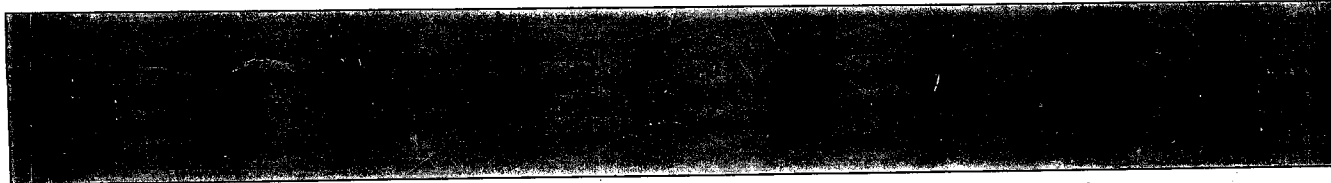
A FIELD CONCEPT
OF PUBLIC MANAGEMENT



Michel Chevalier
and Thomas Burns

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OF PUBLIC MANAGEMENT**

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A FIELD CONCEPT OF PUBLIC MANAGEMENT

INTRODUCTION

A cornerstone of modern management - the point of departure and return for the process itself - is the *objective*. Planning of all kinds begins with the definition of objectives; that is, explicit statements of purpose or intent. The conventional wisdom of management places great stress on the arrangement of objectives into hierarchies which are intended to integrate the activities of an enterprise into a single and comprehensive whole. Programs of activity are developed from or combined into broader policies and priorities which are themselves articulated in terms of sweeping supra-objectives. This approach has become ever more refined in recent years, and has become the stock-in-trade for an ever expanding number of policy analysts, management experts, budget specialists and program evaluators. On the surface it seems the very essence of rationality, but on closer examination we find that it is not.

The reason is that bureaucratic objective-setting tends to support and build in fragmentation and goal conflict. The frustrations of the public manager concerned with policy integration, and the marginal impact of objective-based management systems on the quality or effectiveness of public programs are closely related to this phenomenon. Suppose, for example, one fixes on an objective for a given activity or program, and defines appropriate measures of performance in terms of that objective. A clear and strong priority is now established - the objective is to be met. The integration of that activity or program with another may be recognized as advantageous by everyone concerned, but integration will be attempted only so long as it does not conflict with the achievement of established objectives. Within the objective hierarchy, conflict among program objectives is generally resolved in the context of broader objectives at higher levels, and program integration tends to become a "top down" process. As a result, management systems designed around hierarchical objective-setting tend by their very nature to promote strong vertical integration and to discourage horizontal, cross-functional integration. Integration and centralization tend to be viewed as synonymous, and decentralization is seen as resulting inevitably in the optimization of the part rather than the whole. Only recently has this dilemma of modern large-scale management come to be recognized.

This paper attempts to show how present decision processes based on principles of hierarchical objective-setting are inherently incapable of producing effective and integrated public policy. It proposes an alternative and complementary approach based on the

development of a simple and shared language of management resting on the concept of "field perspective." The field perspective approach is capable of being designed into an operational management tool to assist individual program managers in conceiving and evaluating functional activities in the context of integrated policy fields - that is, fields of related activity co-produced by the interpenetrating effects of their own and other programs. The institutionalization of field management across functionally distinct units of government can provide a new basis for integrated policy development. The field concept is applicable to both centralized and decentralized planning, and indeed forms the basis for a new order of dialogue between central and functional bureaucratic units. The build-up of a system-wide capability to design policies and programs in view of their effects on overlapping activity fields is argued to be the only workable way of improving the management of public policy. This new type of capability is crucially needed as a counter balance to existing processes of hierarchical objective-setting.

The common language of field management must be designed to meet the needs of functional departments with respect to program design and evaluation, and those of the central agencies of government with respect to overall priority-setting and evaluation. As this new language comes to be articulated, it can provide a much stronger basis for dialectic between central and departmental management, permitting more decentralized and interdepartmental initiative with a common and overriding conception of the whole. This new language is seen as a major departure from the present basis for dialectic which rests essentially on hierarchically determined measures of performance and adjudication between competing parts.

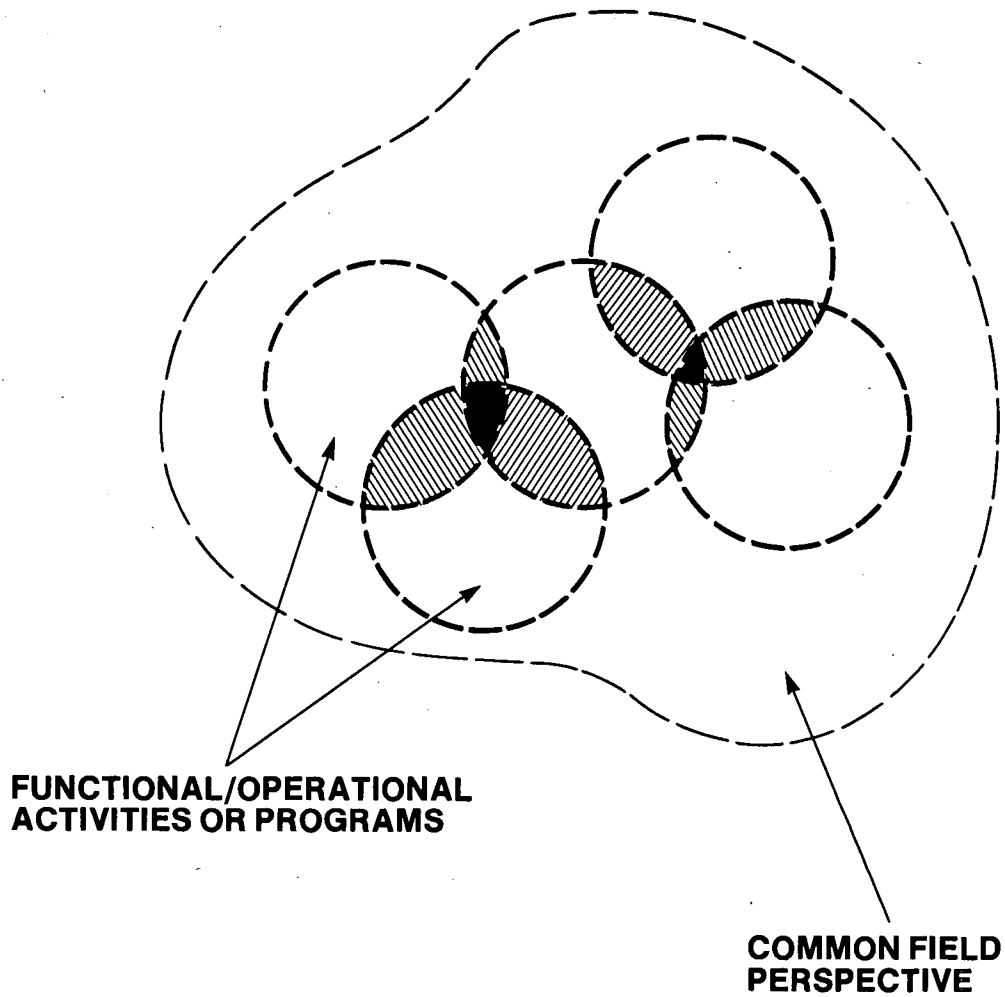
This paper has three sections. The first discusses in more detail the problem of objective-setting in public management. It argues that the hierarchy of objectives and the bureaucratic hierarchy together produce a mutually reinforcing tendency toward fragmentation of interest and diminution of output effectiveness. Several effects of the objective-setting syndrome are examined from the point of view of major shortfalls in the effectiveness of large programs, both as to declining social well-being and increasing material waste.

The second section outlines some dimensions of a common language of field management. It explains the concept of field perspective and illustrates its applicability as a way of approaching activity and program design and evaluation. Finally, it suggests a way of conceiving and assessing large-scale trend effects on the social and material conditions of a community or society as a whole.

