

A THEORY OF CORPORATE PLANNING
APPLIED TO THE
CAPE PROVINCIAL ADMINISTRATION

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FOREWORD

Corporate Planning is a somewhat recent approach to management, more developed in the private than the public sector. It is an intellectual approach to large scale planning worked out theoretically and also applied empirically with success. The first chapter is devoted to establishing a definition of the term planning as the integration of elements into a system, and distinguishing it from policy-making and decision-making. In the second chapter it is shown that policy-making belongs in the normative, planning in the synthetic and decision-making in the analytic realm of discourse, and that the three modes form a coherent scheme of rational behaviour. The methodology of planning depends on the type of model used, and the logic of conceptual and mathematical models is discussed.

The third chapter concerns the special field of corporate planning as it has been developed in the private sector. The intellectual background of systems theory, information theory and cybernetics is described, and a modelling process is begun, distinguishing between behavioural, structural and dynamic models. Some examples are given, and it is concluded that no single model is adequate; several must be used.

In the fourth chapter these models are applied to organizations in the public sector, and it is found that the logic of the system is not disturbed although individual variables may have characteristically different values. Some empirical work is described.

In the next chapter a detailed analysis of the Cape Provincial Administration is set out. In addition to normally accessible sources of information such as the budget, the author was able to use organization charts and other documents of a non-confidential nature obtained (with the permission of the Provincial Secretary) at a series of interviews with administrative officials in several departments. Each department is considered in turn, its conventional structure is shown, its environmental conditions, and its modus operandi. It is established what planning is done in the functional field concerned, and by whom, and also in the critical controlling functions of finance, organization, and personnel. The proper hierarchical distinction is

made between line departments and the administrative divisions which serve the Province as a whole, so that the administration is correctly understood as a corporate body intended to regulate the affairs of its subordinate departments. A series of problems was uncovered in the course of this analysis.

In the sixth chapter the Administration is compared with the models built up previously in the structural and dynamic dimensions and the functioning of the financing, staffing and organizational functions is criticised. The workings of the Executive Committee as the Directorate of the institution is also discussed, as is the general environment in terms of the electorate and other state institutions.

It is found that the main provincial functions of Education, Hospital Services, Roads, and to a lesser extent Local Government, are heavily influenced by central government legislation and intervention which has the effect of displacing the Provincial Administration as the meta-system. As their clientèles are disparate, they in effect compete for funds which are provided by a third party (the central government), which provides 85% of provincial revenue. The Provincial electorate has thus lost the resolving power which is played by the market in private enterprise, of balancing the demand for services against fiscal responsibility. It was found that the 'cabinet' system whereby Members of the Executive Committee each run a 'portfolio' of departments has the same disruptive effect as the committee system in British boroughs, because it by-passes the Provincial Secretary. It was found that no manpower planning or organization planning was undertaken, and that these services are regulated by the central government. In finance, apart from losing control over most of its income, the Province has resisted requests to adopt a planned budgeting system on the lines of the central government's budgeting by objectives. Thus the province is shown to be disrupted by the centrifugal demands of its departments, deprived of control over its management instruments by central government intrusion, and unable to reform its own affairs in the face of restrictive higher legislation and its own bureaucratic inertia. This does not mean that its services are ineffective, but that it is inadequate as an intermediate territorial unit of government.

It is concluded that the internal defects could be remedied over the long term by professionalising the officials in charge of finance, organization and personnel and creating a strong controlling secretariat, while discontinuing the 'cabinet' system and channelling the energies of the political executive into the sphere of corporate planning.

The environmental conditions are a problem in intergovernmental relations beyond the scope of this paper, but in the last chapter some principles are put forward.

Firstly provincial goals should be appropriate to its position in the government hierarchy and its aspect as a territorial unit, and should be within its legislative discretion, (which means re-assigning its function); secondly it should be the effective meta-system for authorities below it in the hierarchy, with no bypasses to the central government; and thirdly, the provincial electorate should be fiscally responsible for provincial services.

The study ends with a note on professionalism in the public service.

General Introduction

In order to apply the relatively new concept of corporate planning to such an entity as the Cape Provincial Administration the scope and meaning of the concept first have to be clarified and any misconceptions cleared up. Planning of any kind is an intellectual exercise. There have been many works written on decision-making, which is also an intellectual exercise. Likewise policy-making has been well scrutinised. Planning has been sometimes attached to the one, sometimes to the other, sometimes ignored. In the literature there is complete semantic confusion over the use of the word, and the uses of the terms planning and policy-making in private management and public administration are quite different. In the first chapter the meaning of planning as a type of intellectual activity is precisely defined so that the nature of the exercise as distinguished from the exercises of policy-making and decision-making is clear, and is related to the synthetic domain of cognition where it properly belongs.

This analysis is of more than mere academic interest because the techniques available for application in the other domains are not apposite for planning, and also because it rounds off a systematic investigation of the rational mode of behaviour which underlies all institutionalised activity. If we want to know what public officials do, it is at the least policy-making, planning and decision-making, and these seem to be the necessary and sufficient components of administrative behaviour.

The second chapter considers the technique of planning, which always involves the construction of a model. Models are discussed as an approach to the basic techniques involved. Conceptual or verbal models are considered first, and for the sake of clarity the normative, analytic and synthetic domains of cognition, which involve different modes of thinking, are specified. Mathematical models, their uses and limitations are then investigated. These two chapters combined define planning as an intellectual activity, show what techniques are involved and available, and locate the planning function in the behavioural system.

The next chapter turns to the specific field of corporate planning, which is the outcome of a basically intellectual approach to manage-

ment - both private and public. The field having been delimited some of the intellectual background which has influenced approaches to corporate planning is introduced by way of short discussions of systems theory, information theory and cybernetics. This background provides the basis for the models used in corporate planning, and in the next section some of these models are described and criticised. An important outcome of the discussion is that management (or administration), is a multi-dimensional activity, just as a corporation is a multi-dimensional entity. There is no single simple model which describes it, and therefore to control it we must have recourse to several models, and the models in one dimension must not be confused with the models in another. Due to a sort of built in bias in our paper oriented culture we rarely go beyond two-dimensional models, and the two dimensional diagram is sometimes used to model entities which may have several, in which case the modelling process flounders. This is somewhat akin to the reductionism of the mathematician, who likes to reduce every phenomenon to a linear equation. The result is that on occasion his variables become divorced from reality and his formula a fantasy.

Having established the framework of corporate planning in the private sector the next chapter considers the application thereof in principle to the public sector. It is found that with some adjustment to the terminology the variables and parameters that apply in the private sector translate well to the public sector, and that, for instance in Britain, corporate planning has made headway as a tool for the reform of local government. The term 'corporate' refers fortuitously to the British municipal borough, where problems of communication and control have arisen which reflect those in the private sector, and are tackled with similar methods. Thus the stage is set for the application of corporate planning to the Cape Provincial Administration.

In chapter five this institution is mapped and analysed as a whole and also department by department. This is the empirical research exercise which the author was well placed to undertake as an official of the Administration, and with the permission of the Provincial Secretary. In addition to conventional documentary sources the author was able to interview a number of senior officials who described their activities and provided documents such as organization charts

and various reports of a non-confidential nature.

The analysis includes the environment in which the organization is set - partly its public, or clientèle - but also the generality of state and local government institutions with which it is intimately connected one way or another. What is revealed is a complex web of relationships between the Province, political organizations at various levels, the ministers of line departments at state level, and administrative officials in the central government structures which deal with financial and personnel matters. Thus the system is very open, and the boundaries are by no means as clearly defined as might have been expected considering the stereotype of the public service as a monolithic bureaucracy.

During the course of the analysis the weaknesses of the system are encountered, and in the next chapter the provincial system is compared to the models built up previously. It is found that there are two sets of problems. One is related to the structural/functional form of the administration. The important management functions of finance, personnel, and organization are either fractured, misplaced in the control system, or lacking in modern planning capabilities, or combinations of all three. Furthermore they are by-passed in their authority because of the cabinet system used by the executive committee.

The second set of problems is due partly to the disruptive effect of the provincial line departments which have strong ties to central government ministries, partly due to the intrusion of central government regulation into the province's domestic affairs. Both these factors reduce the autonomy of the Province and its response capability.

Although it would theoretically be possible to solve the province's internal problems, the problem of its relations with the central government is a corporate planning problem on a higher level, and so outside the scope of this study. All the same there are administrative principles arising out of the investigation which should be observed, and in the final chapter these are laid down. Lastly the question of the professionalisation of the public service is proposed as a vital prerequisite for full corporate planning.

The study ends with a summary of the findings.

CHAPTER I

THE DEFINITION OF PLANNING

I.1. Introduction

This chapter begins with some general remarks on planning, unqualified, which show that the semantics of the word are confused and depend very much on the context. Next an unfortunate conflict in terminology between usages in Public Administration and Business Management is discussed. The discussion brings out the three key notions of policy-making, planning and decision-making as three related concepts which need to be very carefully distinguished. Good distinctions have been drawn between policy and decision making, but planning, which falls between them has too often been attacked arbitrarily to one or the other. The basic distinctions are sketched here, and planning is defined.

I.2. Planning in general

In some of the literature 'Planning' refers to the co-ordination of economic and social plans on a national scale, over an extended time span. This is sometimes dubbed 'Comprehensive Planning'. The discussion may range between the technical parameters of the disciplines involved, political constraints, the normative preoccupations of professional planners, ideologies, or indeed any other matter which the author feels inclined to expound. Obviously in such rubrics 'Planning' does not have a precise scientific meaning, and consequently it is not closely defined. In any case it must be made clear from the onset that this study is not about planning in this broad sense. The Cape Provincial Administration is concerned in town and regional planning, and its officials play their parts on such bodies as the Cape Metropolitan Planning Board; it may be said to engage itself in comprehensive planning to some extent. But this aspect of its affairs is not under consideration.

Other books purporting to be on planning turn out to be directed to some particular functional field of planning, such as town planning, or budgetary planning, and in such works it is usually the nature of the field which comes under discussion, not planning per se. Thus a book entitled 'Planning Theory'¹ turns out to be about the structure of town planning agencies and their relationships with the communities

they serve.

From the point of view of the generalist administrator such works are disappointing. Everyone is aware that planning, broadly considered, is something that an administrator must do if he is to conduct his affairs in an orderly fashion, and therefore that a theory or methodology of planning would be useful. But one does not want to wade one's way through difficult work supposedly on planning only to find one is really learning about personnel management or operational research. What one wants to find out about is the actual planning process, in the hope that it may be applicable to his own affairs. However -

"Despite the growing number of books or articles dealing with planning on one level or another, only a few efforts have been made to develop a systematic approach to the study of planning as an administrative process.... a more systematic approach to the study of planning, utilizing more refined concepts and more advanced research designs and methods is urgently needed".²

I.3. Public Administration and Private Management

Apart from the lack of a systematic approach there is also an unfortunate conflict in the customary terminology, arising from the fact that usages of the words 'planning' and 'policy-making' differ as between the public and the private domains. For instance -

"In the business vocabulary, policy is also widely used in a very different sense in manuals of organization and procedures to denote a specific response to specific repetitive situations, e.g. "overtime re-imburement policy", "foul weather policy", "educational refund policy", "inventory writeoff policy". A contingent event is recognised, such as a periodic need to work overtime, or a snowstorm ... A better and more economical procedure is to prescribe in advance the response to be made whenever a specified contingency occurs. This is done through a written statement of the appropriate policy and of the accompanying procedures for its implementation".³

By contrast in Public Administration policy-making is the first consideration, because it is policy that determines the basic goals - in the 'Generic Approach' advocated by some authorities⁴ Policy is the prime process and planning is de-emphasized, whereas many books on business administration use 'policy' to describe mere forms of procedure.

On the other hand in these same books Planning takes pride of place in "the recitation of procedures for men to follow in 'Planning, Organizing, Directing and Controlling'".⁵ Here "its primary purpose is to provide the guidelines necessary for the vital decision making processes throughout the organization".⁶

Thus it appears that the formation of 'guide lines', 'strategic parameters' and the like is designated in Public Administration by "Policy-making", but in Business Management by "Planning", while in the latter policies are mere forms of procedure. One must regret that this switch of nomenclature has become so entrenched, because it can only make for semantic confusion.

Since this study uses concepts from both the public and private sectors, (and indeed this kind of cross-fertilization is regarded as vital), it behoves us to be particularly clear in the way these words are used, and exactly what is meant by them. At this stage it will merely be said that the customary usage of Public Administration is followed and as far as policy is concerned it is to do with the ordering of the value hierarchy, and the setting of goals.

I.4. Planning, Policy-making, and Decision-making

If one begins by looking for definitions of planning, the literature is not very helpful. Some definitions are merely simplistic general statements -

"Planning is one of the most simple and natural of mental processes by which men set and achieve their objectives".⁷

Or -

"Planning is only another name for the application of intelligence to the future; it is synonymous with rationality...."⁸

These statements are non-definitions, and assume that the meaning of the word is already understood. They are of absolutely no value in refining the basic concept.

Another careless usage is to appropriate a general concept to a particular field, while omitting the vital adjective -

"By planning Wootton means the purposeful regulation of economic priorities by the authorities."⁹

It should not be necessary to explain what Wootton means - she should say "economic planning means" This practice has been referred to before and is strongly to be deplored.

Where some attempt is made to make a general definition it is commonly taken that planning refers to the future -

"Planning is an intellectual activity aimed at determining a future state of affairs, and also the steps to be taken to realise that future state of affairs". 10

Beer maintains on the contrary that "this so-called planning process is not at all a matter of prognostication as is popularly believed.."11

Part of the difficulty is that 'planning' does sometimes carry the connotation of intention. We do say, in common parlance, "I plan to do so and so". Strictly speaking this is a kind of shorthand and carries two meanings - both that I intend to do so and so, and that I have a plan for doing it. But a scientific approach must avoid such blurring of meanings. Intention is a matter of will - the action is preceded by a decision to act and it is not accurate to designate such a decision to planning. Properly speaking, planning results in a plan, that is the representation or model of some configuration of reality, or segment of reality.

Such a model may have no counterpart in present reality at all - for instance the plan of a building project as yet unbuilt. The model, however, exists in the present time, even if it is a plan of action such as a Gantt Chart, or a critical path analysis. What realises the plan is a decision to act, but this must not be confused with the process of constructing the model. There are mathematical models which can be run in rapid time on a computer, to determine the outcome of some setting of the parameters of the model. Any number of hypothetical outcomes can be studied - (not excluding complete fantasy), but the decision to set the parameters in some specific way is not made by the model, or its creator, it is made by comparing the prospective outcomes with the most desirable future situation to obtain a match; the setting of the parameters of the real system which the model represents then determines the future - always provided the model is valid.

Thus a plan may imply a proposal, but the decision to accept or reject the proposal is not arrived at by planning - it is arrived at by considering the merits of the plan against normative criteria, criteria which derive from the policy making process as it is understood here.

A plan must be carried out by taking a series of decisions and this series may itself be planned, but the action is taken (and the future determined) only if the decisions are in fact taken. Thus the future depends directly on the decisions, not on the plan, which is merely an abstract schema.

I.5. Definitions

Thus from a first consideration of administrative behaviour three processes can be distinguished, namely policy making, which has to do with goal setting and normative criteria; planning, which relates to modelling; and decision making, which results in action. Clearly they are interrelated, and must be elucidated and planning at least must be properly defined.

One of the first and best elucidations of the distinction between policy- and decision-making was made by Simon,¹² who was a pioneer in concerning himself with the mental processes behind human behaviour rather than its various manifestations. He held that "the central concern of administrative theory is with the boundary between rational and non-rational aspects of human social behaviour".¹³ Simon assumes that at least within organizations, human behaviour is intendedly rational, but that the rationality is limited by the conditions in which it is exercised. He sees that any action, or unit of behaviour, is preceded by a decision to act, and his work is therefore an exposition of a theory of rational decision making, and the use of logic under conditions of uncertainty.

In order to isolate the domain of rational decision making Simon had first to detach non-rational modes of thought from his field of discourse; he therefore made the positivist distinction between matters of fact and matters of value. Simon is quite definite that decision making is deduction from premisses,¹⁴ whereas policy making is basically the ordering of a hierarchy of values or norms which act as criteria. He maintained that "democratic institutions find their

principal justification as a procedure for the validation of value judgements".¹⁵ According to him there is no scientific way of making such judgements, no formal expertise which is a qualification for making them, they are not susceptible to the processes of analytic logic.