The third section is concerned with the management of innovation or planned change, as an alternative to "drift," or unplanned change. A distinction is made between *marginal* innovation, which is achieved within established socio-material activity patterns and *substantial* innovation which is only achieved by restructuring or realigning patterns of social and material activity. It is argued that the development of a capacity for large-scale or society-wide innovation is essential to counteract the present increasing tendency toward global turbulence and institutional breakdown. This capacity can be developed through a pragmatic understanding of the marginal and substantial innovation processes, and the recasting of the present public management process from fragmented objective-setting toward effective field-oriented program management. Such a recasting would make substantial innovation - or substantial planned change - a possibility for the public administrator, where under present conditions, it is almost completely beyond his reach.

FIGURE 1

A FIELD MANAGEMENT CONCEPT



**NOTE: SHADED AREAS REPRESENT ACTUAL OR
POTENTIAL OVERLAP AND COMPLEMENTARITY**

1. OBJECTIVE SETTING AND THE PUBLIC POLICY PROCESS

Public is distinguished from private policy-making in that it serves over-all societal or community needs (the public interest). Private sector policy-making serves the needs of particular interests in the community. This distinction is too often overlooked in our concern with rationalizing the processes of public policy-making. In the private sector, the overall performance of an organization can be assessed in terms of a relatively focussed set of needs - profit, stability, growth, etc. Performance in the public sector can only be assessed in terms of relatively diffused or generalized needs of the community or society as a whole. This has important consequences for the policy process.

Its importance is closely linked with the increasing difficulty being encountered in the management of public policy as governmental activities continue to proliferate. Such activities are vested in its various departments and agencies, each with individual mandates. Because each department or agency is responsible for its own programs and activities, management of public policy is today increasingly concerned with the coordination and integration of policies across a growing number of activity areas.

Coordination and integration are attempted on the basis of explicit or implicit objectives which derive essentially from the interests and mandates of each department or agency, and its particular set of programs and activities. Established management and budgetary control techniques are premised on the build-up of a hierarchy of

objectives, derived at each higher level from the set of program objectives they represent. There are now highly developed management systems (PPBS, MBO, OPM) which aim to rank programs and their objectives according to the desirable timing and allocation of resources, following centrally established priorities. There are highly developed comprehensive evaluation procedures. But performance is measured primarily against objectives which are derived from individual departments or agencies. There can be only an ambiguous and supporting concern for the effects of programs and activities beyond their immediate operational purposes. Performance in terms of program objectives predominates: "field performance;" that is, an overall concept of performance measured against more diffused sets of community or societal needs is necessarily secondary.

In the public sector, the natural tendency for departments and agencies to legitimize their mission and its maintenance and expansion based on program objectives is not so effectively constrained as it is in the private sector. Field effects may show continuous and major shortfalls, but the public enterprise and its profile of activities persist and grow. There is ultimately no market to constrain it, only a diffused notion of the public interest.

Some more effective construct is required to counteract this tendency. Later sections are concerned with this task. Before this can be done, however, we must look more closely at the objective-setting process and objective hierarchies in the public sector. Here, we attempt to show how the introduction of comprehensive management techniques to further "rationalize" the objective-setting process works counter to the need for program integration with respect to the groups and classes of society to which public policies are directed. Further, we show how the objective hierarchy and bureaucratic organization together form a reinforcing pattern of justification and reward, the result of which is a vacillating or declining effectiveness of government activity on overall societal well-being, coupled with a steadily increasing requirement for resources.

1.1 THE OBJECTIVE HIERARCHY

A generally accepted management premise is that organizational objectives must be arranged so as to be complementary or compatible within a structured hierarchy ranging from the specific to the general. Programs and their component activities should derive

from explicit objectives rather than responsibility centers, and should as much as possible be unambiguous; that is, serve one rather than two or more objectives (or sets of objectives). This ideal of "assignment" of activity more or less exclusively to a particular objective makes it possible to allocate resources through the hierarchy of objectives and the programs and activities derived from them.¹

A number of effects result from the rational application of this approach in the Federal Public Service. They can be considered in terms of two critical aspects having to do with:

- (i) the nature of objective-setting in itself, and
- (ii) the hierarchical integration of objectives in large-scale organizational management to achieve complementarity or at least compatibility.

Here we will see that the actual effects of this approach are not entirely intended. Their net result is such that the overall effectiveness of hierarchical objective-setting as a primary means of policy integration is highly questionable.²

OBJECTIVE-SETTING

According to accepted concepts of public management, the objectives and policies of government derive from implicit or explicit societal ideals. As the ideals of the society change, new objectives are articulated and functions are developed to achieve them. In theory, there is a logical flow from ideals to objectives, and on to related functions, programs and activities. This tends to be an oversimplified conception of a much more complex process, in which the ideal shaping a new objective or function is itself influenced largely by established paradigms and perspectives, closely bound to existing patterns of function and activity. New ideals are often not really ideals, but are more likely to be "idealized objectives."

¹For a more complete explanation and justification of this approach, see the recent *Operations Planning Management Manual*, prepared by the Treasury Board of Canada (Ottawa: Information Canada, 1974).

²This has resulted, for example, in the "addition" of the OPM system to the established PPB system in the Canadian Federal Public Service. However, the PPB principles have not been rejected, but adapted.

In the case of Environment Canada, for example, the salient perspectives leading to the establishment of that department were of two kinds: there were those derived from a generally accepted understanding of environment and environmental management (which emerged in the Canadian society in the sixties), and a sense of the proper role of the national government in a federal state such as Canada; there are also a set of perspectives reflecting the aggregate functions of the several departments and agencies which were combined to form Environment Canada.³ From this complex combination of perspectives, the majority of them firmly established, emerged a set of identifiable objectives of the department. These objectives are articulated more from past and present activity than from a sense of new and unmet need.⁴

In this way, functional objectives tend to be translated into idealized objectives - that is, sweeping statements of policy or supra-objectives (in this case, an optimal relationship between Man and Environment). A similar idealized objective also exists for most "old" or established departments, whose functions are as much, or more, grounded in past and present activity. Thus "old" and "new" functions in a comparatively stable jurisdiction like the Canadian federal one are largely idealized in the form of supra-objectives which express and legitimize an existing pattern of function and activity. They allow only for an incremental extension of what has gone before, based on a marginal shift in established perspective.

Idealized objectives become the uppermost levels of a hierarchy of functionally determined objectives. They reinforce the status quo, giving the appearance of change while leaving unquestioned a great number of functions and objectives of declining purpose and productivity. Two examples of current policy concern are the growing

³ These two classes of perspective are expressed in both explicit and implicit terms. For example, there is the implicit view that forests are primarily an economic asset to be exploited for lumber and other wood products, as well as for recreation, ecological balance, and so on. And there is the explicit view that forests are capable of providing a certain measurable level of perpetual yield.

⁴ The same is true for the Ministry of State for Urban Affairs, although its functions emerged primarily from the first, more general class of perspectives, and not from an aggregate of more functionally distinct ones.

subsidization of rising multi-modal transportation choice and capacity in Canada based primarily on projected demand, and the continuing trend toward extension and use of remedial rather than preventive health care facilities.⁵ Programs and activities flowing from such idealized objectives are essentially unconstrained except in terms of economic capacity and efficiency. "Real" ideals - of freedom, of access to movement, or good health - become synonymous with the established production and consumption interests of the transportation and health sectors.

In this way, the orderly definition of objectives and their idealization serve *grosso modo* to further reinforce and legitimize established interests of people and institutions, of functions and activities. Thus the existing order maintains its vice-like hold, and our capacity for change is restricted to the incremental or marginal.⁶

HIERARCHICAL INTEGRATION OF OBJECTIVES

The hierarchical integration of objectives is intended to bind activities into rational programs, programs into ongoing departmental functions, and departmental functions into a comprehensive whole. It has quite another effect which is not intended.