Our administrative activities could therefore be improved if matters of value were more accurately assigned to the legislature, while matters of fact were assigned to the administrative organs. Thus Simon drew the distinction between matters of value which belong to a normative domain, and matters of fact which are susceptible to rational decision making in an analytic domain, but he did not distinguish any further (at least in this early work).

All forms of mental activity other than policy-making were regarded as decision-making, which he saw as choosing between alternatives - ideally all possible alternatives whose outcomes were known. As it is impossible in practice to consider all alternatives Simon coined the term to "satisfice", or choose the best available, which has now passed into the language of administration.

Simon did not ignore the planning process, but he tried to fit it into his decision making rationale. For instance he discusses the factors that affect administrative behaviour and the integration of these factors in the following way. He says that it takes place in three steps:-

- "i The individual (or organization), makes broad decisions regarding the values to which he is going to direct his activities and the knowledge, skills and information he will need to make particular decisions within the policy the decisional activity just described might be called substantive planning.
- ii He designs and establishes mechanisms that will cause the day to day decisions to conform to the substantive plan. This decisional activity might well be called procedural planning.
- iii He executes the plan through day to day decisions and activities that fit in the framework provided by steps i and ii."¹⁶

This analysis is somewhat marred by the fact that Simon violates his own canon by bringing values and policy into his first step. According to his own philosophy the normative policy decision should

precede any decision making in the analytic domain. However, the integration of 'knowledge, skills and information' may well be described by the term substantive planning. Thus with a slight emendation the series might be expanded to four steps - policy-making, substantive planning, procedural planning, and decision making. This seems to be quite an accurate description of what takes place in practise, and these terms will be useful later in this study.

However when Simon tries to explain the planning process he is not convincing. He maintains that the psychological processes involved in planning consist in "the selection of general criteria of choice, and then particularizing them by application to specific situations".¹⁷ He gives two examples from the field of engineering - the 'selection' of a railroad route from point A to point B, and the 'selection' of a dam site. No engineer would agree that his mental processes in such an exercise are limited to mere selection, however sophisticated. He knows that before he can make any selections he must integrate a great many factors - geographical, geological, structural and financial into a scheme, however tentative, before he can decide whether it will satisfy his value criteria or not. It is the formation of such a scheme that the engineer would call 'planning', and it cannot be described by 'applying general criteria of choice to particular situations'. Thus while Simon made the necessary step of showing that policy making and decision making are not only different processes but different kinds of processes, with different criteria of validity, he was so concerned to establish his decision making rationale that he failed to perceive that there could be a distinction not only between policy making and decision making, but between these two and another kind of mental process, namely planning. One of the objects of this study is to make this distinction perfectly clear, and therefore a definition must be found which does not confuse planning with any other process. The definition used here is:-

"Planning is the integration of elements into a system".

The word integration is used because it implies the synthesis of the elements into a whole. Systems theory will be discussed more fully

later in the study, but at this stage it may be emphasised that a system is not an arbitrary concept - the elements of a system must be interdependent in some way, there must be a causal network operating, there must be a discernable structure. Thus if a system is to be constructed the elements thereof cannot merely be put alongside each other, they must be brought into a determinate relationship, which must be specified.

It is hoped that it is clear that this kind of activity - the construction of a system, the integration of its elements into a whole, is quite different in nature from policy making or decision making, and that the given definition brings this out. In fact it is proposed to relate these activities to three different cognitive domains, and this will be done in the next chapter through an analysis of the nature of models.

I.6. Summary

It was found on consideration of a variety of sources that planning is a word of wide, vague and varied connotations. Furthermore it is used in business literature to mean the same thing that we mean by 'policy-making' in the public sector. Therefore the distinction drawn by H. Simon between policy-making and decision making were cited to anchor the policy-making process into the normative domain, while accepting the notion of decision-making as basically deduction from premisses. Somewhere between these two must lie planning, here defined as the integration of elements into a system. Thus the analysis begins with the identification of three modes of cerebration which lie at the root of administrative behaviour - policy-making, planning, and decision-making.

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CHAPTER 11

MODELS2.1. Introduction

In this chapter planning is considered as modelling, and an examination of the nature of models clarifies the planning process further. It is shown that analytic, synthetic and normative domains of thought or cognition correspond to decision making, planning and policy making modes. This, it is hoped, establishes a logical and coherent rationale for the behavioural processes underlying administration.

The nature of mathematical models is also considered. Such models are related to or developed from operational research, and are appropriate particularly for the operational levels of organizations.

In some areas, however, mathematical statements are not possible, and verbal and qualitative statements must suffice.

2.2. Planning as Modelling

In planning the system that is created is hardly ever a real system - as has been pointed out above, it is a model.

"A model is a simplified stylized representation of the real world that abstracts the cause and effect relationships essential to the question studied."¹

According to Beer there are four key notions about a model which must be present if the model is to be adequate; one, there is scaling down in size and complexity; two, there is transfer across, where the actual parts of things are represented again in their relative positions; three, there is workability, the ability to operate like the original; four, there is appropriateness, which means that those aspects of reality we want to manipulate must be present in the model.²

Another key notion which must be introduced here is Ashby's law of requisite variety.³ This law pertains to control systems and states that control can only be obtained if the variety of the control system is at least as great as the variety of the system to be controlled. (Variety is a cybernetic term, and is defined as "The total number of possible states of a system, or of an element of a system"). This may be applied to models by requiring that the model of a

system must match the system in variety - at least in the sphere in which it is held to be appropriate.

Now the total number of possible states of a complex system is not something to be passed over lightly. In a binary system such as a computer this number is 2^n where n represents the number of bits in the system. That is, increases in complexity are exponential compared to increases in the number of elements. We learn likewise from information theory that the number of pairs of people in a system is n^2 where n is the number of people, and if other combinations than pairs are considered the multiplying effect soon reaches fantastic proportions.

This fact accounts for another source of confusion or even conflict over the notion of planning. Ordinary individuals are quite accustomed to planning their own affairs all the time, and devising schemes of every possible kind. Hence - "planning is one of the most simple and natural of mental processes..." Someone who maintains that planning is a complex and difficult process may be regarded as needlessly esoteric. The point is that while only a few elements have to be integrated to form a plan it is indeed a simple and natural process and can be done quite easily by pattern recognition or a bit of arithmetic. However as soon as the number of elements begins to proliferate the relationships between them become exponentially more complex and difficult to handle, and various devices must be resorted to to reduce the variety of manageable proportions. These devices are the techniques of planning.

Another very important aspect of planning which is revealed by regarding it in the light of systems theory is that any element, whether it be information, symbol, or real object, can only be integrated into a system if it is compatible with the other elements in the first place. This may seem to be a truism, but the consequences are not trivial. It brings out the fact that any one plan is always particular - it must refer to a coherent segment of reality, whether it be a budget or a building, and relate to a particular field of information.

This is why planning is so often discussed in terms of its application to special fields of knowledge - town planning, financial

planning, manpower planning and the like. The planning process in fact sorts out information into such fields and sub-fields. As the number of elements or the amount of background information increases, and therefore exponentially the complexity, the planner is forced to specialize and acquire methods and techniques for reducing variety, and this is the basis for professionalism.

2.3. The Nature of Models

It must be clear from the above definition of planning and its implications that it is of very little use to consider the many specialised applications of planning in professional fields - at least not until it is established exactly what fields the administrator is concerned with. It is not appropriate to try to teach administrators town planning or education planning - such activities must be left to the professionals concerned. However once attention is switched from the field to the model thereof something useful may well be learned, because in the first place the enquiry is considerably simplified, and in the second place the results have general application which is exactly what is required.

There are only three basic kinds of models:-

1. Physical models exactly reproducing some aspect of the original, such as a model railway.
2. Verbal models, using concepts and propositions.
3. Mathematical models using figures and formulae.

The first type is appropriate to technology rather than administration, but the latter two will now be discussed.

2.3.1. Conceptual Models

Verbal communications, and the symbolic codes by which they are conveyed and recorded, comprise concepts and propositions which are studied in the sciences of communication and logic. Any verbal model, to be successful, must conform to the canons of logic and the rigours of information theory. It is not intended to go too deeply into this subject, but as reference has already been made in this study to the different cognitive domains in our realm of discourse, as they have different criteria of validity, and as the processes we call policy making, planning, and decision making fall

into different domains, these must now be made explicit.

First of all language has certain uses and functions, (ritualistic or exhortatory, say), whose purpose is not to convey information, but to impose a mood. These are not under discussion here.

Language is here considered as a vehicle for carrying information, which must be understood to be effective, and must also be reliably related to reality if it is to lead to successful action. Information is assimilated in an act of cognition which contains a mental judgement according to its reliability or truth status according to criteria which vary in three recognisable domains, the analytic, the synthetic, and the normative.

2.3.1.1. The Analytic Domain

In the analytic domain truth is determined by "inspection of the formal or structural relations of signs to other signs rather than any empirical meaning the signs may have. In that sense analytic truths are syntactical."⁵

In logic propositions can be represented by signs and their relationships presented in formulae without any substantive meaning - for example $p \rightarrow q$ conveys that the term p implies the term q . The further proposition $q \rightarrow r$ enables us to write:-

$$p \rightarrow q$$

$$q \rightarrow r$$

$$\therefore p \rightarrow r$$

None of these signs refers to anything concrete, but it can be said that if the first two statements are true, the third must necessarily be true. It is true by virtue of its conformity to the transformation rules of logic. Thus analytical truths are verified by inspecting the logical properties of assertions in which they appear.⁶ Since the logical properties of analytical propositions are either correct or incorrect in terms of these rules it can be said that their correctness validates them completely, and in this respect they are absolutely reliable. It is this characteristic of absolute reliability associated with deduction from premisses which has fascinated theorists such as Simon, and sponsored so many attempts to rationalise administration. Unfortunately our mental processes are not confined to the analytic domain.

2.2.I.2. The Synthetic Domain

In the application of logical method our terms have to have real referents, which immediately introduces an element of uncertainty. The semantic validity of the terms lies in their correspondence with something real, and this correspondence is established by interpersonal observation and agreement. The claim that some term describes a real phenomenon, whether a concrete object such as a stone or a tree, or an abstraction such as faith, hope or charity, is an empirical claim. Such a claim is never absolutely valid because it is mediated by the fallible observer - it is probabilistic and corrigible. This observation goes all the way back to Kant's Critique of Pure Reason, written in the eighteenth century.⁷ To Kant an analytic judgement was possible only in the field of pure logic or pure mathematics, everything with a real reference was synthetic; and by synthetic he meant something that was only an appearance, not the "ding an sich", or thing in itself, which according to Kant we can never know. This usage of the word 'synthetic' was picked up by the Logical-Positivists and is the usage found in the work of Gregor to which reference has been made.

There is a further distinction to be made between deductive and inductive logic. Inductive reasoning moves from the particular instance to the general law. As an example, I may perceive that an object O_i has an attribute A, and that another object of the same class, O_{ii} also has the attribute A, and infer that all objects of the class O_n have the attribute A. This inference may be expressed in a law, or lawlike assertion, thus - $O_n \rightarrow A$. This law remains conditionally acceptable until such time as an object of the class O is discovered which does not have the attribute A. Because induction is so characteristic of the real world Gregor places it in the synthetic domain.⁸ If his classification is tabled in a simple matrix it looks as below:

	Analytic Domain	Synthetic Domain
Deductive reasoning	X	
Inductive reasoning		X

With two of the boxes empty this is not a happy classification, because it is quite possible to represent induction symbolically, and

it is also quite possible to make deductive propositions containing real terms. A familiar example is "All men are mortal, Socrates is a man, therefore Socrates is mortal", a syllogism found in every logic primer since Aristotle.

What seems much more reasonable is to tie analysis and deduction together on one hand, and synthesis and induction on the other hand, and keep the distinction between abstract and empirical propositions separate. The matrix could then be arranged as below:-

	Analytic (deductive)	Synthetic (inductive)
Abstract	X	X
Empirical	X	X

Not only are all the boxes full and their contents clear and consistent, but the word synthetic regains its proper meaning which connotes putting things together, in contrast to analysis which is taking things apart. The word 'synthetic' could then be quite appropriately extended to other processes than induction, such as analogy, pattern forming, the abstraction of similarities, and the formation of elements into systems - processes which are constructive or divergent rather than merely extensive. This classification is preferred here but it must be borne in mind that the Kantian usage of the word 'synthetic' is so strongly entrenched in logic and philosophy that experts in these disciplines would probably have to reject this emendation of their familiar terms.

The position has arisen that mental processes that are not catered for in formal logic, such as intuition, imagination or supposition have been dubbed "creative thinking" and made to fall in a class of their own in artificial contrast to scientific thinking, which is limited to the closed analytic and synthetic domains proposed by Gregor. The development of computer science and its heuristic and stochastic routines shows that scientific thinking does not stop short at induction, and indeed one author in this field formally announces the "marriage" of creativity and science.⁹

Since planning makes use of creative thinking some account will be given of developments in this sphere, which is regarded as an extension of the synthetic domain into another mode, which could be called constructive, thus:-

	Analytic (deductive)	Synthetic (inductive)	Synthetic (constructive)
Abstract	X	X	X
Empirical	X	X	X

It will appear that although the formulation of a plan happens in the constructive mode, during the planning process the mind shift from box to box or operates in several simultaneously, a proclivity which makes planning almost impossible to describe.

Among the techniques that have been developed for constructive thinking are:- Brainstorming, the Little Technique, Synectics, Phillips 66, Matrix Analysis, Black Box Technique, and Scientific Problem Solving.¹⁰ The latter, known as SPS, is perhaps the best developed, and begins by identifying two types of thinking:-

- Creative, or divergent thinking
- Judgemental, or convergent thinking

Judgemental thinking is in effect the scientific method relying on deductive logic in the empirical sphere.

Creative thinking is said to have four steps:-

- 1 Preparation
- 2 Incubation
- 3 Insight or illumination
- 4 Verification

No-one professes to understand how step 3 occurs in the mind, (as Gregor said, there is no determinate logic of discovery),¹² but in SPS it is simply accepted as a phenomenon which can be used - even assisted and developed. This is done by formalising the process of SPS so as to include creative thinking. Nine steps are discerned, each of which alternates between creative and judgemental sub-steps, and the author is not afraid to call on serendipity (fortunate happenstance) as a factor in problem solving. The whole process is claimed to be the result of considerable research, and to represent what creative scientists from Archimedes to Einstein actually do in solving problems. Thus it might be called a method of bringing the Eureka effect (so called in honour of the well known fable about Archimedes) under control.

In view of the previous discussion of the word 'synthesis' it is of

interest that planning by this method is discussed under the sub-head Synthesizing a Plan, an exactly correct use.¹³

It is noted that planning is accomplished by a long process of associating, comparing, and refining sub-, sub-sub-, and sub-sub-sub-plans, feeding information backward and forward, and oscillating between the various stages of SPS, that creativity and judgement must alternate, and that there is a distinction between plans for action, and plans for the implementation of plans for action.¹⁴ Thus there is a planning process which is synthetic in nature, involves creative or divergent thinking, is found indispensable to the management of affairs and has two phases, namely the construction of a concept or system of concepts and the activation or realization thereof. For this purpose two models are generally needed, one is the substantive model of a system or a proposed system which does not only illustrate the system, but can be used for the simulated operation thereof; the second model is a plan of action which refers to a distinct time epoch. Both plans are indispensable to communication and control.