The articulation of a program or activity from an objective (or fixing of objectives for a particular activity or program), stemming from (or leading to) broader objectives at higher levels of responsibility, tends to legitimize or strengthen the division of effort between program managers. The community of interest is quite clearly vertical, from program managers up the line to their superiors, and from senior public servants down to their subordinates. As a result, the lateral integration of activity across functional bounds at any level is difficult and often impossible.⁷

⁵ It should be noted that in the case of Health Canada, there is evidence that this particular idealized objective is being broadly re-examined through the introduction of the Health Field Concept.

⁶ This phenomenon has been described more extensively by Donald Schon as the process of "dynamic conservatism;" see Donald Schon, *Beyond the Stable State* (New York: Norton, 1971).

⁷ For a thorough discussion of techniques of lateral organization, see Jay Galbraith, *Designing Complex Organizations* (Reading, Mass.: Addison-Wesley, 1973).

Program managers must remain wedded to their own objective hierarchy, as there are no clear primary rewards resulting from lateral integration. The only cross-functional integration which occurs is that imposed by central planning agencies. To the extent that it is imposed, so also is a changed pattern of objectives. This changed pattern, like the one it replaces, is still based on the narrow principle of the primary relationship between objective and program.

The formalized hierarchy of objectives is thus supported by the structured hierarchy of bureaucratic responsibility. Central agencies have to content themselves with "policing" activity backed by ever more rigid and complicated rules. This has tended to undermine departmental initiative and responsibility but not the incentive to give continuing primacy to their own functions. Inter-agency coordination at the program level has not improved, in spite of vast new resources applied in this respect, and a vast new array of mechanisms and public servants engaged in the exercise.

A great deal has been said and written and attempted on the matter of inter-functional coordination and integration since the milestone initiative of the Glassco Commission in the early sixties. First, it is reflected in the Commission's rather off-hand approach to the question, which essentially limited itself in this respect to budgetary procedures and the rational organization and conduct of inter-departmental committees.

It is reflected in the more recent efforts of the Treasury Board to implant and operationalize PPB, and later OPM systems. It is reflected in efforts to rationalize inter-departmental decisions and priorities in the organization of the Cabinet Committee System in the PCO. It is reflected in the even more recent divisional reorganization of the Department of Finance so that economic and fiscal policy can be better integrated with growing program demands in social and cultural policy areas. Perhaps the most ambitious step has been the design and establishment of the two Ministries of State - integrating and coordinating through superior knowledge. A parade of regrouping of functions in new departmental hierarchies has characterized the last ten years in the federal administration, trying to find better ways of dividing up responsibility, so that in time it can be better coordinated, and integrated.⁸ None of

⁸ Canada has certainly not been alone in this regard. The same process of perpetual reorganization characterizes the governmental bureaucracies in the U.S. and abroad, and is equally prevalent at the provincial and local levels.

these initiatives has had significant effect in producing integrated policy outcomes. Priorities remain clearly aligned with the hierarchy of objectives.

Departmental managers continue to participate in the growing array of interfunctional routines, paying lip-service to coordination. But they prosper by giving the priority to the programs and activities under their charge, clearly bound by their budgets and objectives. And central planning officials, in order to give some credibility to central agency procedures, often tend to reinforce the interests of line program managers, so long as the procedures are followed. Coordination is a key part of public service procedures, but is essentially no more than a ritual of second-level priority.

A good illustration of this principle was the inability of the Federal Government to successfully mount a Neighborhood Improvement Program integrating even some proportion of its Federally-sponsored activities (not to mention the need for greater integration of activities with those of local jurisdictions) relevant to urban neighborhoods. This is despite the fact that the planners of the Neighborhood Improvement Program clearly saw the value of an integrated federal approach and tried at the outset to accomplish it. Their efforts failed because it was contrary to the primary management interests of their superiors, and of decision-makers in other departments, to respond in this way.

The development of a strong hierarchy of objectives within the public service will likely improve the "internal" organizational efficiency of its departments, but only at the expense of the "external" efficiency of program delivery.⁹ It is this external efficiency of delivery which should be the dominant measure of performance for any public policy.

⁹ The concept of these two kinds of efficiency is extended and illustrated in terms of the "production" and "delivery" of government services, in a report prepared for the Ministry of State for Urban Affairs. See M. Chevalier, T.J. Cartwright and J. M. Choukroun, *The Coordination Role of the Ministry of State for Urban Affairs: A Proposed Strategy* (Ministry of State for Urban Affairs, March 1972).

1.2 THE OBJECTIVE HIERARCHY AND RESOURCE COMPETITION

Emphasis on the objective hierarchy continues to stimulate another well-known phenomenon - the competition for resources. And the competition for resources stimulates in its turn the ever increasing allocation of resources more or less across the board, which is at least implicitly justified as an end in itself.

An increased allocation of resources will do a better job for transportation, for health, for welfare - for whatever. So goes the refrain. And an increased allocation of resources will do a better job for each program and activity. "The better job" is identified and legitimized by the program objective. And so public expenditure rises, in terms of the multiplicity of program and activity objectives and their aggregation on up the hierarchy. If the program manager plays the game and is skillful, he cannot help but receive his allocation and proportionate increase.

The above does not mean to say that programs and activities are immune from the axe, or that they may not suddenly flourish with a great new infusion of resources. This happens, at the discretion of decision-makers at appropriate levels in the hierarchy - responding to the objectives for which they are responsible and their interests in the organizational structure.

Both the PCO planning process, and the Treasury Board budgetary policing process legitimize and compound the process of expansion. The inter-functional planners try to meet as many of the programs and their objectives as possible, merely going through a marginal activity of downgrading those which are clearly inappropriate and those which clearly have adverse or unpredictable external impacts. The Treasury Board assesses past and projected program results against their individual departmental objectives, and tends to further legitimize them in terms of these objectives. The result tends to be an expanded program. Objectives are "achieved" or partially achieved, in the idiom of the program. More of the same is called for - more programs expanding, each in terms of itself, justified by measures of output against its objective, calling for more output, a greater aggregate across the board somehow contributing to the public good.

The fallacy in all this is that the programs are maintaining or expanding their outputs mainly in terms of themselves. They are not doing so in terms of some relevant overriding context of which they are and can only be a part. Indeed, the output of any

program can only be a part of some overall field of activity, which by its nature will be influenced by program inputs of many kinds.

Why the need for an overall context? It is here, and only here, where the synergy of related system-wide effects of a wide spectrum of program or activity outputs is relevant, be it in social, economic or environmental terms. Several examples help to illustrate:

- In-city or inter-city transportation have both gone through tremendous investment, in capital expenditure, subsidy and user cost. Planning, construction and use have scarcely considered the proportion of urban and multi-urban resources which have gone and go into transportation. Furthermore, each mode of transportation has been designed, subsidized and operated wholly or partly in terms of its own objectives, compounding the proportionate resource allocation for transportation in terms of other needs. Again, this primacy of transportation, coupled with primacy of modes within transportation, has distorted urban growth and land use and inter-urban patterns, resulting in declining quality and high, accelerating costs of all kinds. Transportation has its own expanding purpose or objectives, justifying its continued growth, further stimulated by the expanding purposes within transportation of its various modes. The opportunity cost has been incalculable - in federal, provincial and municipal terms. The Federal Ministry of Transportation is in its third basic policy reappraisal in seven years, evidence of breakdown in established management practice in this function.
- Health has gone through a similar cycle. Medicare, brought in in the last decade, changed the rules as to access to health, thereby expanding the volume of health care services a great deal. Costs have increased because of the growing volume itself, and because of scarcities of expertise and facilities. The objective of extending health care services has been achieved, but it is now increasingly recognized that this vast effort and expenditure occurred without full cognizance of its field effects. The almost exclusive reliance on remedial care has marginally improved health in Canada, but the notion of preventive care has been scarcely considered.

Preventive care can only be considered in a field context; its objectives cannot have priority in themselves. It must clearly be designed and carried out in relation to other programs and activities. This has been recognized in principle by Health Canada's significant milestone, the "Health Field Concept", which places preventive - and remedial - care in a context.

Most major program thrusts of recent years - as in the past - have proceeded in the same upward spiral of self-justification through their own objectives, leading to increasing activity and expenditure. In some cases, programs have become top-heavy and have been regrouped and reorganized, but in most the upward thrust has continued in old or new guise adding new and supporting programs along the way - ARDA and Department of Industry (partly) to DREE, National Employment Service and other functions to Manpower, Fisheries and Forestry and parts of EMR and others to Environment, and so on. The upward thrust is seldom blunted; the hierarchy of objectives, made ever more efficient through the techniques of management science, sees to that.

1.3 SUMMARY

It is obvious that activities and programs are a logical focus for priority-setting and resource allocation. But to design them and integrate them only in terms of the objective hierarchy is another matter. The objective hierarchy is presently the key binding element of public management. The question here is whether it should be the only one. Except as a means of controlling internal efficiency at lower levels of operation, the evidence suggests it is not, for the following reasons:

- It encourages reinforcement of the status quo.
- It strengthens the division of interest between program managers at each level of the hierarchy.
- It increases the technical difficulty of program and activity integration in cases of potential complementarity.
- It supports an upward spiral of resource competition and use.

The broader consequences of policy management based on objective-setting are essentially two-fold. First, there is a total absence

of a sense of community or societal purpose in the proliferating activities of Government, as overall purpose becomes increasingly defined in terms of activities, programs and departmental missions. Second, there is a self-generating growth in the allocation of resources for various public activities which is not directly shaped by societal or community purpose.¹⁰

The first consequence reflects a measure of societal drift which is made to appear purposeful. The second reflects opportunity cost, a measure of waste which is given the appearance of productive effort. Certainly the apparatus of public policy and management in a pluralistic society cannot achieve perfectly clear purpose. Nor can it achieve a perfect record of output. Nevertheless, the growing and proliferating shortfalls in the societal and environmental impact of public policy and management are more apparent now than heretofore in this generation. The growing presence of turbulence and incipient breakdown, in global terms, give evidence and warning that there could and must be a significant measure of improvement in both results referred to above.

Improvement in the overall impact of public policy must occur in two respects. The first must be in terms of the extension and fostering of a clear sense of public (social) purpose. The second is in the productivity and conservation of public (material) resources. To do this, the planning and application of all departmental missions, programs and activities must somehow be harnessed to a broader context of social purpose and material resources. The next section

¹⁰ A prevalent criticism among certain social scientific schools of concepts such as "societal purpose" is that such macro-concepts are a nonsense, without meaning and relevance to the affairs of everyday life. While it is here agreed that such concepts are of limited value in explaining or managing social behavior, we would stress first of all that everyone at least implicitly espouses and relies upon such concepts as a fundamental basis of social and political life, whether such concepts are expressed in values placed on survival, civilization, etc., or in terms of social institutions - legal, religious, cultural, etc. The danger in the use of macro-concepts is their misuse, a criticism often leveled at the elaborate macro-models of economics, which rest on unquestioned assumptions and theories. The economist, Oskar Morgenstern expands on this point in a recent article, "Thirteen Critical Points in Contemporary Economic Theory," *Journal of Economic Literature*, 1973.

outlines a contextual schema representing these two components. It is argued to be one way of moving toward "field performance" as an operational counter-weight to "objective performance" in public policy management.

2. A COMMON LANGUAGE OF FIELD MANAGEMENT

An alternative to a management approach based exclusively on hierarchical objective-setting is one which employs the concept of field perspective. Field perspective refers to a common perspective built across a broad range of bureaucratic level and function of the effects of individual departmental or agency functions and programs on larger systems of interrelated activity. Field perspective encompasses a multiplicity of operational concerns inside and outside of government. Policy fields can be thought of in a great variety of ways, but usually cannot be as rigorously bound or defined as can an operational objective. They may be wholly contained within a jurisdiction or sector, but are more often likely to extend across a number of them, and be influenced by decisions which are made independently of each other. Fields may be usefully conceived as a particular class of recipients for the delivery of government services (e.g., the urban neighborhood, the rural region), as a particular economic market or other operating decision system (e.g., immigration, foreign ownership), as a critical problem area within a given sector which is affected by many external factors (e.g., intra-urban public transportation, the development of health maintenance programs). There are numerous other possibilities as well. The diagram in Figure 1 illustrates the general concept of overlapping operational concerns within a broader field perspective.

The definition of a field is contextual and based on a set of overlapping perceptions. As such, it is subject to frequent adjustment as perceptions change, and as actual programs and activities change. It is defined jointly in such a way as to establish a mutually recognized framework for the management of functionally distinct though complementary programs and activities. Once developed, field perspective provides a common basis for program and policy integration, and the criteria from which individual departmental activities are designed and evaluated. Program effects can then be examined not simply in terms of narrow, program-based objectives, but in terms of their complementarity or conflict with other programs impacting on a given policy field. A dialectic is established between the effectiveness of a program within the hierarchy of bureaucratic objectives and its impact, along with those of other programmed and unprogrammed activities, on conditions within the policy field.

Through the use of common field perspective, various operational departments and agencies can identify and achieve complementarity among programs and activities. It is field perspective which potentially provides the means for questioning operational objectives at every

level of concern. By developing the capability and incentives to assess programs and activities by their field performance as well as objective performance, government as a whole can begin to regain control over its overall purpose and productivity.

To introduce the field perspective approach within the Public Service requires that a common language of field management be developed as a basis for design and evaluation. In this part of the paper, we propose some of the main elements of such a language.

12. ACTIVITY AS A FIELD CONCEPT

The language of field management rests on the concept of activity rather than objective. All human activity¹¹ can be thought of as having two components - initiative and intervention. Initiative connotes the bringing together and application of *knowledge* in a purposeful manner by a set of individuals functioning in an organization; both the organization and the individuals (as a group, severally and separately) have an interest in the activity. Intervention connotes the manipulation of *resources* to carry out the activity, in a configuration established by the relationship of knowledge and interests. Activities are thus a combination of a symbolic component, initiative, and an energetic component, intervention.¹²

Activities are seen as grouped and linked in various ways to make up the overall function or mission or service of a department and of the Government as a whole. They are similarly grouped and linked to make up the functions and missions of a rich variety of other organizations and systems in the community or society. The field is comprised of an ongoing course of activities, punctuated

¹¹ Here we are referring to conscious or planned activity rather than unconscious activity.

¹² These distinctions, and much of the argument that follows have their basis in a larger body of concepts developed further in another paper; see M. Chevalier, *Learning to Manage the Environment*, Paper prepared for a Workshop on Growth and Resources Management - Implications for Canada, Environmental Systems Branch, Department of the Environment.

by initiation, phasing, reorientation, completion, combination, withdrawal, and so on. Activities are the behavioral expression of a multiplicity of interests and material interventions which together form a highly complex pattern of stability and change.

Each activity embodies implicit goals and objectives, and may also have explicit ones. Activity and objective are interconnected. Objective is a function of activity, and activity is a function of objective. Activity seldom emanates exclusively or largely from objective(s) or vice-versa. Each is wedded to the other. So one might for the present argument define objectives and goals as part of the initiative component of any activity. The task of policy management is to systematically test and evaluate the output of each activity in the established course of activities under a jurisdiction. Activity outputs or results should be measured against objectives only as an indication of efficiency and effectiveness for internal consistency at the activity and program levels. The real concern of policy management is not the output or result of each activity in itself, but rather the output of collections or systems of activities, programs, departmental functions, and their reinforcing or countervailing cross-impacts. This cannot be accomplished by narrow measurement of results against objectives and hierarchies of objectives. It can be done by assessing the output of the activity (or activity system) against a set of contextual values or norms which by their nature are relevant to all activities which are or might be carried out within the jurisdiction.