2.3.I.3. The Normative Domain

Normative discourse is concerned with values, as the name implies. There is a class of fundamental values - Liberty, Equality, Fraternity, - or Truth, Beauty and Justice, which are used evocatively to engage our interest; our interest is simply the conditions of existence we aspire to.¹⁵ We are interested that a situation should prevail where these values obtain. However these primary values lack definition, they lack systematic coherence, they lack empirical content. In any specific normative discussion proposals are made which hinge on the realization of one or another of these primary values through a hierarchy of subordinate values which in the end motivate some particular course of action. The Form of argument is in normal analytic or synthetic reasoning, but the terms are funded in empirical circumstances and human volitions which express wants and needs which are subjective, changeable and fluctuating. Thus normative discourse is always relative. Its functions are to sort out and provide norms and standards as a basis for value judgements, and further, to motivate, by engaging our interest. Most normative discourse is therefore perlocutionary,¹⁶ it is calculated to exercise some influence, to

produce some effect. The normative domain is the domain of evaluation, of prescription, of proscription.¹⁷ It involves the Setting of objectives, and as far as public administration goes, this is the realm of policy making. The formulation of public policy is a normative exercise of great scope and variety. Public planning is evaluated against policies which are definitive norms enshrined in acts of legislation. Only in the light of such evaluations are the decisions made which result in action, the choices determined, the exercises undertaken.

Policy is in fact constantly being evolved to provide criteria for the evaluation of plans so that decisions may be taken as to courses of action. In this constant activity the normative, synthetic and analytic domains form a unified field of discourse characterised by volitional, inductive and deductive modes of thought whose interplay constitutes the modus vivendi of Public Administration.

2.3.2. Mathematical Models

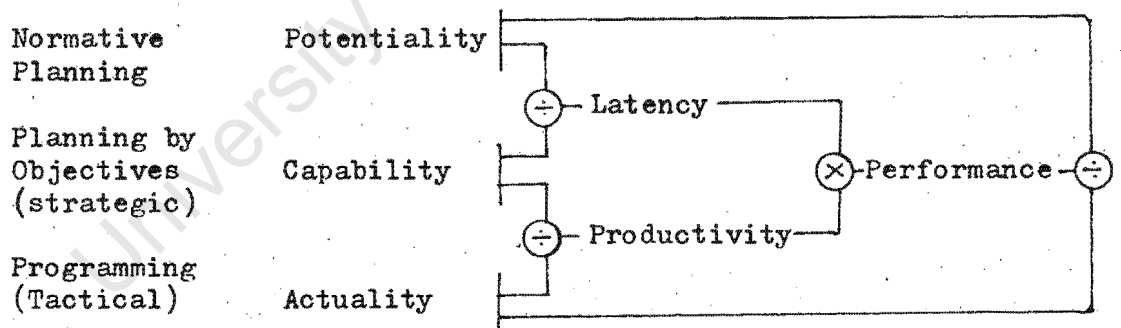
It is unfortunate that mathematics is a kind of bogey to so many people. Having struggled through the minimum at school they simply forget the whole subject. In many western countries this has become a cause for concern as mathematical ability is seen as a prime resource in the modern state.¹⁸ This is the educational problem of innumeracy. The effect it has in the Republic or anywhere else and on administrators as much as anyone else is that "their attitude to even the simplest mathematical equations reflects the primitive tribesman's approach to his ju-ju rather than a civilized curiosity about a rich field of human knowledge."¹⁹ The appearance on a page of some such "terrifying monster" as $ax^2 + bx + c = 0$ is enough to cause the reader to put the book hastily back on the library shelf in favour of something that does not tax his brains.

But speaking of the development of new theories in sociology and industrial organization Rashevsky has been quoted as saying that "many significant areas of these disciplines have already been removed by the advances of the last two decades beyond the reach of anyone who does not know mathematics."²⁰

The clerical background of most administrative cadres accentuates this

problem in public administration, but it will have to be faced sooner or later. The stock argument that the government provides unquantifiable services, that there is no direct payment involved, and that there is no profit motive and therefore no financial gauge of government activities or efficiency is becoming suspect. (See the discussion of exactly this argument in chapter V.) Furthermore quantification in terms of money is not the only way to determine efficiency or establish control over it. For instance Beer has proposed a set of ratios which can be used for this purpose as follows:²¹

Firstly the actual performance of any function (considered as a rate of transformation, for example) is determined by inspection. This is called the actuality. Next the maximum or optimum performance, given it is carried out by present methods but with 100% efficiency, is established, and this is called the Capability. Finally the potentially best performance is assessed on the assumption that maximum technical and organizational improvements are made to the process, and this is called the potentiality. The table below then shows the system of ratios which can be derived, together with the type of planning that goes with each parameter according to Beer's system.



According to Beer the use of these ratios, which are pure numbers, gives a very quick and clear indication of changes in performance when used in a cybernetic model. Thus if any system is modelled, and all the transactions in it are quantified, (not necessarily in money), then it is possible to set up a mathematical simulation of the system in which all the dependencies of the different variables can be precisely formulated. The creation of such an operable simulation or model is in fact indispensable to systems analysis because it is the operation of the model which makes feedback and control possible. (The outline of such a model will be built up in chapter 111).

Such a simulation is usually an exercise in Linear Programming.²² Being the integration of mathematical terms into a formula it is the main mathematical form of substantive planning.²³

The main mathematical form of procedural planning is network analysis, or critical path method, fundamentally an elementary concept which needs no higher order skill than simple arithmetic.

Apart from linear programming and network analysis there is a whole spectrum of mathematical techniques which have a wide variety of applications, many of which were developed for operational research during world war II.²⁴ Some that might be mentioned are queuing theory, matrix algebra, analytic geometry, linear inequalities, theory of probabilities, and of course, statistics in all its branches.

2.2.3. The Limitations of Mathematical Models

In mathematical modelling there are normally two steps, first the identification of variables, and second the establishment of the relationship between them. According to our definition of planning it is the 'elements' which are the variables, which have to be integrated in this case into a system of mathematical relationships.

As was indicated before the elements must belong to a compatible system in the first place, and if they are variable quantities it must be possible to assign them some value, if only for the purposes of an exercise. If the elements are incompatible, or if no values can be assigned, no calculation can be made. It must be stressed that the use of a mathematical model is justified solely by the single criterion - can I, by using this model, make a meaningful calculation. If not, the model is spurious.

As an example, Galbraith explains a 'motivational' model which describes the 'force' on a person to perform an act as below:-²⁵

$$F_i = F_i \left(\sum_{j=1}^n E_{ij} V_j \right)$$

where F_i = the force to perform act i

E_{ij} = the strength of the expectancy that act i
will be followed by the outcome

$j, 0 \leq E_{ij} \leq I; \text{ and}$

V_j = Valence of outcome j as determined by equation 17.2.

This so-called equation could never be operated because none of the 'variables' could ever be quantified.

As Abell has pointed out,²⁶ if any individual's action is explained in terms of some scheme or structure such as:

"A intends that X should come about
and A believes that in a situation he describes as S
 if, and only if, he does x that X will come about;
 ∴ A does x.

Such an explanation of A's action is (1) not dependant on any universal generalization, (2) not dependant on the truth of the statement that the situation is in fact adequately described as S; (3) the 'objective truth' of the statement that x will bring about X it starts and terminates with A's interpretations and objectives."²⁷

Thus any attempt to describe A's behaviour by relating A S x and X in any kind of formula is doomed by the subjectivity of the phenomenon, and it would not be possible (supposing the formula were somehow made to work), to extend it to apply to any other individual whose subjectivity was different.

Apart from this the algebra used to link the variables is itself a variable. Informed laymen have long known that Euclidean Geometry is not the only geometry, and that both the number of dimensions and the basic postulates can be manipulated to create any number of possible geometries. The Algebra we normally use is specifically the Algebra of complex numbers, but there are other algebras.

One of these is Boolean Algebra, named after the British mathematician who invented it in the last century to apply to propositional logic. It also applies to set theory, switching circuits, binomial arithmetic, diode electronics, and since the computer revolution has become increasingly important.

Thus it is perfectly valid to enquire, in respect of the variables A, S, x, and X quoted above, (supposing we want to formalise them), should we use the algebra of complex numbers, or Boolean Algebra, or perhaps some other algebra.

In fact, considering any administrative unit as a switching system, a logic circuit, or a decision making set, - all quite valid approaches - it is much more likely on the face of it that Boolean Algebra will

apply than not.

Once one moves to the sphere of symbolic logic, where the whole idea is to develop a calculus, (and Boolean logic does this), then one is on the bridge between the perceptual qualitative domain, and the conceptual quantitative domain, and the distinction between mathematical models and verbal models becomes blurred.

In these realms the social scientists should be wary, because behind the strange looking symbols and the mathematical pyrotechnics there may lurk a concept which could be far better expressed in a single sentence. Nothing invalidates a verbal statement as a model - they are all sets of symbols, and we should stick to the ones we understand.

It seems to be the case that the further one moves away from physical operational situations towards the human behavioural situation, the less likely is one to be able to find an appropriate quantifiable formula to describe it. Nevertheless mathematics is not only algebraic formulae. A geometrical model is often highly appropriate as a descriptive device which also contains an implicit logical pattern which can immediately be 'seen'. In switching theory, set theory, even propositional logic, the basic relationships can often be much more clearly illustrated in, for example a Venn diagram, than by a formula. The brain is so constituted as to be expert at pattern recognition, it is not normally so expert with series. A non-mathematically minded layman can easily see what is meant by the intersection of a set if it is illustrated graphically, and he can also see the nature of a Boolean relationship if it is illustrated by means of a simple switching circuit, whereas a string of peculiar looking symbols will convey nothing to him at all.

Mathematicians say that human thinking is 'non-linear', and therefore ones apprehension of a linear equation is much clearer if it is displayed in a graph. The concept of a circuit, which is the backbone of information theory and cybernetics, is for this reason particularly useful in organization theory, as the dynamics of a system is easily illustrated this way. So long as one bears in mind that one is working on a two-dimensional piece of paper, and that multi-dimensional problems must therefore be broken down into sections, one can use geometry as a kind of lay mathematics, and as such it is

a better medium of communication than algebra.

2.4. Summary

In this chapter conceptual verbal models were examined and it was found that the deductive mode of decision-making belongs in the analytic cognitive domain, the constructive mode of planning falls in the synthetic domain, and the valuational mode of policy-making in the normative domain. Some approaches to the methodology of constructive thinking were touched on. The mathematical model was then considered, but although the advantages of computation are obvious there are two snags - firstly, it is not always possible to find quantifiable variables, and secondly the method of computation is itself sometimes dubious. However geometrical models in particular can be very illustrative of some kinds of relationships, whether or not they can be used for any kind of calculation.

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CHAPTER 111

CORPORATE PLANNING

3.1. Introduction

In this chapter we turn to a specific type of planning - Corporate Planning. This is defined and its scope outlined in the first section, and then various models are considered. Before turning to the structural and dynamic aspects some of the theoretical background of organizational theory is introduced - system theory, information theory and cybernetics. The system is illustrated with structural and dynamic models, and various versions offered by Beer, Argenti and others are analysed in some detail.

3.2. The Scope of Corporate Planning

We now turn to the notion of corporate planning as a field in which planning, as defined in the last chapter is carried out. Corporate Planning as a concept arose in the United States during the sixties, and is now recognised - in large scale organizations particularly - as an indispensable management tool. "Corporate Planning involves planning the company as a whole, - a corporate whole."¹ It is also related to a long range time scale.

"As the size and complexity of commercial and industrial enterprises continues to multiply, the time lag between decisions and their consequences is increasing. Accordingly, there is a growing need to plan ahead, in order to anticipate threats, identify opportunities, correctly allocate total resources, and ensure that a business is never overwhelmed by events, or is placed in a position where there is little room left for manoeuvre.

To ensure profitability a business must be able to react effectively to accelerating sociological and technical changes, and keep ahead of its competitors. Consequently more and more companies are making use of long range corporate planning to assist them to achieve increased profitability, and long term profitable growth. In essence corporate planning is a systematic way of running a company so that it anticipates and can profit from change. It symbolizes the intellectual approach to management and determines courses of action based on searching analyses of the significant factors affecting company performance."²

The referendum of the word 'corporate' is thus originally the modern business corporation, which implies a large and complex organization - often international in its operations, consisting of a varying

number of subsidiary companies interrelated by product exchange or resource exchange, and sharing pools of expertise, personnel, and finance.

Of course the word corporation has the more extended meaning of any legally constituted body which has a legal persona, can own property, can sue and be sued, and has a continuing existence. In this study this extended meaning is accepted because it reflects the extension of the term to the public sector and large governmental systems such as the Cape Provincial Administration.

Corporate Planning then implies the design of such large systems, considered as wholes, or to use Koestler's term, Holons, a holon³ being any entity in a hierarchy or system or hierarchies which can be identified as having its own code or canon. The elements from which the plan must be built can be extracted from an analysis of such organizations, including their internal structure, dynamics, boundary transactions and the environment with which they interact.

Such analyses are not simple, and over the years different aspects have been emphasized and studied in a vast literature dating back to the scientific management of Frederick Taylor, and the studies of Max Weber and Henri Fayol. It would be out of place in a study of this kind to attempt a complete review. What can be done is to indicate the dimensions of the problem, give some idea of modern approaches - particularly systems theory - and provide a conceptual framework wherein corporate planning can be located both as to its matter and its function.

Part of this framework has already been provided in getting to grips with the concept of planning as a type of intellectual endeavour. In what might be called the conceptual dimension it is held that the rational behaviour of people in organizations consists of policy-making, planning, and decision making - without, of course, losing sight of the operational activity which is the object of the whole business, but which is inevitably particular, sometimes technical, and therefore eludes this type of general analysis.

In an organization, then, a number of individuals, through their behaviour, carry out some processes in time, which realizes the objectives of the organization. Their roles, in carrying out this

process, are defined by some structure - they have an agreed relationship depending on the division of labour and the method of co-ordination.

The structural (or static, or cross-sectional) parameters of the organization are in a different dimension from the processes (or dynamics, or longitudinal activities), which they contain.

In the classic organizational jargon, behavioural, structural and procedural parameters were all jumbled together in such prescriptions as POSDCORB,⁴ (Planning, Organizing, Staffing, Directing, Coordinating, Reporting and Budgeting.) Similarly in Public Administration it is held that it consists of Policy, Organization, Personnel, Finance, Procedures, and Control.⁵ This approach is now seen to be inadequate, although it still has its uses.

"The recitation of procedures for men to follow in 'planning, organizing, directing and controlling' might have been left to the level of instruction typified by the rules of behaviour in the boyscout handbook. A clear conception of management is not to be found in the repetition ad nauseam of such shibboleths".⁶

Such a trenchant condemnation is a little exaggerated, but certainly more sophisticated approaches have been developed. These arise out of systems theory, information theory, and cybernetics.

3.3. Some Theory

3.3.I. Systems Theory

So complex and highly specialized and compartmented has scientific research and endeavour become in these times that many scientists (of whom L. von Bertalanffy is the doyen), felt the need for some means of re-integrating studies in diverse fields where the theoretical considerations seemed to be tending to similar kinds of conclusions, there was overlap in research, there were illuminating discoveries in related fields going unnoticed, and generally reductionism and the fracturing of the conceptual world of science as a whole was becoming intolerable. The remedy was systems theory. "In one way or another we are forced to deal with complexities, with 'wholes' or 'systems', in all fields of knowledge. This implies basic re-orientation in scientific thinking".⁷

The Society for General System Research was founded in 1954 in the United States by von Bertalanffy, a biologist, Boulding, an economist, Rapoport, a bio-mathematician, and Gerard, a physiologist.⁸ Together with the theory of games, (von Neumann and Morgenstern), information theory, (Shannon and Weaver), and cybernetics, (Wiener), which all appeared in the late forties, systems theory (which according to von Bertalanffy includes them all), rapidly gathered adherents and generated what Kuhn⁹ might describe as a scientific revolution and the introduction of a new paradigm. During the sixties systems theory penetrated the field of business management, and had such an impact that Beckett could say:-

"No longer is it necessary for man to see management as fractionated, inconsistent, and contradictory parts; no longer is it acceptable to visualise management process as a series of man dominated functions. Systems theory has provided a welcome release from the dichotomies, myths, clichés, shibboleths, and platitudes that have dominated management theory in the past." 10

System theory consists of a cluster of methodologies surrounding the idea of a 'system' consisting of 'parts in interaction'.¹¹ These are the "classical" theory, applying classical mathematics (i.e. calculus), computerization and simulation, compartment theory, set theory, graph theory, net theory, cybernetics, information theory, theory of automata, game theory, decision theory, queuing theory, which are all mathematical models. Of course as we have seen, mathematics is not always applicable, and in such cases "a verbal model is better than no model at all, or a model which, because it can be formulated mathematically, is forcibly imposed on and falsifies reality."¹²

In respect of organization, the "notions of wholeness, growth, differentiation, hierarchical order, dominance, control, competition, etc.,"¹³ can be dealt with in system theory. von Bertalanffy was here talking of biological organisms, as well as societies, but it is characteristic that such a catalogue should be perfectly apt in relation to a business company.