2.2 A COMMON NORMATIVE FRAMEWORK

Reaching again for the broadest and most fundamental level of distinction, the effects of an activity on the human condition can be assessed as either positive or negative in terms of two dimensions; one a profile of social choice, the other a profile on intensity of consumption. These two profiles are used to express fundamental human values, essential values for survival and well-being of the species as a whole.¹³

¹³ The arguments in support of these two fundamental values must be left to another time. A wealth of ethical and philosophical as well as scientific justifications for their selection is contained in an extensive literature. A number of references to works of particular relevance are included in the general list of references.

The profile of social well-being represents the trends toward a growing or declining choice of options, among individuals, groups, and classes in the community, both organized and unorganized. For example, a trend toward increased social choice is seen in a higher standard of living, or higher level of health or education. And the opposite is true if such trends tend toward lower levels; that is, toward social constraint or decreasing social choice. There are, of course, countervailing trends toward choice and constraint. Every kind of activity contributes to one trend or another. And there is a trend which can be identified for each federal government function.

The profile of intensity of consumption is expressed in terms of trends in the use of materials. Intensity of consumption reflects the material used per capita, per household, per group and class of population, and per community or society. Material used can in turn be expressed as the nature and scale of expenditure of energy in the process. This can be described as a trend toward high or low intensity in scales and kinds of energy use.¹⁴ An activity stimulates a trend toward higher or lower intensity energy use; that is, toward increased or decreased materials use. The effects of activities may be more clearly identified through one profile than the other. Yet, in principle every activity is by its nature capable of being considered in terms of each profile.¹⁵

¹⁴ The nature of energy used can perhaps best be described by the natural systems hierarchy of energetic interaction from atomic to ecological systems. High intensity kinds of energetic interaction come at the lower end of the hierarchy. Within this general framework, it is possible to introduce the specific concepts of resource renewability and ecological capacity. See, for example, Ervin Laszlo's, *A General Systems View of the World* (New York: Brazillier, 1972).

¹⁵ A more extensive explanation of the theoretical basis for each dimension and the relationships between them is now being prepared.

FIGURE 2

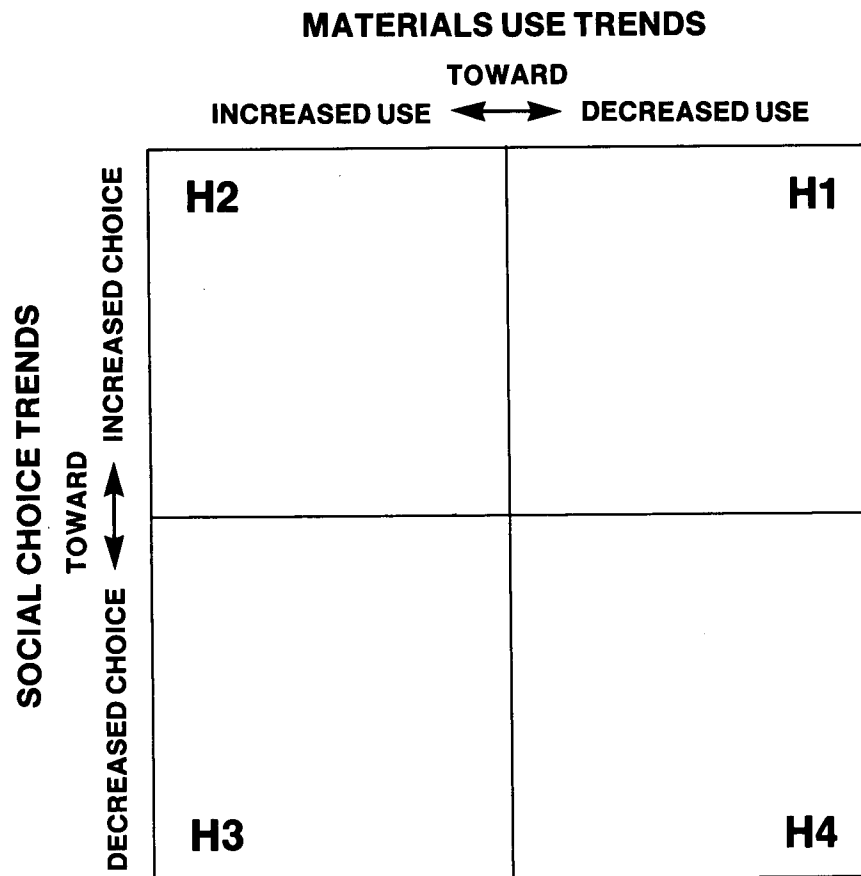
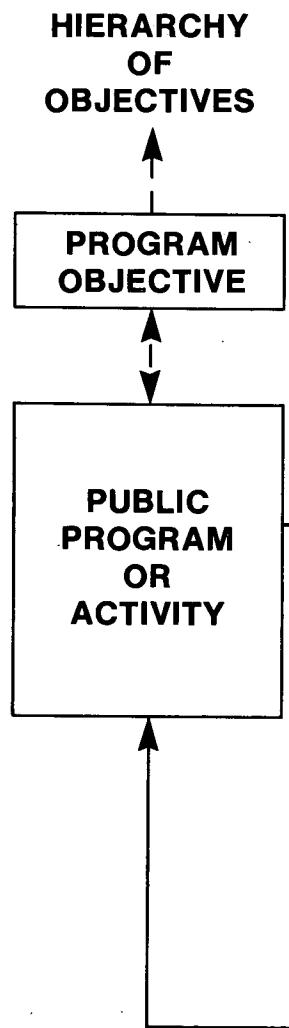
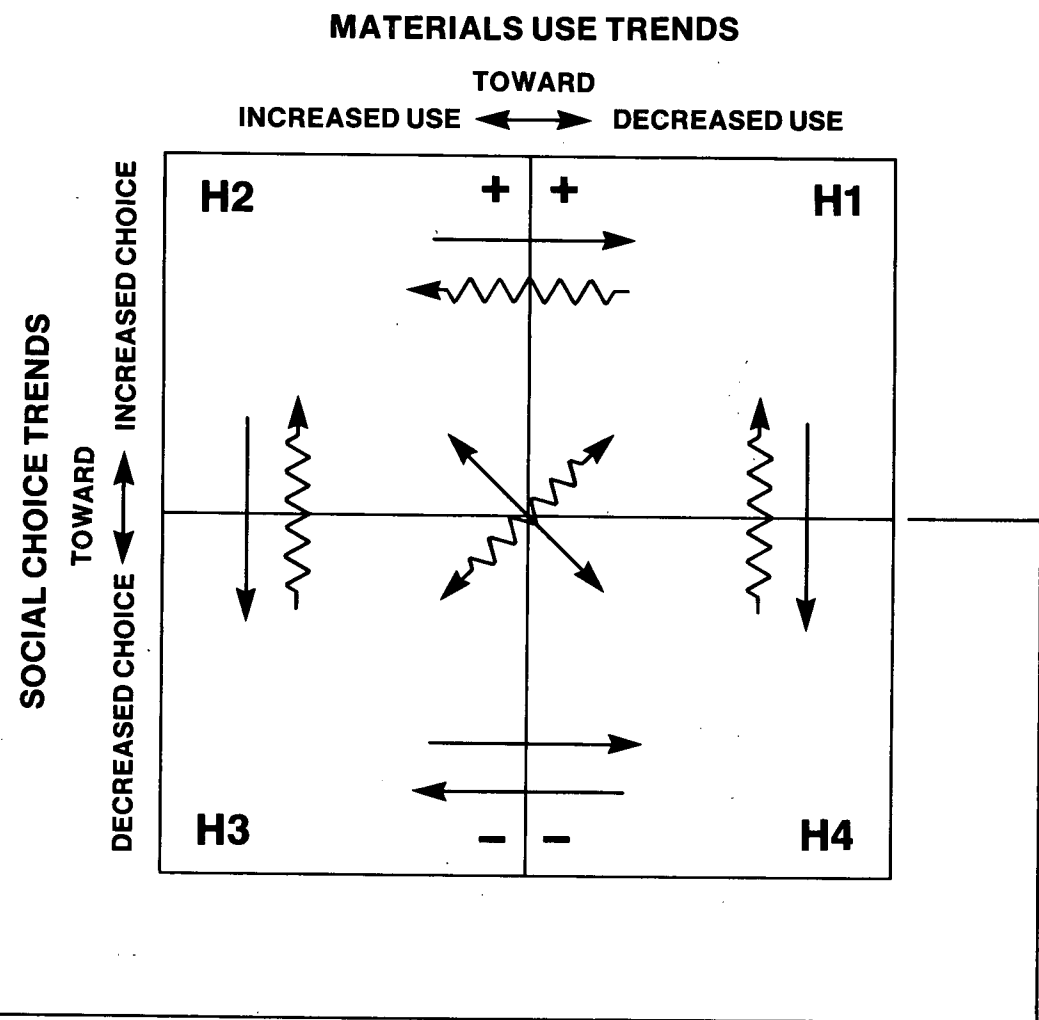
FOUR CLASSES OF TREND EFFECT

FIGURE 3

HUMAN ACTIVITY



HUMAN CONDITION



OPERATIONS

FIELD EFFECT

2.3 FOUR CLASSES OF EFFECT ON THE HUMAN CONDITION

The effects of all kinds of intervention on the human condition, and through it on the social and material conditions, are identified by the two trends it stimulates - toward increased or decreased social choice on one hand; toward increased or decreased materials use on the other. Assessment of the combined effects of human interventions on these two trends provides a field-oriented normative basis for the design and evaluation of public programs. There are four classes of effect which can be defined by the integration of these two trends as represented by the matrix in Figure 2. These four classes are hierarchically ordered in their impact on the human condition (see below). They are described in this section only for the most simple positive and negative effects for each class, and for trends linking classes together. In following sections, the nature of these classes is elaborated to show a wider and more complex set of effects and interdependencies.

The four classes of trend effect are:

- H.1 A combined trend toward increased social choice and decreased material use leading to an improvement in the human condition; that is, a positive system effect.
- H.2 A combined trend toward increased materials use and increased social choice leads initially to a positive effect, then toward a negative effect as materials limits or shortages are encountered.
- H.3 A combined trend toward increased materials use and decreased social choice leads normally to a decline in the human condition; that is, a negative effect (see below).
- H.4 A combined trend toward decreased materials use and decreased social choice leads initially to a negative effect on the human condition, then possibly toward a positive effect in classes H.3 or H.2.

A trend toward decreased materials use or low intensity consumption starts from a higher intensity energy use technology and/or scale of energy use. A more efficient technology or use of it means lower intensity consumption. A social choice for lower consumption demand will also mean lower intensity consumption; this may be the result of a less artificial life-style, less conspicuous consumption, less waste, and so on. Thus, a combination of trends toward greater

efficiency and less demand can be said to have a continuing positive effect on the human condition, by strengthening social choice and physiological priorities - Class H.1. This class of effect is seldom seen, except in the context of individuals and small groups.

A trend toward increased materials use or high intensity consumption starts from a lower energy use technology and/or scale of energy use. A trend toward increased social choice stimulates the first trend as it contributes to a positive effect on the human condition (H.2). The externalities and emerging inefficiencies of high intensity consumption (e.g., diminishing returns of high power technology and large-scale organization) then lead to a growing allocation of resources to maintain levels of benefit or service. This, in turn, creates resource constraints which are immediately reflected as social constraints. Excessive inflation is an example of this effect. It is a move from class H.2 (positive), toward class H.3 or H.4 (negative).

Again, a trend toward increasing materials use or high intensity consumption may be at a stage of diminishing returns, with a consequent trend toward decreased social choice. This is represented by a continuing negative effect on the human condition; that is, class H.3.

Finally, a trend toward decreased material use or low intensity consumption may be combined with a trend toward decreased social choice, through mutual stimulation, or stimulation of one by the other. The recent increase in oil prices has had such an effect in some countries; the depression of the nineteen-thirties is another example. The first example illustrates a shift from a high to a low intensity consumption trend (decreased materials use), which then was the cause of growing social constraint. The second illustrates a shift in trend from increased to decreased social choice, which then caused a shift from a high to a low intensity consumption trend (again decreased materials use).

This trend is represented by class H.4, and is negative. It tends to recover or return to a positive effect on the human condition as represented by class H.2.

2.4 A HIERARCHY OF TREND EFFECTS

We mentioned that these four classes of effects can be arranged into a hierarchy. The effects of planned activities on the human condition can be expressed by a natural order from H.4 to H.3 to H.2 to H.1. This order reflects an increasingly complex expression of symbolic communication from H.4 to H.1, supported by a corresponding form of energetic interaction. This is defined by the combined trends toward increased or decreased social choice and materials use in each case.

H.1, the top of the hierarchy, is seldom if ever achieved on a societal or community level. Occasionally it can be seen in a particular organization, in a small group or with an individual: the highly productive organization which runs light; the religious group which achieves high spiritual levels with scarcely any worldly panoply; the creative individual who is not concerned with worldly goods.

From time to time, a society may temporarily achieve these heights, such as Britain in World War II, where social choice expanded in a great number of ways in the face of reduced availability of civilian consumer items and services (albeit more equitably distributed). Most of the World's great religions preach (even if they may not practice) the growth of the spirit as being stimulated by a minimum of essential worldly goods. So the ideal of H.1 has long been with us, despite the fact that it has seldom been achieved. On a national and world scale, the recent realization of the limits to material support on the Earth have given it new relevance in operational terms. In turn, this broad imperative can be related back to scientific, technological, and management criteria about effectiveness and efficiency in the use of materials - to provide a wider choice for the consumer in his activities of earning and spending resources.

The paradox in placing H.1 at the top of the hierarchy is raised by the widely accepted notion that increased social choice depends on increased use of materials. The basic economic indicators which govern public policy, for example, are almost wholly grounded in this principle. That is the nature of H.2, at the next level in the hierarchy - the dependence of increased social choice on materials use. This particular effect is the standard purpose of almost all societies. It connotes success, prosperity, rising standards of living, happiness and fulfillment for all nations of whatever political persuasion or level of "development."

These first two classes in the hierarchy of trend effects can be identified as positive effects on the human condition (although H.2 may, at the same time, be "mining" Man's environment on Earth).

The next level in the hierarchy is H.3. Here is a combination of the two trends toward increased materials use and decreased social choice. An example of this effect is the condition now faced by the Western World economy. The continued increase in the consumption of materials, supported by many kinds of energy expenditure, has produced a condition of diminishing returns to the user, so that his social choice is on the decrease. Increasing expectation coupled with two figure inflation out-pacing productivity is the symptom. Growing waste in the design, production, delivery and servicing of public and private sector products and services are to blame. It is a matter of low "real productivity" (i.e., measure of product or service effect as distinct from production).

Finally, there is the lowest level in the hierarchy - H.4. This is the combined trend toward decreased social choice and decreased materials use. Here is a condition of breakdown similar to the Great Depression in the nineteen-thirties. The kind of local slump which one sees on a chronic basis in disadvantaged regions illustrates the condition. Or a short term slump such as one sees in a city whose major industry is in a soft market, such as Seattle during the aerospace industry recession at the turn of the last decade and since.

2.5 COMMON AND UNCOMMON SEQUENCES OF TREND EFFECT

This hierarchy of trend effect on the human condition leads to certain established change sequences between the four effect components. Some of these sequences are the result of planned activity; others are not. H.1 and H.2 identify positive effects on the human condition; and H.3 and H.4, negative effects.