Furthermore, although all this mathematical apparatus is available, it is not a sine qua non for thinking in terms of systems. In terms of our definitions we ourselves must plan systems, therefore it is

encouraging to be told that:-

"Another completely erroneous idea is that corporate planning is enormously sophisticated and advanced. Big-Company corporate planners certainly like to use such techniques as computer models, risk analysis, cross-impact analysis, and directional policy matrices. My belief is that none of these is of much use."¹⁴

Argenti was making the point that a corporate planner should not get bogged down in the detail of sub-plans, but keep his attention firmly on the broad picture. The broad picture is sometimes simply a statement of a few sentences.

3.3.2. Information Theory

An important sub-field of system theory is information theory. It is mathematically highly developed but the basic concepts and terms are easily illustrated diagrammatically. First a general model of information transfer is proposed, as in diagram 3.I. ¹⁵

The model can be quantified by considering the rate at which information can be produced compared with the capacity of the channel. The content of the message is not considered, what is significant is the problem of transmitting it. The theory of probability is applied to information considered as a set of choices (yes or no) made at a binary digit, or bit as it is called. Since computers also work on a binary system the theory applies to them too. Various aspects such as the manner in which series of choices can reduce variety, the amount of redundancy in a message, binary coding, and the filtering of noise are all treated mathematically in information theory. Some knowledge of the concepts involved is indispensable to management theory, since all management systems are communication systems with multiple sources of information and complex networks of information flow. ¹⁶

3.3.3. Cybernetics

Information theory leads into cybernetics, which is the study of communication and control in large complex systems. In fact it can be seen that diagram 3.2. below is homologous with the information transfer diagram shown above, and in fact develops from it.

Here i represents the input from the environment. (The small circles at each end of the diagram could be considered as exchange functions.)

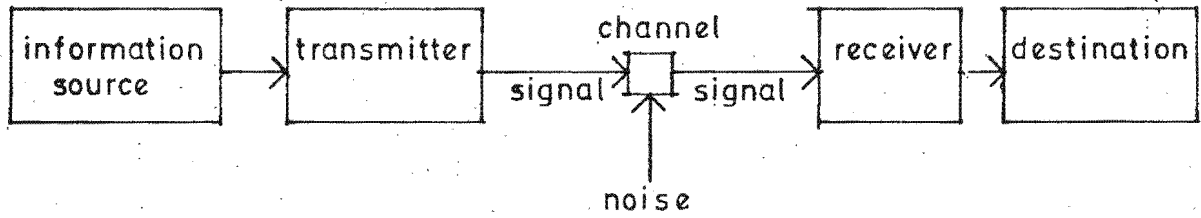


DIAGRAM 3.1.

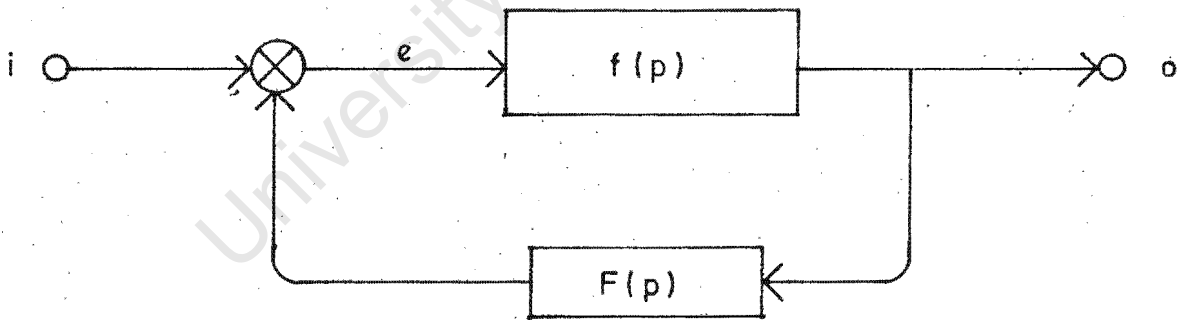


DIAGRAM 3.2.

The main box contains the 'transfer function' $f(p)$ which changes the input to output - shown as the small o on the right. In information theory this would be the amplification of a signal and the gain achieved would be of crucial importance. In cybernetics it is thought of as anything from the operation of a machine in a factory to the service provided by a government department. The return line indicates a monitoring function known as feedback, which has its own transfer function $F(p)$, which operates on the input in some way. In public address systems the output from the loudspeakers sometimes re-enters the system through the address microphone and results in a sudden increase in volume, the most familiar example of uncontrolled positive feedback.

The input as so modified is called e , and the diagram is described mathematically as follows:- ¹⁷

1. $f(p) = \frac{o}{i}$ this describes the forward network without feed back.
2. $oF(p)$ is the value of the output transformed by the feedback network.
3. $e=i+oF(p)$ is the new total input.
4. $f(p) = \frac{o}{e}$ then describes the whole system.

However, to show the effect of the feedback, equation 3 must be put back in the system and an expanded function $O(p)$ can be shown thus:-

5. $\phi(p) : \frac{o}{i}$
6. $: \frac{f(p)}{1-f(p)F(o)}$

Here the feed back is positive if $F(p)$ is larger than zero and negative if it is less than zero. Error correcting feedback must necessarily be negative, as the error must be subtracted to achieve it; to arrange the system so that the feedback must be negative expression 3 above must be rewritten $e : I-oF(p)$, and then equation 6 becomes:-

$$\phi(p) : \frac{f(p)}{1+f(p)F(p)}$$

From this it can be seen that if $f(p)$ is very large, as it is in a

high gain system, the one can be neglected, the $f(p)$'s above and below cancel out, and $F(p)$ becomes the determining variable for the system. This explains how feedback controls the system.¹⁸

Of course this is rather a drastic simplification of the subject of feedback. For a fuller treatment the student might consult chapter four of Wiener's original book on cybernetics, particularly diagrams 4, 5 and 6, from which Beer's formulations indirectly derive. It is also worth noting that the mathematics used to treat feedback refers mainly to what are called linear oscillations, which are by no means the only possible effects of feedback because feedback can be non-linear. As Wiener says with notable understatement, "non-linear systems of equations are hard to solve".¹⁹

Probably the administrative situation corresponds more or less to a model where the sets of variables controlling the equation change their function, but so slowly that the changes can be ignored over the relevant time span. Then the equation can be treated as if it were linear. Such a system is called a secularly perturbed linear system,²⁰ and the mathematics concerned is useful in astronomy.

Thus systems theory plus information theory plus cybernetics constitute a radically new approach to administration, and the relevance of this to planning is that according to Beer the all important function $F(p)$ "is precisely the corporate planning function of the enterprise."²¹

Clearly then, planning is central to system control; the enterprise has a plan and it runs according to a plan and its very structure is planned - "the manager who will be most in demand and who will command the highest salary will be the enterprise designer."²²

In this study system construction is planning, and planning is defined as the integration of elements into a system. Likewise policy making is the setting of standards - the creation of a value structure against which any system must be matched, and finally the operation of a system is handled by the well defined process of decision making. Thus policy making, planning, and decision making constitute a triad, - a system of intellectual action which corresponds to the three cognitive domains of administrative discourse, namely the normative, the analytic, and the synthetic.

3.4. The Structural Dimension

The structural 'shape' of an organizational system is seen as being determined by a large number of factors which are considered as variables, analogous to the variables which prescribe the outcome of a mathematical formula. A recent version of this approach by Galbraith classifies these variables under five heads - Task, Structure, Information and decision processes, reward systems, and people. This is illustrated by means of a diagram,²³ (see diagram 3.3.).

The lines joining the angles of the pentagram indicate the inter-connections between the various groups of factors, and it is held that they form a system in that one cannot be amended without amending another.

At the same time the diagram illustrates the dimensional traps that beset the unwary theorist. Galbraith maintains, quite correctly, that the determinants of the system are first of all the strategic choice of the domain in which the organization will move, and its objectives within this domain. This choice determines the basic task, and the scale and nature of the task generates the setting of all the other factors.

Here it is reasonably clear that 'strategic Choice' and 'goal' are motivational factors in the normative domain; on the face of it informational and decision processes are similarly behavioural parameters; irrespective of the mechanics of their functioning they are not variables in the sense that the division of labour or job design are. Furthermore financial parameters have been omitted altogether, which seems to be an error - the budget format, for instance has a great influence on every other parameter, and is of a structural nature.

Another illustration of the "general framework of a business plan" is given by Ansoff,²⁴ (see diagram 3.4.).

This diagram breaks up the elements of the plan into the strategic parameters, which we would think of as policy-making, the product-market development plan, which is an assessment of the environment and its possibilities, an operating plan, which is related to the processes or dynamics of the organization, and an analysis of the resources of the establishment under the headings of organization,

strategy choice of:

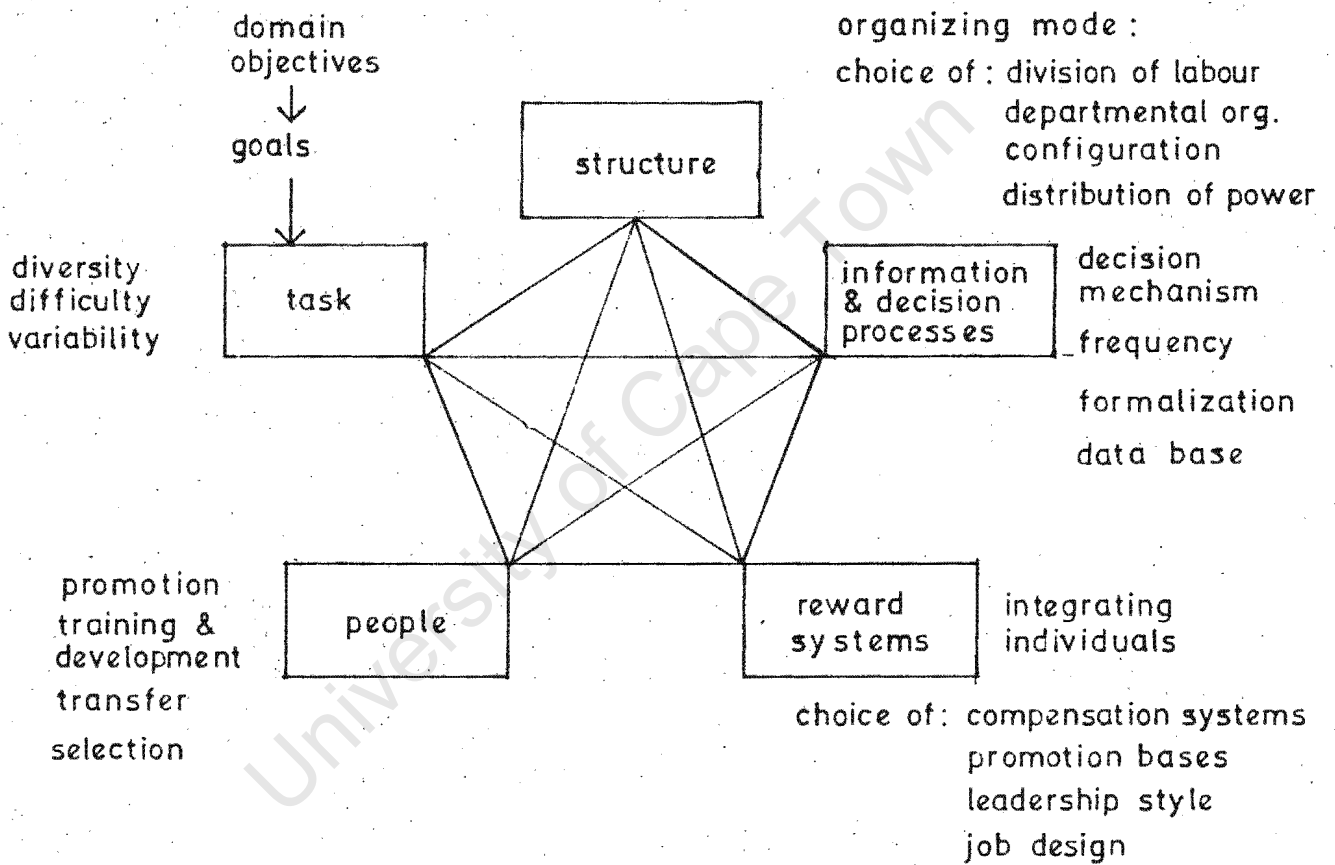


DIAGRAM 3.3.

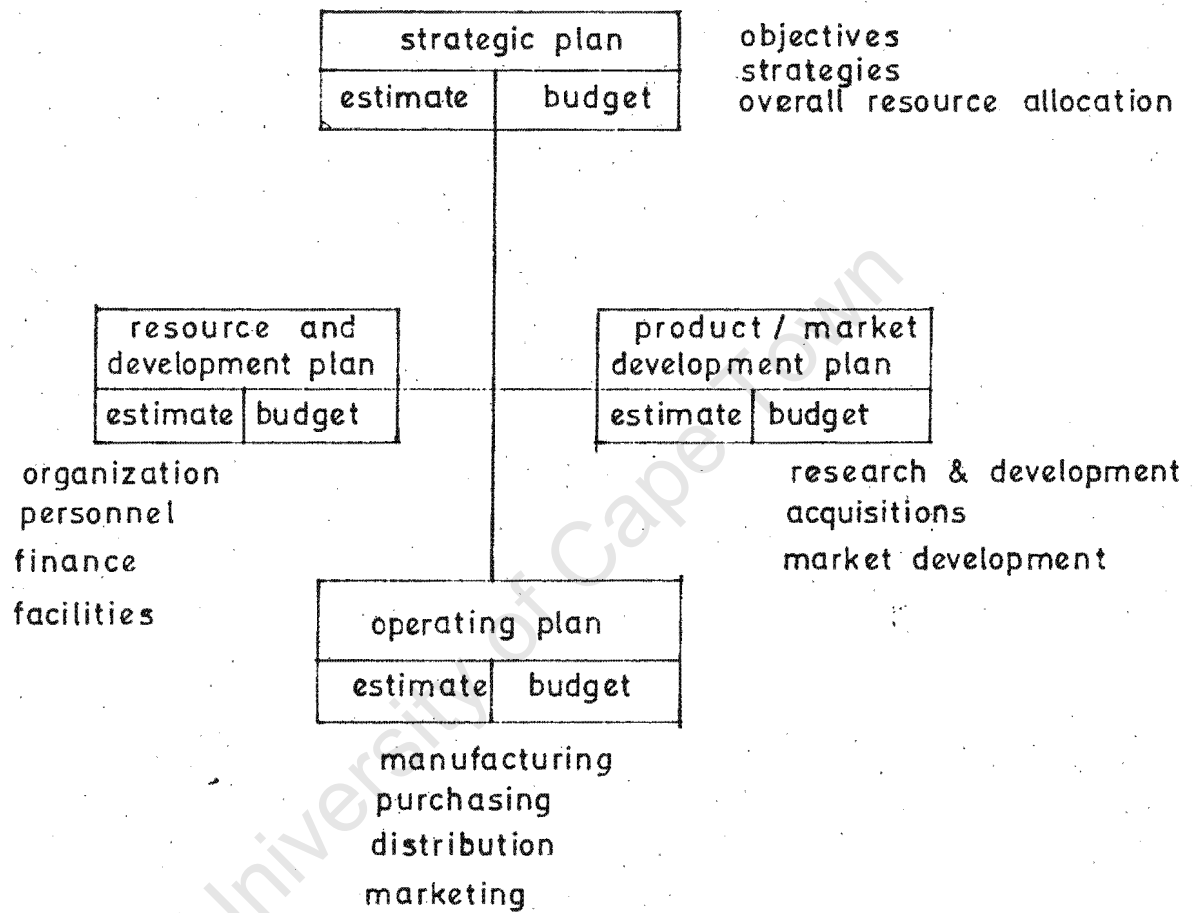


DIAGRAM 3.4.

finance, and facilities.

If the facilities (i.e. Plant and machinery), are ignored, there remain three basic structural parameters - organization, personnel, and finance. These seem to be fundamental. Galbraith's system contains them, but they are disguised rather than clarified by his analysis.

It must be clearly understood that money, as an input, is a different thing from a financial system, in the same way people as employees are not that same thing as the personnel system. Once this is borne in mind it becomes clear that we have here three fields, or disciplines, each of which constitutes a system which can be planned. Thus organization theory and organization planning is concerned with the job-task structure, division of labour, departmentalization, the configuration of the management system and its authority structure. Personnel management and manpower planning are concerned with selection, recruiting, training, promotion systems, compensation scales, career design and retirement. Finance and financial planning are concerned with patterns of resource acquisition, programming, allocation, cash flow and audit.

Each of the fields shows the internal coherence and compatibility of elements necessary for it to form a sub-plan within the general framework or corporate planning, and together they may be said to comprise the inner environment - the anatomy of the system.

3.5. The Dynamic Dimension

Within this anatomy the system operates, in some fashion. However, a different dimension is involved - namely time. The organization must be modelled in a different way to illustrate this. The usual method is by means of an input/output diagram of some kind. The difference between a conventional organization chart and such a diagram exactly illustrates the dimensional difference which we must always be careful not to confuse.

The diagram must show exchanges with the environment, a transform function, and a control system or regulator sustained by an information flow. There are many versions - for present purposes it is proposed to illustrate as in diagram 3.5.

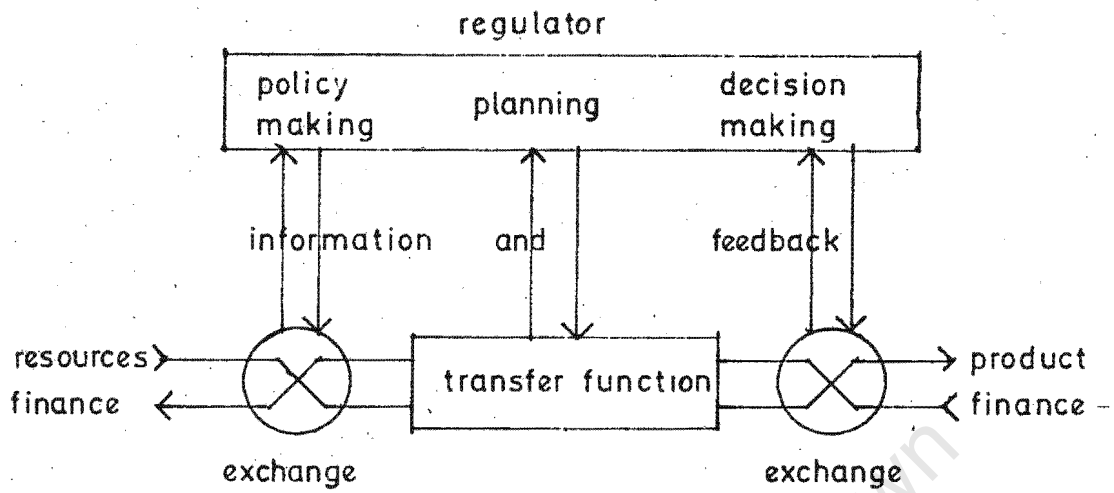


DIAGRAM 3.5.

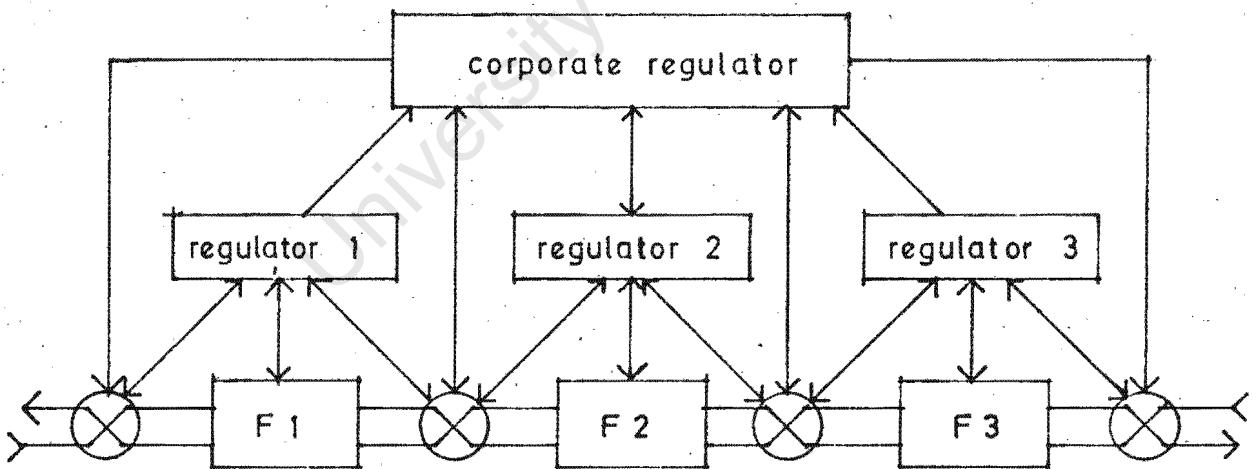


DIAGRAM 3.6.

The way in which the regulator sets the variables of organization, personnel and finance will determine the rates of the exchange and transformation functions, and also their effectiveness and efficiency. At this stage the management or regulating mechanism is merely considered as a 'black box', but of course it has a structure which is integral with that of the input/output system. This structure is the organizational variable, and of course constitutes an alternative model of the system. However we will concentrate for the moment on the input/output model.

Let us now consider the case of a corporation as distinct from a simple company, and let us suppose we have three companies which are subsidiaries, and a corporation which is the holding company. This may now be illustrated as in diagram 3.6.

It has now become difficult to illustrate the various connections, indicating that two dimensions are inadequate and that a different level of complexity has been reached. For this reason a simple case has been given where the products of one company are the resources of another. In reality each company would probably have its own access to the market. However that may be the diagram does illustrate an important effect of this level of complexity, namely that the corporate structure may have the effect of separating the corporate management from the operating system by interposing the intermediate sub-regulator of the company management. At the same time this feature articulates the strategic and tactical levels of the system.

Since we have already discerned three sub-systems and three distinct dimensions in the system as a whole, (namely behavioural, structural and dynamic), it is clear that the planning function is no simple matter but quite a complex exercise articulated into structural functional and operational aspects, statics and dynamics; and that apart from the fact that it may refer to some specialized functional field in the operational sphere, it always has to deal with the parameters of three special fields - organization, personnel, and finance, both on the tactical and strategic levels.

The information flow which will enable a corporate planner to regulate or at least devise the regulation of the system, must come from internal events, boundary transactions, and the environment with all

its complex changes. The activities of the regulator may then be summed up as follows:-

1. Policy making: the strategic choice of the domain in which the system will operate, and the setting of its overall objectives.
2. Planning: the design of the system to achieve the policy objectives by integrating the three variables of organization, personnel and finance; and the design of the operational function.
3. Decision making: the matching of real time events to the parameters of the plan.

Thus the corporate plan is the link between the strategic objectives of the corporation and its daily physical activities, and corporate planning is the creation and constant adjustment of this plan.

3.6. Some Models

3.6.1. The Cybernetic Model of Beer

A corporate plan depends on information and forecasting. One of the models it uses might well be the model of an information system, and cybernetics being the science of communication and control might be supposed to offer suitable models. Here is one devised by Stafford Beer, but before it can be discussed some further terms and concepts must be introduced. One that is important to hierarchical systems is that of the 'meta-system' with its 'meta-language'.

"The greek prefix 'meta' means 'over and above', so a metalanguage is a language of a higher order in which propositions written in a lower order language may be discussed.

In logic, the bases of the metalanguage really are abstruse. It can be shown that (virtually) any logical language must contain propositions whose truth or falsity cannot be settled within the framework of that language - logical paradoxes are the familiar example. These propositions will then have to be discussed in a metalanguage, at which level we may understand what is paradoxical about them." 25

Metalanguages can form hierarchies, and are current in hierarchies of systems, and we can therefore expect to find metalinguistic features in complex systems such as the corporation, whether in the private

or public sector. In the case of a discussion in a lower order language, it will appear that the higher order language is not understood.

Related to the hierarchical aspect of organizations is also the idea of the replication of viable systems. (A viable system is the same thing as Koestler's holon). Such systems are all models of each other in different scales. The elements of a metasystem are viable systems in their own right, in which case they will have all the machinery required for viability, and this machinery will not differ in function but only in scope and scale from that of the metasystem.

Beer bases his model on the human nervous system. Where the firm is a one man band all the necessary machinery is inside the one man's head. As the firm increases in size, departmentalizes, and acquires subsidiaries and corporate status, each metasystem evolves a meta-language in respect of its components, but each order of levels in the hierarchy formally replicates the holons in the level below (or above).

Beer's system therefore arises out of an analysis of the physiology of the human nervous system, which he finds to be a control system articulated into a hierarchy of five levels, of which level one is the automatic reflex system, and level five the cortex.

If we decide to focus on the corporation then we must look at a firm having a number of subsidiaries (say four). We must bear in mind that each subsidiary is a replication of the corporation, probably controls a departmental structure, and has its own five level control system. Bearing this in mind the basic structure is as illustrated as in diagram 3.7.

Here the circles (for instance A), plus the squares representing their control systems (1A), each comprise a subsidiary which is a replica of the whole system. At corporate level the control system of any subsidiary is system one, so we have in the example four systems one, designated A, B, C, and D. These are embedded in system two, which is a system of mutual information exchange analogous to the spinal chord in the human body. Systems three, four and five jointly form the corporate management, consisting of an operations directorate (corresponding to the cerebellum and the pons medulla), a development

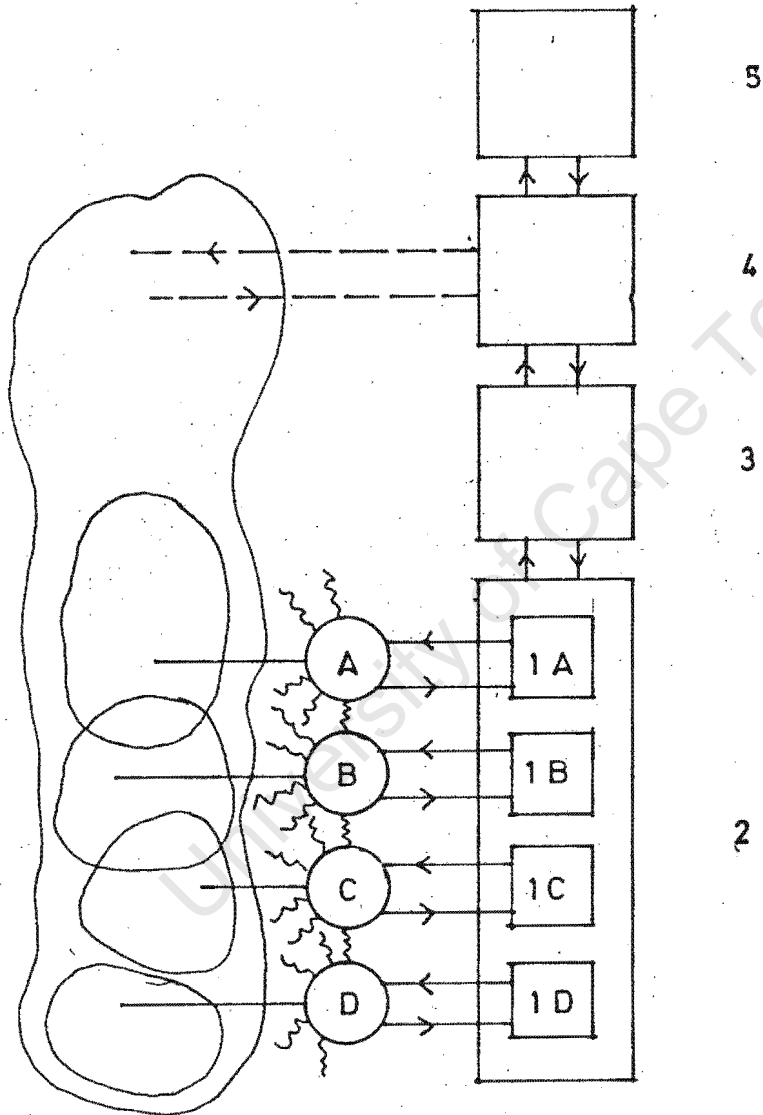


DIAGRAM 3.7.

directoriate (corresponding to the diencephalon and the basal ganglia where information from the outside world is received from the senses and processed), and a board of management (corresponding to the cerebral cortex). Thus the system consists of a strongly ordered hierarchy in which each metasystem has a progressively broader data base than its immediately inferior system, and thus a metalanguage.

In an interesting exposition Beer develops this structure by putting in the information flow in the form of circuits and filters. There is always more than one path for any particular bit of information, and the neural networks and blocking mechanisms and thresholds which reduce variety but allow for emergency by-passes are all well explained by Beer. The full cybernetic diagram appears as in diagram 3.8. ²⁶

Beer calls this an 'organization chart', in other words it represents the static structure of an organization, with respect to its information system. The conventional pyramidal chart is also structural, but displays a different set of relationships - those of authority and accountability. These two types of chart are accordingly not contradictory but complementary, both are valid and necessary. Beer maintains that his chart must apply to all viable systems, whether their structure is formally articulated to display the various functions or not. The loss of any function, on this logic, would impair the viability of the system.

Unlike many less sophisticated theorists, Beer does not confuse his dimensions and try to cram his whole system onto one diagram. In order to explain the working of the system he returns to the input/output type of diagram as in diagram 3.9. ²⁷

This shows the system together with its exchanges with the environment, and indicates the points at which these can be measured. (These are absolute minima - a lot more information is normally available). The 'control parameters' so measured are cast into commercial or market terms, and for the moment simply accepted. It will be shown in the next chapter how they translate into the public sector.

The internal control system is then illustrated in another diagram which takes the form of a cybernetic circuit as in diagram 3.10. ²⁸

In this diagram corporate planning and the model it must use are

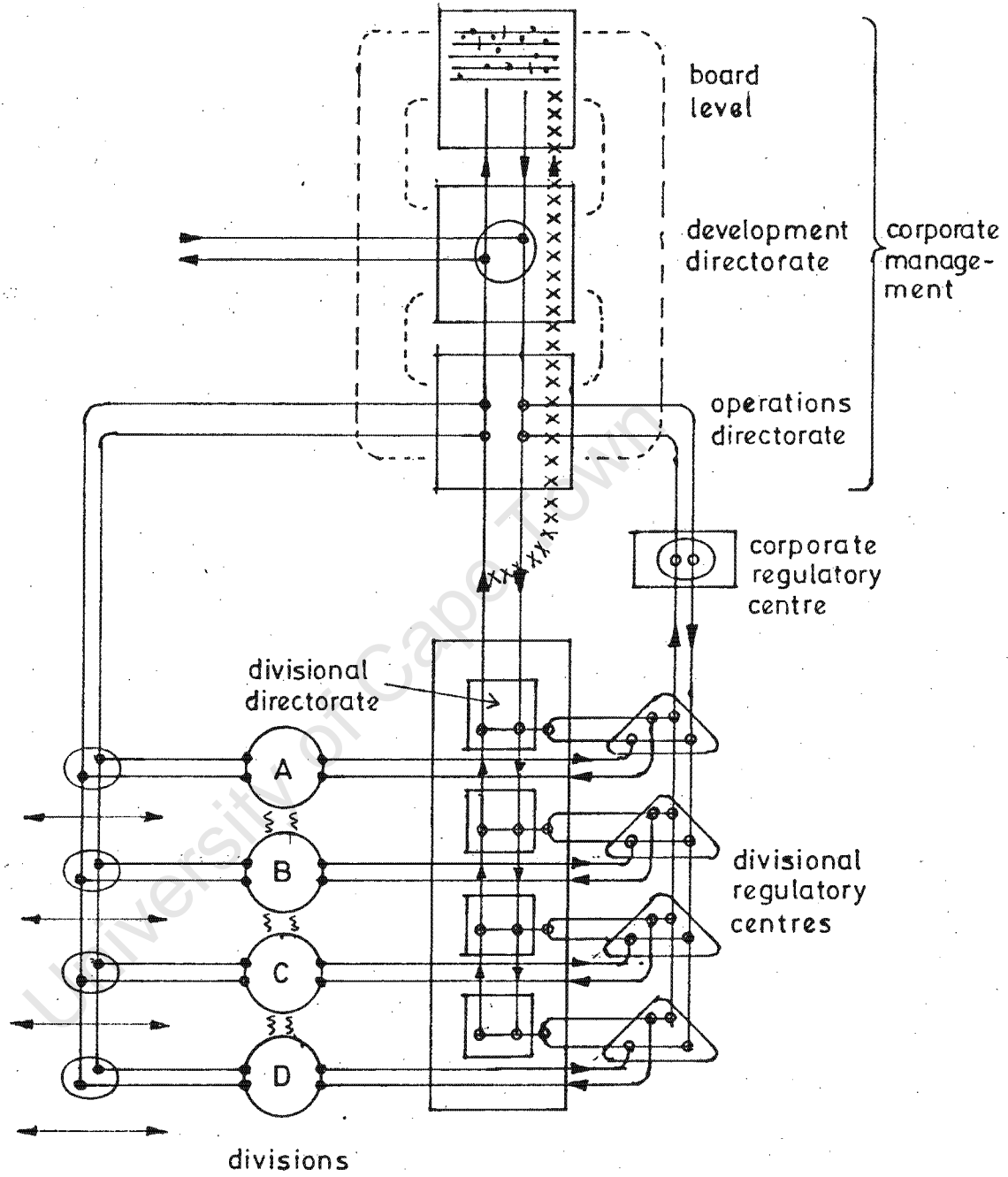


DIAGRAM 3.8.