As the accepted ideal is H.2, there are various established sequences linking H.2, H.3 and H.4. H.1 is almost always left out of the sequencing, except in the aspiration of conservationists and the pronouncements of philosophers.

If a community finds itself at H. 4 - the bottom of the heap, so to speak - there are two practical (i.e., established) possibilities.

First, the standard move in a comparatively open and democratic society is diagonally back from H.4 to H.2. In effect, this is standard route charted but not necessarily achieved for disadvantaged regions in Canada and for Third World countries. It was also the route followed in the nineteen-thirties in the wake of the Great Depression and later in recoveries from recession. Prime the pump with more "materials use," and social choice will increase.

What actually may happen, if the community does not make it back up to H.2, is a move from H.4 to H.3. That, indeed, is what is happening in most Third World countries, and disadvantaged regions and/or socio-economic classes in Canada. The pump is being primed in each case, but social choice is not increasing. The small enclave society in the Third World country is trapped in a rising level of consumption, and the rest are trapped at lower or subsistence levels. As the gap between them grows, a growing social control apparatus is inevitable. It appears in various forms - in comparatively benign terms, such as in Kenya or Malaysia; in flamboyant dictatorial terms, such as in Uganda; or in "modern" control terms, such as in Argentina.

The pattern is dissimilar although comparable in disadvantaged regions and socio-economic classes in Canada. The control factor is much less evident. It is more disguised socially and is essentially economic in nature. The "agents" of the move from H.4 to H.3 will tend to prosper (as do the enclave societies in Third World countries). Agents in the Canadian case can be government officials, social workers, road contractors, and so on. But the rest tend not to prosper, but rather to often continue losing ground - decreasing social choice.

That is the move from H.4 to H.3. The move from H.3 to H.2 is much more difficult. It might occasionally be achieved when a bonanza in material use is discovered and brought into production. A striking case in point is the exploitation of oil in the Persian Gulf Sheikdoms. The scale of material riches is so large in relation to the community affected, that it moves swiftly from H.3 to H.2. (A less complete and immediate version of the total H.4 to H.3 to H.2 sequence may now be underway in Iran.) Closer to home, the material investment in services and infrastructure for disadvantaged regions and economic classes, as well as in income redistribution, changes the effect from component H.4 to H.3. There has been a turn-around in the material trend dimension from decreased to increased material use. Hopefully, the next step in turning around the social trend dimension will also take place - moving to H.2 from decreased to increased social choice. It seldom does without a material bonanza like oil in the Persian Gulf, a comparative scale quite beyond the instruments of redistribution to disadvantaged regions and socio-

economic classes in Canada.

Now, if one wishes to start from the top level of the established sequences, that is effect component H.2 (H.1 being beyond the established sequences), there is only one way to go, and that is down from a positive to a negative human condition. One can go from H.2 to H.3. That is precisely the route of Western countries at present. Canada is still in a trend toward increased material use (per capita, per unit of production or consumption, etc.). But we have moved from increasing returns in social choice as stimulated by materials use to diminishing returns in social choice. As materials use is still on the rise, we have moved from the positive effect on the human condition to the negative effect on the human condition - H.2 to H.3. But we are not at the bottom yet. The next move in the established sequence is toward H.4. That is, there could be a shift from increasing to decreasing materials use - more unemployment, lower overall production and consumption, and so on. To move back up from H.3 to H.2 is only possible under extraordinary circumstances. For example, the bulk of the Western World might go from H.3 to H.4 - in the established sequence. Then, later it would continue in the established sequence to achieve H.2 again. Because of Canada's raw material position, we might escape H.4, and be drawn directly back to H.2 from H.3 as the result of a Western World economic resurgence. But that would be a quite unusual circumstance. The norm is to follow the established sequence from H.3 to H.4.

The next move in the established sequence is back up to H.2 - to move from H.4 directly to H.1 is at present no more than the dream of the exponents of a conserver society. One can also move down directly from H.2 to H.4. That is the route followed in the Great Depression of the thirties, where institutional breakdown or decrease in social choice brought about a parallel economic breakdown or decrease in material output or use.

The established sequences of relationship between the four effect components on the human condition are the triangular anti-clockwise links between H.2, H.3 and H.4, plus the two reverse links between H.4 to H.3, and H.4 to H.2. (It will be recalled that the reverse link between H.3 and H.2 only happens under extraordinary and incalculable circumstances.) H.1 is totally outside the established sequences. It is not and cannot be reached under the present set of public management structures, procedures and measures of performance. But its inclusion in the field perspective is a first step in finding ways - i.e., public programs and activities - to achieve it. In the next section, the distinction between substantial

and marginal innovation suggests how the potential effect of H.1 might be achieved.

In Figure 3, the solid arrows represent the established sequences of marginal change and innovation, and the rippled arrows the rare, out-of-the-ordinary sequences of substantial change and innovation.

3. IDENTIFYING THE EFFECTS OF PUBLIC PROGRAMS AND ACTIVITIES

There is, as was noted above, a tendency to "drift" down the hierarchy of effects in established sequences. This can lead to instability, turbulence and societal breakdown. It is precisely this kind of drift we are experiencing now with at best a prolonged period of high inflation before us (H.2 to H.3), and at worst a follow-through to full depression (H.3 to H.4). This drift has emerged at least to some extent as a result of public programs and their rising cost without a corresponding usable output. The drift phenomenon, then, is identified as a field effect of public programs and activities. The field effect trends should provide for a more informed judgment by public management as to its particular programs and overall programming. Furthermore, it should indicate when big change is needed, either to be initiated, responded to, or both. This last capacity scarcely exists in public management today.

3.1 A CRITICAL DISTINCTION - MARGINAL AND SUBSTANTIAL CHANGE AND INNOVATION

Marginal change means simply a change in a particular condition which occurs without disturbing the pattern or structure of the condition: that is to say, a change within the existing pattern - *pattern maintenance*.

Substantial change means simply a change in a particular condition which occurs only through a change in the pattern or structure of the condition: that is to say, a change to a new pattern - *pattern realignment*.

If the change is planned - a planned program or activity - it is described here as *innovation*. There is, then, the additional distinction of marginal innovation and substantial innovation.¹⁶

¹⁶ See *Learning to Manage the Environment, op. cit.*

The established sequences described in the last section identify effects of marginal change and innovation: that is, structure or pattern maintenance. (Straight arrows in the Human Condition field, in Figure 3.) The rippled arrows represent effects of substantial change or innovation: that is, structure or pattern change.

The substantial change (innovation) sequences are all sequences which move up the hierarchy of effects (with the exception of one covered in the next paragraph). And there are two marginal innovations which do so as well; H.4 to H.2, and H.4 to H.3. H.4 to H.2 represents the return to the accepted ideal of well-being - the interdependence of increased material use and increased material choice. The whole apparatus of public and private aspirations, management, and performance measurement supports this pattern maintaining sequence. H.4 to H.3 is similar to H.4 to H.2, in that it undertakes increased material use as a precursor or prerequisite of increased social choice. But the pattern of decreased social choice tends to harden in the process, and the hoped-for subsequent rise from H.3 to H.2 requires a substantial innovation for pattern realignment.

The marginal change (innovation) sequences are all sequences which move down the hierarchy of effects (with the exception of the two referred to in the last paragraph). And there is one substantial innovation which does so as well. That is H.1 to H.3. This happens for example when a long established traditional community which has lived in harmony with its environment is opened up to modern influences, techniques and values. It breaks down to decreased social choice coupled with increased material use. The transformation of some tribes in remote areas of the tropics illustrate the sequence, as do the growing effects of "development" on many Eskimo and Indian communities in Canada.

The "downward" sequences will generally not be planned, although this is not always the case. They are then, more often than not, changes rather than innovations.

3.2 IDENTIFICATION OF ACTIVITY EFFECTS

The identification of program and activity effects might be best illustrated by turning to examples. Two are selected - urban transportation and medicare.

Urban Transportation

Marginal: The maintenance of the present modal pattern by adding new bus, road or rapid transit facilities: this has a present tendency in many North American cities of increased material use with diminishing returns to the user; that is to say, decreased social choice.¹⁷ The sequence is from H.2 to H.3.

Medicare

The establishment of medicare made access possible to the best in medical facilities to all the population. It stabilized health services; in effect, component H.2 - increased social choice and increased material use. There are two potential changes in tendencies evident here at present. One is from H.2 to H.3. That is a tendency toward diminishing returns to the user because high and growing cost of remedial services are being stressed over preventive services, thereby decreasing social choice. This is a potential marginal change. On the other hand, there is also a potential tendency toward a greater stress on preventive medicine and health services, as reflected in the Health Field Concept of Health Canada. This would be an effect tending from H.2 to H.1 - a substantial innovation, in that both health service users and providers would have to make substantial planned changes in their patterns of activity to make preventive health operational in any significant way. Activity effects are, as has been illustrated, identified by designating the appropriate effect component at the start of a sequence, and the change toward other component(s), in either actual or potential terms.

¹⁷ See example described in Appendix, *Learning to Manage the Environment*, *op. cit.*

4. CONCLUSION

A cardinal rule of public administration is to identify its programs and performance in terms of program objectives. Despite elaborate machinery to weigh and relate all the objectives of a Government in a rational manner, the approach is bound to become more and more unwieldy as government functions grow and proliferate. Each activity, each program tends to justify and reinforce itself in an iterative process between program and objective - design, execution, evaluation, and back to design. Program managers must each act as though their particular program, and its strength and prosperity in itself, is of highest priority. Central planners, allocators and evaluators can adjudicate between programs and their relative priorities. The central managers can be invested with sweeping powers. But because programs are distinguished primarily by their own objectives, no central procedure, no common management criteria can make them part of a whole. Aggregated they can be, but never fully integrated in their effects.

That is the dilemma faced by big public administration everywhere as it seeks a rational whole for its operations, but must content itself with little more than rationalization. In consequence, burgeoning public expenditure stems not only from legitimate (or illegitimate) public demand and political response, but from the mindless pressure of hundreds and thousands of big and little motors, rounds of mutual reinforcement between established activity and objective.

It is argued here that the cure is to displace the objective from its supreme position in public management. A fundamentally new approach to large-scale public management is suggested as an alternative. It would give primacy to management of the whole, and at the same time would remove primacy from management of the parts where it now resides. "Objective performance" would be maintained to orient efficiency at the program or activity level. But "field performance" of each program and activity is the way its effectiveness would be judged as one program among many serving a particular field (i.e., community or society in its material setting). This has widespread implications for the organization of the Public Service and the design of public policy.

The model of "field" put forward here is first of all illustrative. It also shows promise of being applicable in operational terms. It is being developed further in a number of ways, including:

- (i) The idea of *threshold*, where a change is underway between one effect component and another (see Figure 3).
- (ii) The related idea of *established pattern*. With an established pattern, as in the case of H.2, the threshold tends to stabilize the effect in that component. And the established pattern tends to stimulate a return to that component.
- (iii) The additional related idea of an equilibrium axis, where changes occur outside the pattern, and the pattern immediately incorporates the changes without moving from one effect component to another.
- (iv) The further articulation of the social choice dimension by relating it to social initiative and social awareness.
- (v) The further articulation of the materials use dimension by relating it to material intervention and material capacity.
- (vi) The integration of these last two in a more detailed field model to include the social and material conditions as distinct from the human condition. The value of this elaboration will be to specify the effects of public programs and activities, not only on the human condition as a combination of social and material aspects, but of the social condition in itself as a non-material expression; and also the material or environmental condition in itself.

The significance to such departments as Environment Canada, Urban Affairs Canada and Science and Technology of the above is basic to their overall missions. If such broad mission agencies cannot find common cause, as a matter of course, with other departments of the Federal Government, their mission is impossible to achieve.

In order to do this, the old notion of the hierarchy of objectives must be relegated to a secondary position. Common cause must be sought with the central missions of the Privy Council Office (PCO) and the Treasury Board (as well as the Prime Minister's Office (PMO) and Finance) - the custodians of the present system. To do that, the argument showing that the present system by definition supports - legitimizes - the growth and expenditures of programs for their

own sake needs to be put forward. It can be made a telling argument, and not necessarily a complex one. Common cause must also be sought with other departments facing the same obstacles as these broad mission ones, and who are conscious of these obstacles. Health Canada, with the embryonic initiative of its Health Field Concept, is an example.

And, of course, a substitute procedure which rigorously evaluates the effectiveness of programs in a field context - not simple in their own right - is required.

The assessment of programs in context requires a common language basic enough to encompass any activity or program, yet sufficiently clear and rigorous to make the assessment. That is the purpose of the field perspective approach, and the illustrative field model which has been put forward here.

(A number of the ideas presented in this paper are developed from work done in the project "Gestion publique et défi socio-écologique" at l'Université de Montréal, sponsored by the Ford Foundation.)

SELECTED REFERENCES

- ACKOFF, Russell. *A Concept of Corporate Planning*. (New York: Wiley, 1970).
- BENNIS, Warren. *Beyond Bureaucracy*. (New York: McGraw-Hill, 1966).
- BOULDING, Kenneth. *The Image*. (University of Michigan, 1956).
- CHEVALIER, M., T. Burns and L. Bailey. "Toward a Framework for Large-Scale Problem Management." *Human Relations*. January 1974.
- CHEVALIER, M., T.J. Cartwright and J.M. Choukroun. *The Coordination Role of The Ministry of State for Urban Affairs: A Proposed Strategy*. (Ministry of State for Urban Affairs, March 1972).
- EMERY, F.E. and E.L. Trist. *Towards a Social Ecology: Contextual Appreciations of the Future in the Present*. (London: Plenum, 1972).
- ETZIONI, Amitai. *The Active Society*. (New York: Free Press, 1968).
- FREEMAN, S. David. *Energy: The New Era*. (New York: Vintage 1974).
- FRIEDMAN, John. *Retracking America: A Theory of Transactive Planning*. (Garden City, N. Y.: Anchor 1973).
- FRIEND, J.K., J.M. Power and C.J.L. Yewlett. *Public Planning: The Inter-Corporate Dimension*. (London: Tavistock, 1974).
- GALBRAITH, Jay. *Designing Complex Organizations*. (Reading, Mass.: Addison-Wesley, 1973).
- GROSS, B. *The Managing of Organizations*. New York: Free Press, 1964).
- ILLICH, Ivan. *Energy and Equity*. (New York: Harper, 1974).
- KATZ, D. and R. Kahn. *The Social Psychology of Organizations*. (New York: John Wiley, 1966).
- LASZLO, Ervin. *Introduction to General Systems Philosophy*. (New York: Gordon and Breach, 1972).
- MATSON, Floyd N. *The Broken Image*. (New York: Anchor, 1966).

- MEADOWS, D., I. Randers and W. Behrens. *The Limits of Growth*. (New York: Universe, 1972).
- MORGENSTERN, Oskar. "Thirteen Critical Points in Contemporary Economic Theory." *Journal of Economic Literature*. 1973.
- OZBEKHAN, H. "Toward a General Theory of Planning," in E. Jantsch (ed.), *Perspectives of Planning*. (Paris: O.E.C.D., 1969).
- SCHON, Donald. *Beyond the Stable State*. (New York: Norton, 1971).
- TEILHARD de Chardin, Pierre. *The Future of Man*. (New York: Harper, 1964).
- THOMPSON, James D. *Organizations in Action*. (New York: McGraw Hill, 1967).
- VICKERS, Geoffrey. *Value Systems and Social Processes*. (London: Tavistock, 1968).

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