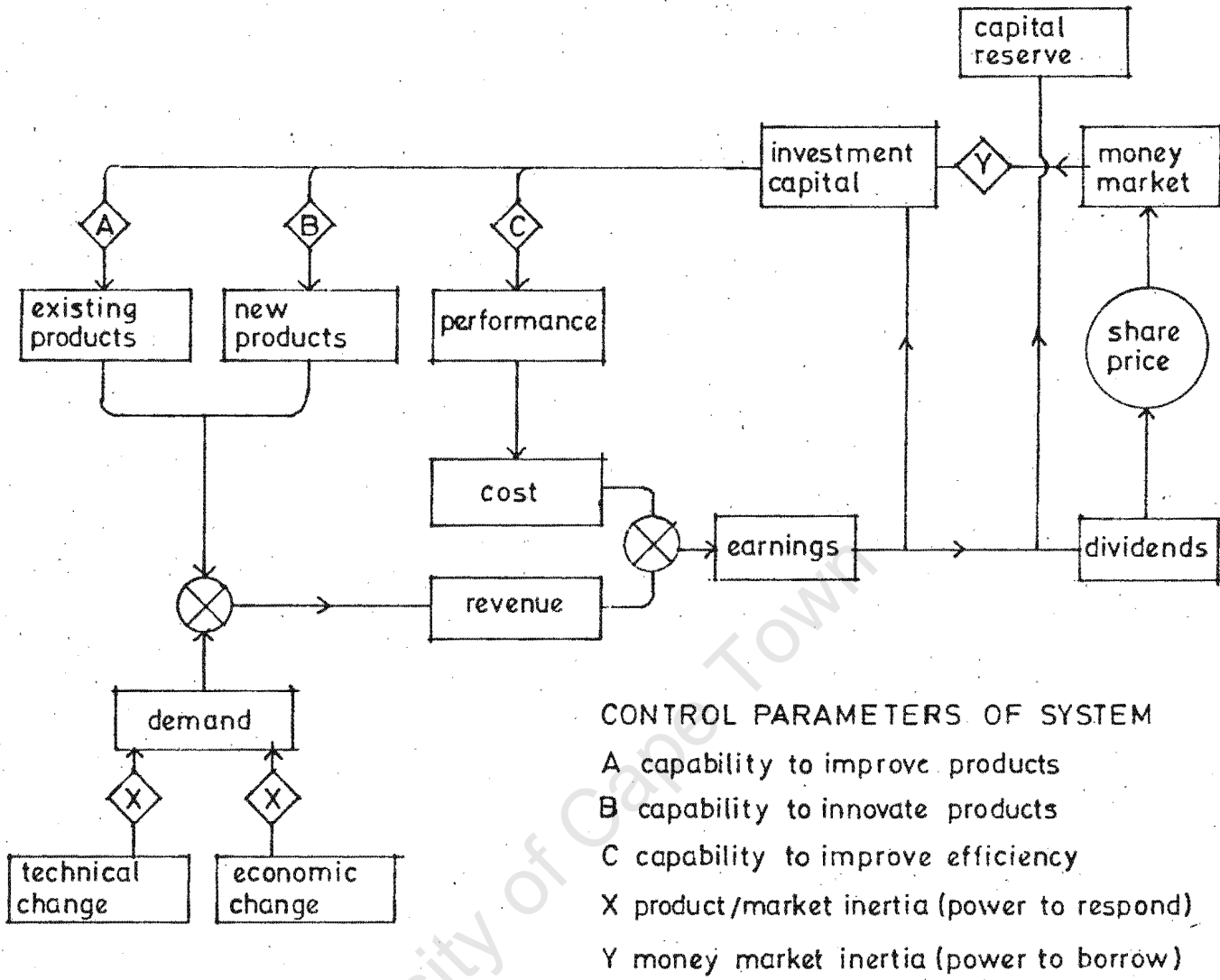


DIAGRAM 3.9.

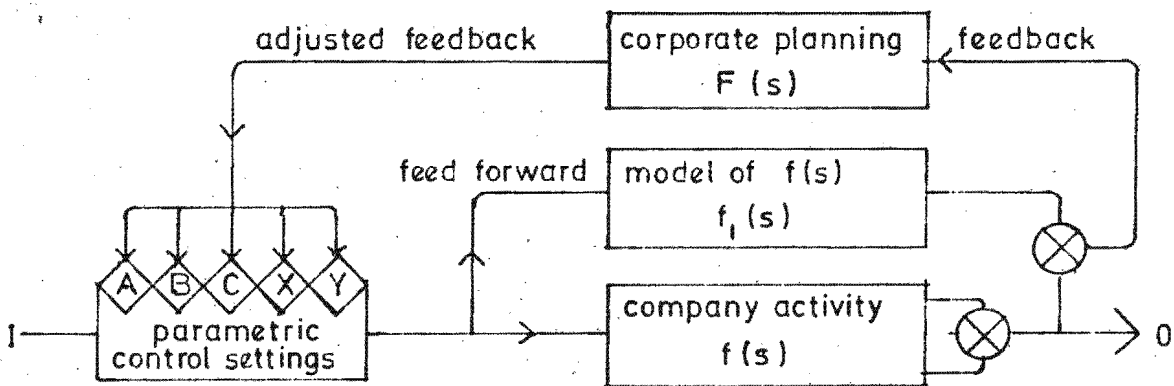


DIAGRAM 3.10.

precisely located by Beer.

"The activity which represents the feedback transfer $F(S)$ is corporate planning. This is the very adjustment activity which modifies, or continuously aborts, the plan enshrined in the operation on i of $f(s)$. Moreover this so-called planning process is not at all a matter of prognostication as is popularly believed, but a matter of sequentially aborting every plan which the management supposed itself to have underwritten".

Clearly this kind of conception of corporate planning is in a different class from some of the crude definitions discussed in chapter one. In Beer's system the structure, the function and the hierarchical order of the organization are all explicitly recognised, there is no dimensional confusion, and the defining factors are all measured in terms of quantifiable information flow - at least in theory. Each parameter is in itself a complex concept which is not exactly obvious from the diagram - indeed the crucial difficulty with Beer is exactly how to derive these parameters. Thus for instance "Capability to improve products" which is the first parameter, clearly depends on sub-factors of organization, personnel and finance, any one of which may limit the capability. It is not just a magically measured cybernetic quantity, but a highly complex variable. Furthermore some of the elements of such a variable may simply not be quantifiable; they may depend on subjectively assessed probabilities, for instance. So Corporate Planning is not a matter of writing out a formula, assigning variables with some value, and arriving at a magical Q.E.D. Merely achieving a suitable model which has any operational value at all is a major achievement, and will contain some areas where judgement, intuition, and just plain guesswork must be resorted to. Thus although Beer offers a workable scientific concept and a general illustrative model, there is a large empirical gap between the theory and the operational situation. It might well be argued that such a highly intellectualised approach goes at the moment far beyond what is required by the practical necessities of the real situation. Even if this is granted, Beer's approach is illuminating, and increases the depth of our understanding of the other less complex models.

3.6.2. Other Models

Here some other models are briefly considered, beginning with one by Johnson, Kast, and Rosenzweig.³⁰ According to them the managerial function consists of Planning, Organization, Control, and Communications, (in the POSDCORB tradition). Planning is:-

"The managerial function of planning is one of selecting the organizational objectives and the policies, program, procedures and methods for achieving them. The planning function is essentially one of providing a framework for integrated decision making and is vital to every man-machine system."

Note again that policy is merely included in planning in the managerial jargon. A diagram is given which illustrates 'an operating system' as in diagram 3.11.³¹

This diagram illustrates a feedback and control system in principle much the same as the input-output diagrams used by Beer. The 'activating groups' operate the parameters of the processing system in the light of a plan which is constantly monitored by a control group. This type of diagram, which is common, makes no attempt at being a precise model, but it is an advance on traditional models because it attempts to display information flow. The influence of cybernetics is obvious.

Argenti offers a practical guide to the actual process of corporate planning. In his view there is no absolutely vital expertise in the matter outside what is already available to any top management group. It is a matter of mobilizing the information and decision systems to make an effort and get down to it. It is therefore a plain layman's account - "No jargon, no mathematics, no sophisticated techniques".³² He makes the point that the executives - particularly the top executives and preferably the 'board' - should do the planning themselves, firstly because they are the ones who know the most about their own business, secondly because it will then be their plan, and therefore stand a much better chance of actually being executed. He recommends that corporate planning should be undertaken by a committee or group, chaired by the chief executive, with a man (not necessarily a management scientist) knowledgeable in corporate planning to assemble information, supply data, act in a secretarial capacity, and

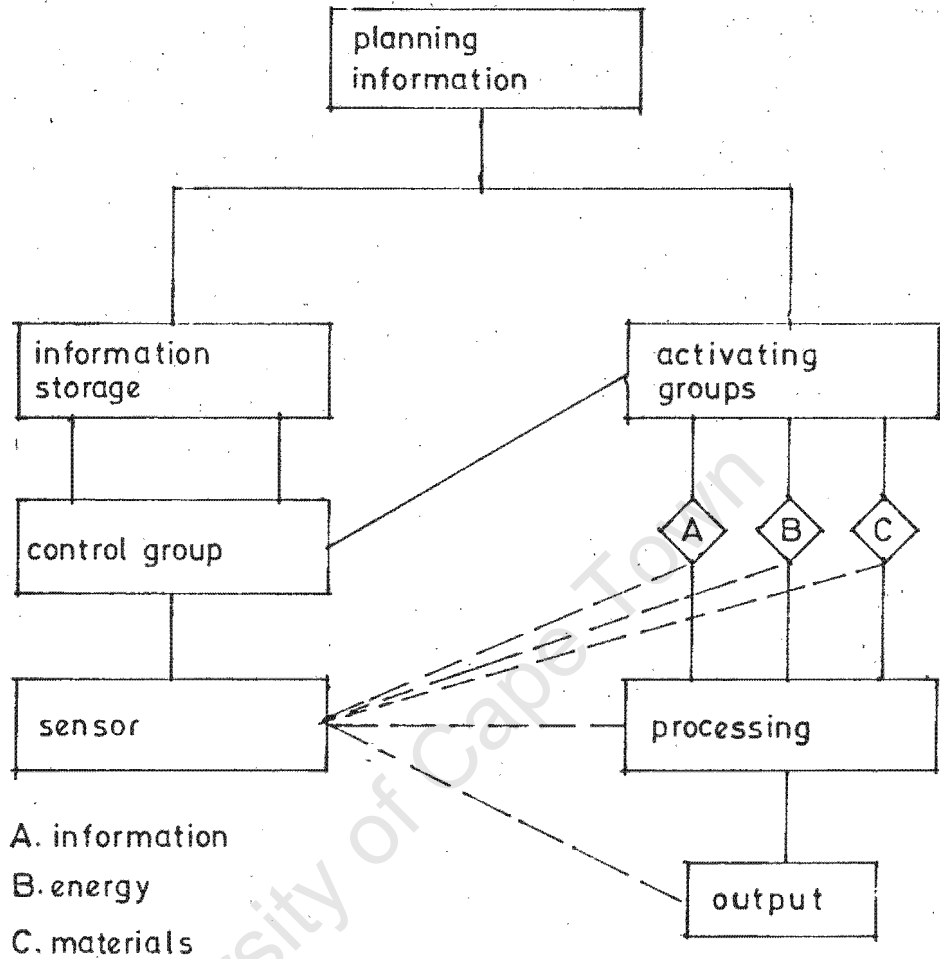


DIAGRAM 3.11.

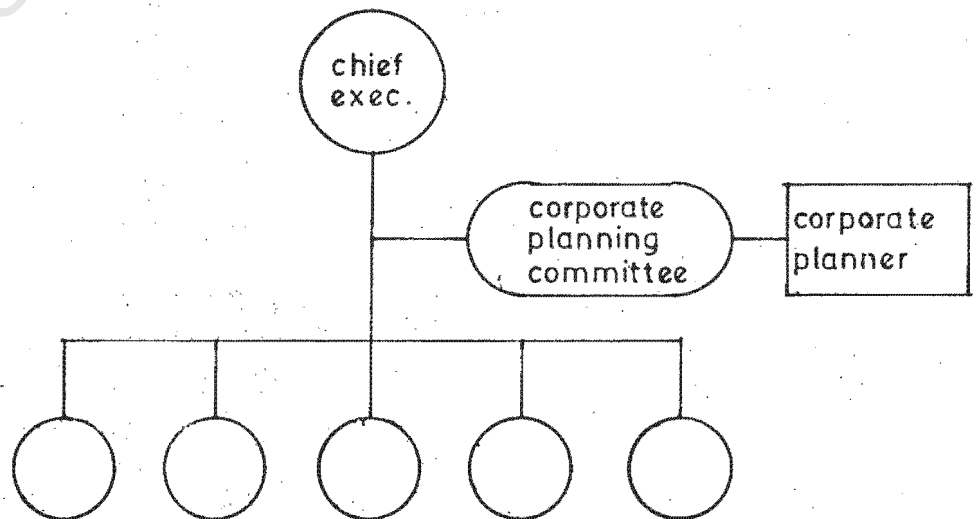


DIAGRAM 3.12.

stimulate new ideas. Structurally he situates the function as in diagram 3.12.³³

The circles indicate divisions of a company or subsidiaries in a group organization. Argenti does not differentiate in scale between a simple company and a corporation, although he amends his procedure slightly in the latter case.

The process as given at the end of the book under the heading "The corporate planning process as a glance"³⁴ may be summarized as follows:-

- A. Starting the corporate planning process (three months).
Form a planning team, appoint and train a planner, hold a company seminar to inform employees and hear views, arrange first meeting.
- B. Setting objectives (three months).
Determine the corporate objectives, ethos, and targets. Make forecasts and begin building a model.
- C. Drawing up the strategic factors (six months).
Identify strengths and weaknesses, threats and opportunities, and study and rank all these. Hold a second seminar for information both ways, list alternative strategies.
- D. Selection and valuation (three months).
Select best strategy and evaluate by making forecasts, (the technique is explained in the body of the book). Prepare corporate plan for approval by board.
- E. Action plans and budgets (a few weeks).
Action plans for major cost or profit centres, including targets. Decide on monitoring process.
- F. Monitoring
Continuous process including re-evaluation and 'rolling' the plan. (Quarterly).

This is then a perfectly good verbal model of a process. The model that Argenti refers to in the text is a complex table showing various indicators over a five year period. They include the market factors - share of market, sales, selling price, profits before and after tax,

described in several ways, a balance sheet of assets, capital statement, cash flow, tax calculations, and a set of simple indicators which can be calculated from the preceding figures.

The whole attitude is down to earth and business like, in contrast to that of Beer which is highly intellectual. The two models do not conflict, however - they are both saying the same thing, but from different point of view.

3.7. Conclusions

From this brief conspectus of corporate planning systems it is possible to make some generalizations.

Clearly there is not one single model which describes either the organization or the planning process. Several are needed.

Firstly a behavioural model is needed to describe the planning process, which can be verbal as illustrated by Argenti.

Secondly a structural model is required which describes the organization and the condition of its static parameters or organization, personnel and finance.

Thirdly a dynamic model is needed to show the interaction of the organization with its environment, and either simultaneously or separately the nature of its internal processes.

Two determinations must be made before planning can commence. First the objectives or goals, and targets to be aimed at, second forecasts of environmental conditions and their probable rates of change over time.

The models are then used in the planning process which is intended to adapt the organization to its environment in terms of these determinations.

These models may take a variety of forms - geometrical for illustration, tabular or arithmetical for specific detail, verbal for processes, or permutations and combinations of all these.

3.8. Summary

In this chapter the scope of corporate planning was first described in terms of its field of application to large organizational

structures typically consisting of several clearly articulated divisions, each of which could be considered as a whole in itself.

The theoretical background of systems theory, information theory and cybernetics which enable us to conceptualise such organizations was then reviewed.

With this in mind the structural dimension of organization was examined to determine its basic parameters - organization, personnel and finance. The dynamics of the system was then illustrated, which consists of resource flows and behaviour patterns. The corporate plan integrates all these elements into a system.

Some specific models were then used as illustrations of the technique, which yielded the conclusions listed above.

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CHAPTER 1VCORPORATE PLANNING IN THE PUBLIC SECTOR4.1. Introduction

This chapter considers the translation of corporate planning theory into the public sector. In the first section it is shown that there is already a corresponding methodology in the context of the British Municipal or County Corporation, and the structure of this kind of authority is compared to that of a corporation in the private sector. The nature of the boundary transactions and the environment is also considered. In the next section the nature of the control parameters or variables in different dimensions is compared, and finally some approaches to modelling are offered. These are not highly developed, and are mostly verbal, but it is found that the theoretical considerations developed in the last chapter will, *mutatis mutandis*, apply.

4.2. The Parameters of Public Sector Corporate Planning

The question is now, how does all this relate to Public Administration? Or to put it another way, does a governmental system correspond sufficiently to the corporate systems of private enterprise to make comparison valid? If so, would Corporate Planning be a satisfactory description of what a governmental system does, or should do?

It so happens that in Britain at least there is a congruence in terminology, because local government there is handled by administrative units that are traditionally known as 'corporations'. Although the reforms of the seventies have changed the nomenclature of the borough/county system the image of the 'Mayor and Corporation' persists in the public mind, and the term Corporate Planning is readily accepted as applicable to the reform of local government.¹

The problem in Britain is that each local government unit consists of a number of departments (twenty or more), traditionally almost autonomous, each headed by a chief officer protected in most cases as to his tenure by central government legislation, and controlled by committees of elected council members. These committees (up to a hundred in some cases), concern themselves with every detail of the work of their departments. The position of the town clerk in British boroughs has been invidious for many years, because although

nominally the senior officer - primus inter pares, as it is said - he has been unable to exert any authority over the departmental chief officers partly because of their protected status and partly because his authority is as it were intercepted by the elected committees. This led to fragmentation, empire building, duplication of effort, inefficiency and Parkinsonian growth. Budgeting systems were incremental.

The remedy has been to introduce Program Budgeting, (P.P.B.S.), drastically cut the number of committees, rationalise the departmental structure, and introduce a specific organizational unit to carry out the function of corporate planning, as it is understood in this particular context. The objective is to create a total picture of the authorities services projected five to ten years ahead, which must show present performance, standards, needs, and the 'gap' between the real situation and the ideal target. This is a corporate plan, often referred to as a 'rolling plan', because unlike the five year plans of socialist countries it is extended every year and constantly modified in the light of current circumstances. Together with the program budget the corporate plan has the function of crystallising and displaying basic policy options, thus forcing the elected policy making body to attend to important policy decisions rather than waste their time on trivial administrative detail.

As a system british local government displays many of the features of a large private corporation. The individual departments correspond to the filial companies, and the town clerk's office to the corporate management. The elcted councillors fulfill the role of a board of directors, and the ratepayers act as the shareholders. The demand for services coupled with the resistance to taxation has had an effect on these authorities similar to the competitive situation of a private company, putting a premium on efficiency and forcing them to assess their objectives and resources in a new light.

The methodology is known as corporate planning, and is closely similar to the same process in private enterprise. In some departments such as gas supply or housing, the boroughs do in fact sell their products, but discounting these revenue earning activities the main difference between a local government department and a private company is in its exchange functions. The nature of the output precludes any kind of

direct return, and is not directly related to the source of funds as it is in private enterprise. This may be illustrated as in diagram 4.1., illustrating a private company which at the input end must buy its resources, and at the output end sell its products. These exchanges take place in the same market, which is the environment which closes the circuit.

Diagram 4.2. illustrates the government department which at the input end receives its resources by allocation from a political body, which in turn levies them from a public by means of a tax. This public receives the services in exchange for the tax, so that an exchange does take place, although it is mediated by a political organ and not by a market.

Of course in a private company there must be found some organ which allocates resources in the sense of distributing them between dividends, research and development, and the maintenance of the establishment as a going concern. In both cases distinctions are made between revenue and capital, and the reasons are analogous - if not homologous. Likewise the shareholders in some sense represent the market although their interests are far from identical.

Thus it seems that the fact that a government service is not delivered by means of a sale in no way upsets the logic of the system. In private enterprise the market exchanges are vital to the survival of the company, and thus act as automatic regulators of its efficiency, whereas in the public service this discipline does not apply and must be replaced by audit and efficiency controls and the ethos of public service, but this qualification also leaves the logic of the system much the same.

When one looks at the corporate pattern as illustrated in diagram 4.3., the distinction blurs even further, because the activities of a corporate management in allocating resources between a set of companies and regulating their affairs indirectly, are only with difficulty distinguished from the activities of a borough council allocating funds between its departments. It may be held that the exchange of products between the members of a group and the effects of synergy have no counterpart in the public service. However a consideration of the dynamics of change soon shows what the interrelationships are. Suppose

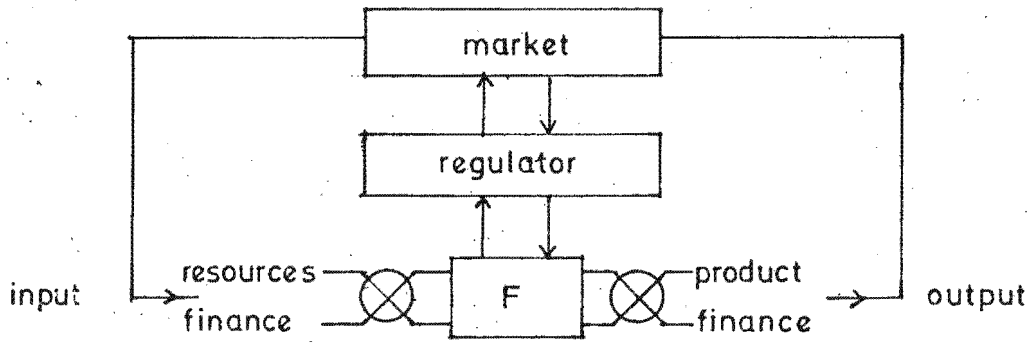


DIAGRAM 4.1.

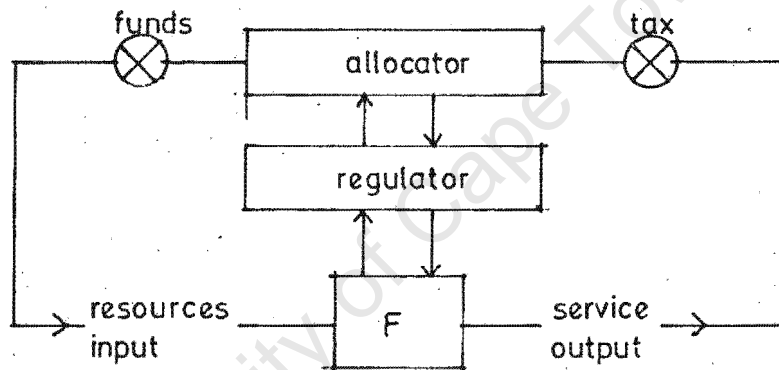


DIAGRAM 4.2.

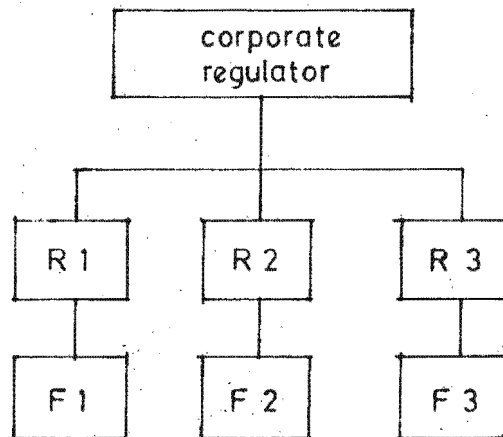


DIAGRAM 4.3.

a municipality projects demographic movements within its area some years ahead, and finds that population is flowing out of ward A and into ward B, that the birth rate is dropping, and that the percentage of older people is increasing - quite a likely scenario. Such a set of changes affects housing, traffic circulation, roads, schools, old age homes, fire services, health services and others, and consequently the ratios of expenditure between the departments that provide these services. Thus the authority has its activities inter-related because they are all directed to the same 'public', which is an organic community. Thus in this case the public supplies the correlating factor which in the private sector is provided by inter-group homeostasis and the condition of the market. Of course if the public is not an organic community this kind of correlation will not act, but it can be taken for granted at the local level.

If we now attend to other levels of government up to national level it might be thought that all the same considerations apply on a different scale - there being a simple analogy between the central government with its many departments and a municipal corporation with a similar structure. But the analysis must be more careful than that. In some respects a set of local governments are (in Beer's terms) systems one, co-ordinated by provincial or state governments acting as systems three, four and five for them. In turn the provincial or state governments as a set are controlled by the central or federal authority. But of course both provincial and central governments provide certain direct services themselves, (unlike a pure holding company), so that in some respects they are metasystemic to lower levels of government, but in other respects not.

For instance in the republic the provinces are formally metasystems in relation to the municipal authorities, and regulate some (but not all) of their affairs. The provinces provide educational services direct, and in this respect the local authorities do not enter into the system. The metasystem here is the Department of National Education, which itself also provides higher education directly. In regard to the health services the national Department of Health and Welfare acts in some respects directly as a metasystem to local authorities, while hospital services are handled at provincial level (except for some fever hospitals). When the Cape Provincial

Administration is analysed the effect of these structural peculiarities will be made clear.

At this stage it is sufficient to point out that at higher levels of government there may be a considerable complexity of structure - the authority can be regarded as a corporate system in respect of its own departments; some of its departments together with elements of authorities lower in the hierarchy are themselves corporate systems, and others again may be elements of corporate systems controlled by the central government direct. The logic of all these arrangements is therefore questionable, and a corporate planning exercise might well reveal areas where reform is needed.

Although the tag 'Corporate Planning' may seem inappropriate at provincial or national level, there does not seem to be a substitute of any special cogency, and as the term is well established for local government as well as the private sector it will be retained here to designate a set of techniques which may be applied to any level of government.

4.3. Static and Dynamic Variables

If we look at the behavioural modes worked out in chapters one and two it is easy to see that policy-making, planning and decision-making must apply to government officials in their executive capacities just as they do in private enterprise.

If we look at the static variables worked out in chapter three under the headings of organization, finance and personnel, it is likewise clear that these variables apply to the public service as well as private organizations. It might be that some aspects such as task variability or means of resource acquisition differ characteristically over the two sectors, but as parameters they are generic to the system in either case.

When we turn to the dynamics of the system we have already taken note of the fact that political allocation takes the place of the market, with the corresponding implication that the service motive replaces the profit motive without upsetting the logic of the system.

In the public service the environment in which the organization is embedded is differently perceived than it is in the private sector. -

it is the political milieu. The boundary condition between the organization and its environment is consequently differently structured, and the public also has a different perception of the organization.

These differences in mutual perceptions of and relations with each other are normative - that is they lie in the realm of purposes, goals, objectives, motivations. Hence the whole highly articulated political system whose function is to feed in demands and validate value judgments. The apparatus of party machinery, election of representative organs and the insertion of political controls at various levels is one aspect of this normative concern. The other aspect is the public or exposed condition in which the government official must work, and the elaborate system of control and audit designed to institutionalise the idea of public accountability, and which generates a strictly hierarchical system.²

This implies that in the public service 'system five' is highly articulated, conspicuous, and responsive - at least in a democracy.

However it would be difficult to show that this character of system five affects the formal dynamics of the administrative organization in any way. The facts that a public official is very aware that he is working in a political milieu, that he is publicly accountable for his actions and must have legitimate grounds for them, and that he must accept political control may indeed affect or influence his administrative behaviour. Nevertheless this behaviour must still comprise policy-making, planning and decision making within a framework of an organizational structure and according to a designated role.

Thus in principle although the values that may be assigned to the variables in our administrative formula may differ somewhat in the private or public sectors, even characteristically so, the formula itself which consists of the relations between the variables (not the values), still holds good for both sectors.

4.4. Models

The general argument of the last two sections bears out Beer's contention that his model will apply to any viable system. It should therefore be possible to apply his organization chart without

any change to any public bureau, provided it falls within his definition of a viable system, or in other words, is a holon with its own cannon of rules.

However the terms he uses in his input/output model which are appropriate to private enterprise, such as earnings, dividends, the money market and so on look strange in the context of the public sector and need some translation before they can be applied there. We should therefore take another look at his 'parametric control settings' which are as listed below:-

- A. Capability to improve products
- B. Capability to innovate products
- C. Capability to improve efficiency
- X. Product market inertia (power to respond)
- Y. Money market inertia (power to borrow)

If 'services' are substituted for 'products' in A and B they would seem to be appropriate, and there is no ambiguity in C. X would translate into 'service public inertia', meaning power to respond politically. Beer breaks this down into response to technical and economic change, but clearly in government socio-cultural and political change will be further complicating factors. Thus X, which is synthesized into the single variable of demand will be much more complex than it is in the private sector. Y will also be more complicated, depending on the economic climate, the power to tax, and also the power to manipulate the economy of the whole state and even the value of the currency.

Thus although these control parameters at first look strange in the public service context, some amendment to the terminology establishes the relationships quite securely while suggesting that the variables concerned conceal considerable complexity. Such a phrase as 'capability to improve services' is a factor constructed out of an indeterminately large quantum of doubtfully compatible data.

The question again arises therefore - is all this elaborate cybernetic theorising really necessary?

The empirical approach to corporate planning in the public sector is admirably set out in a report published by a working group of the

British Society of County Clerks.³

This report describes corporate planning as involving "the appraisal of current conditions, the prediction of social and economic change, the determination of needs, the formulation of objectives and alternative strategies, and, to be effective, the review and evaluation of achievements."⁴ This process, say the clerks, is increasingly difficult because of the increasing rate of change in population and technology, scarcity of resources, and "the increasing recognition of the interrelatedness of services".⁵

Corporate Planning has four elements:-

1. Identifying and studying change in the environment, population change, employment trends, technological developments, transportation changes, changes in national policies.
2. Determination of needs.
3. Correlation and integration of departmental plans to form a coherent single program.
4. Estimation of available resources.

In Britain the borough and county councils are heavily politicised, and the report emphatically disclaims any intention of pre-empting financial decisions which are political prerogatives, while offering to "contribute significantly to decision making by identifying problems, revealing issues, and where appropriate, posing alternative strategies."⁶

Corporate Planning is seen as going hand in hand with programme budgeting (P.P.B.S.), and a brief account is given thereof, seen from the local government point of view. The main elements are:-

- a. The grouping of the authorities activities into a number of program areas.
- b. A clear statement of the authorities objectives.
- c. Presentation to Members (i.e. elected council members) of a budget within this framework.
- d. Measurement of the degree of success (effectiveness) in various fields by devising output measures, and methods of monitoring feedback.

- e. Analysis of problem areas and devising alternative strategies for solving the problems.

PPBS is not synonymous with corporate planning, but does a great deal to facilitate the operation of a corporate plan. The report considers corporate planning in relation to land use planning - in British terminology the Structure Plan, which is a statutory document co-ordinated with those of different authorities by the central government. It is considered to relate to the development of a particular resource - namely land, nationwide, whereas the corporate plan is supposed to develop all the resources of a particular community. Thus there is an area of overlap where local developments fits into a national plan.

At what is called 'member level' corporate planning implies the existence of a policy committee of some kind to advise the council on the allocation of its resources. At 'officer level' the concept demands 'the management team approach'⁷ at chief officer level, preferably (one would think inevitably) headed by the Chief Executive - i.e. the town clerk. The report treads delicately over the question of the independence of the chief officers with their traditional empires, but it is clear enough that the main object of the exercise is to break down the self-induced compartmentalisation of the organization.

It is recognized that corporate planning is long term - up to twenty years. "On this sort of scale it is more realistic to speak of corporate planning than a corporate plan. It seems necessary to accept the concept of a planning process of a 'rolling' character producing reasonably precise proposals in early years with an increasingly conjectural 'tail' in later years."⁸ Clearly all this projection in time demands research and intelligence facilities supporting the planning organ, and suggestions are made for creating these.

In view of the re-organization of local authorities which was taking place in Britain at that time, corporate planning is seen as a necessary corollary to the new two tier structure. The report ends with a summing up of points in favour - the case for corporate planning.

The influence of the political milieu comes out strongly in this report, with its disclaimers of any politically oriented decisions. It is meant to 'facilitate' the sacrosanct roles of the elected members. The policies of these members must affect the basic objectives which determine the direction of the planning exercise. While many of these objectives may be non-controversial and stable, changes in the ruling party which are frequent in Britain could easily mean wholesale changes in the most important parameters of the corporate plan. If one thinks of the farcical nationalization, de-nationalization, re-nationalization and re-de-nationalization of the steel industry one can imagine how disruptive these political switches can be. Few of the articles on corporate planning really face up to this problem, but it is general in the public sector of any country. Directorates in the private sector can and do change, but the constancy of the profit motive must have a stabilising influence which is not repeated in the public sector.

However that may be, although the elaborate theoretical background to corporate planning worked out by Beer does apply as a model to the public sector, there is also - as in the private sector - a straightforward empirical do-it-yourself approach which ignores the theory, but at the same time can be seen to satisfy it approximately.

An example of a proposed organization structure which illustrates this empirical approach is shown in diagram 4.4. It is a recommendation from Booz Allen and Hamilton International to the Stockport County Borough Council.⁹ In the original diagram (of which this is a simplified version), the individual services are listed under each directorate. (There are thirty eight). The purpose of the chart was to illustrate the re-grouping of these services into six divisions as shown, which is the rationalisation required for programme budgeting. The service functions of finance, personnel and organization (management services), together with legal and clerical back-up are all related to the chief executive through a finance director and an administrative director. The obvious weakness of this structure - which is endemic in British local government, is the interposition of all the 'members' committees between the executive office and the directors of the various departments. It is overcome to some extent by the fact that these directors are brought

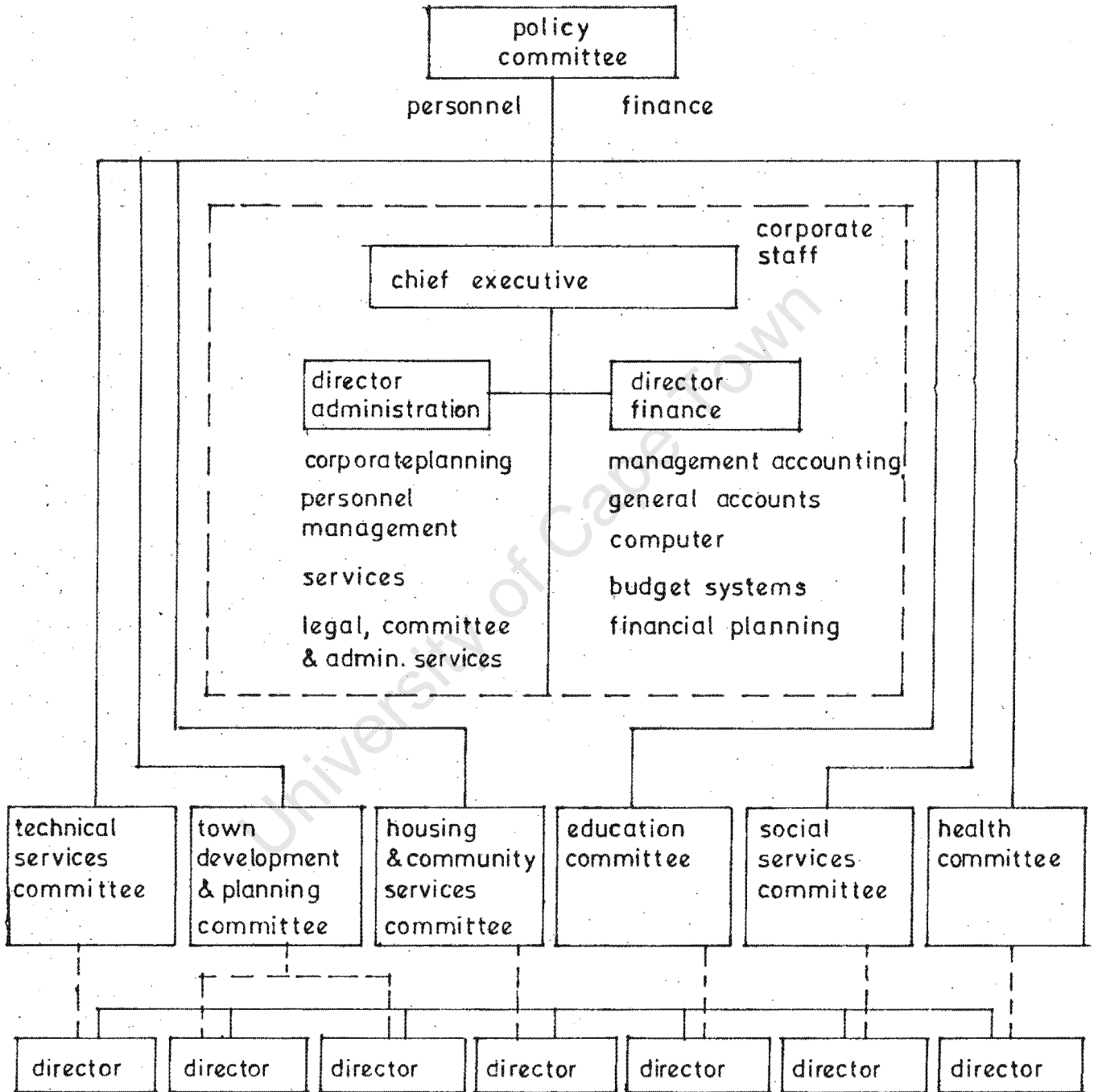


DIAGRAM 4.4.

into the corporate planning process by their membership of a committee, but it is nevertheless a compromise dictated by the strong British tradition of committee rule.

In the United States there is a greater variety of constitutional forms in local government, but none of them work by means of committees except to some degree some of the so-called weak-mayor systems, which are now generally discredited.¹⁰ The commission system is somewhat analogous in that a small group of commissioners, including the mayor, act as a kind of cabinet (rather after the manner of the executive committee in our provinces), but this system too is losing ground. The most favoured systems are the 'council/manager' system, and the 'mayor/administrator' system. In the former, the council, chaired by the mayor, appoint a professional city manager, and this official then appoints and controls the entire municipal administration. Thus he is in a position in which British town clerks would no doubt like to find themselves.¹¹ The council also appoints the auditor and acts as a board of control - they retain naturally the legislative function but they forgo the administrative function in the interests of efficiency.

In the mayor/administrator system the mayor himself acts as chief executive after the pattern of the President, assisted by a professional administrator whose exact functions vary from one case to another.¹² In both cases the intention is to provide a professional administrator in a key position at the head of the municipal hierarchy.

In the United States it is not normal for the state legislatures to lay down general legislation as to how the local level of government shall operate. Most of the states operate some kind of 'home rule' system whereby a city may (or even must) propose its own constitutional form by submitting a charter, which the state then ratifies.¹³ Because of this a great variety of systems and versions of systems has sprung up and the evolution of these forms represents a kind of experimental corporate planning at large. As the process has been so diffuse and varied the issues are not so well defined as in the British case, but they have been mentioned here to show that the key British problem, the status of the town clerk, is by no means insoluble, and that democratic processes are not everywhere thought to depend on having

elected officials at every level of the system.

In the Republic the re-organization of the central government departments as described in the White Paper of May 1980 shows many of the features of corporate planning, and might indeed be described as corporate planning on a grand scale. The term used in the White Paper is 'Rationalisation',¹⁴ which is explained as firstly; making the most effective arrangements possible for the functioning of the cabinet and cabinet committees, second; the division of the functions of the central government service (which again depends on the program budgeting exercise which was first introduced in 1976), and thirdly; the internal re-organization of the departments and what are called the 'horizontal' sub-systems, namely the financing system, the personnel system and the logistic system. The instrument for planning this major reform is naturally an 'organization sub-system' within what used to be called the Public Service Commission, and is now one of the planning functions attached to the office of the Prime Minister.

4.5. Conclusion

Because of the political constraints inherent in any governmental system at whatever level, the corporate planning process cannot very well begin with goals, because goals and objectives are the prerogative of the elected legislatures. These are jealously guarded. What is possible is to establish a framework of committees or other structures with clear frames of reference and good information systems so that an organized hierarchy of policies can be expected to emerge. Existing legislation can also be examined for duplications, contradictions and irrelevancies (which is being done at parliamentary level), thus creating the conditions for rational policy-making, including forecasts and strategic alternatives. Having done his utmost the administrator must then rely on the politicians to produce an orderly hierarchy of goals.

Following this essential preliminary a model in several dimensions can be set up for the public sector as for the private sector, and the parameters will be essentially the same.

First there must be a verbal model describing the intentions and rationale of the corporate planning process (such as the White Paper

referred to). Second there needs to be a structural model of the organization as existing describing the state of its parameters of organization, personnel and finance, and thirdly there should be a model describing the processes and transactions which relate the organization to its environment. Fourthly, some account must be given of the information system and its feedback mechanism.

Once the abjectives have been crystallised and forecasts of environmental change have been made, the 'gaps' between real and ideal conditions can be established, and resources can be marshalled to eliminate or reduce these over a specific time period by manipulating the key parameters of the system.

This, then is corporate planning in the public sector.

The models used to reform British local government, or the systems of municipal government in the United States will not be appropriate to other systems - each has its own form, its own environment, and its own problems.

The theoretical considerations defining viable systems as defined by Beer ought to apply. They might be thought of as the professional considerations in the back of the planner's mind, analogous to the aesthetic considerations in the back of an architect's mind when he approaches a new problem.

The next phase is to examine thoroughly the institution concerned, and this will be done in the next chapter.

4.6. Summary

In this chapter the nature of the governmental unit was compared with that of the private corporation, first of all from the structural point of view. The main difference was found to be in the nature of the boundary transactions and the complexity of the environmental conditions, which increases as one proceeds from local through provincial to central government institutions.

It was found that although the behavioural parameters are similar, they vary in respect of their normative content, while leaving the logical relations to the system essentially unchanged.

As far as models are concerned, it was found that Beer's model is

applicable with some amendment to the nomenclature, but that there is in this field also a body of empirical method which does not rely particularly on any scientific theory, but nevertheless conforms to it. Examples from British experience were given, with some brief notes on American systems and the South African Government White Paper of 1980. The conclusion is that Corporate Planning as a technique is applicable in the public sector - and is indeed an essential tool for radical reform.

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CHAPTER V

THE CAPE PROVINCIAL ADMINISTRATION

5.1. Introduction

This analysis deals with the government of the Province of the Cape of Good Hope, in the Republic of South Africa. The political organs of this government are an appointed Administrator and an elected Provincial Council, and the administrative organ is a complex bureaucracy headed by the Provincial Secretary. The two together are commonly known as the Cape Provincial Administration. Since this study is concerned with corporate planning in public administration, attention is concentrated on the administrative organ.

This consists of a central secretariat and a number of divisions which are termed either Departments or Branches, depending on their size and importance. The provincial budget is divided into eight 'budget votes' which reflect in their headings and sub-headings all these structures, and is therefore the prime source for the analysis.¹

Other sources are the Provincial Year Book and Diary, and reports and other documents put out by individual departments. Apart from the documentary material, a number of interviews were held with senior officials which gave an insight into the workings of the administration which could be obtained in no other way.

All the documents consulted refer to the financial year ending 31 March, 1980 - or in some cases merely 1979.

The general systems model built up in the previous chapter is theoretically replicative, which implies that it ought to apply to individual departments, and also to the Province as a whole. Therefore, each department is considered individually in two ways. The first is to consider the inner working and structure of the department itself, in its aspect as a 'Holon' within a hierarchy of organizational units. The second is to consider its relationships with its environment and particularly to the superior system of which it forms a part, which speaks a meta-language for it, and co-ordinates its activities with other departments. The same treatment is given for the province as a whole.

The Public Service Commission (as it was in 1979) classes officials into administrative, professional, clerical, technical, and general staff, and this classification is simply accepted. The word staff merely refers to employees in this context. The staff of the Province is also classified into 'staff on the fixed establishment' (strictly speaking the Public Service Establishment) and 'provincial Staff'. The former have their posts, salary structure and conditions of service specified by the central government, the latter by the Province.

This study deals by and large with the former, who constitute the head-quarters staff quartered in Cape Town, with a few exceptions.

In this analysis, attention is also given to the position of professional staff in the administration, because there are so many instances where specific planning functions are handled by professionals in their particular disciplines. It will be found that, where activities are controlled by administrative officials, planning of any kind is weak or absent. The significance of this fact for the possibility of corporate planning will be dealt with in the next chapter.

Before continuing with the analysis it will be as well to make some general remarks on the position of the provinces in the highly complex South African governmental system, and also to take note of the manner in which the Cape Province differs from the other three.

Firstly the provinces are geographical units and form the middle level in the geographical hierarchy from local to provincial to central government. But South Africa is a plural community, and on this account the government is organized on a group basis as well as a geographical basis. These group divisions sometimes intrude into or overlay the geographical and functional divisions. For instance from 1953² Bantu Education has been run by a central government department, and from 1963, coloured education also.³ The provinces now only run white education.

Likewise in the field of physical planning the Group Areas Act overrode the powers of Provincial and local authorities in respect of non-white housing. In many instances therefore the jurisdiction of the provinces is not purely territorial, but related to the white population group.

We are here concerned with a special administrative technique, namely corporate planning, and its application to the Cape Provincial Administration as an administrative organization. The jurisdiction of this organization is therefore taken as given (as it constitutionally is), and the peculiarities of group politics will be regarded as outside the scope of this thesis. It may be found that the assemblage of functions assigned to the province is not rationally justifiable, but the re-assignment of such functions would be an exercise in corporate planning at national level, which is far beyond what is intended here.

The conspicuous difference between the Cape and the other Provinces is the divisional council system.⁴ In the other provinces rural communities are provided with services by bodies such as the Transvaal's Board for Peri-Urban areas which are partly financed and supported by the Province.⁵ Each of them has an organization which is the equivalent of a large local authority to handle these services. In the Cape however the whole province is divided up into divisional council areas, and these councils have powers of taxation which enable them - together with the municipal authorities - to provide a complete local authority system for the whole province. The Province in this case does not provide any direct services of a local nature, and therefore lacks the organization to do so. It only controls and monitors these functions through its Department of Local Government.

5.2. The Powers and Functions of the Cape Provincial Council

The Republic of South Africa has a unitary government, and the powers and responsibilities of the Provincial Governments are conferred on them by the Republic of South Africa Constitution Act (Act 32 of 1961), which of course is an Act of Parliament. (A piece of Provincial legislation is termed an Ordinance). These powers are as follows:-

- a. direct taxation within the province in order to raise revenue for provincial purposes;
- b. the borrowing of money on the sole credit of the province with the consent of the State President and in accordance with regulations framed by parliament;
- c. education, other than higher education and education for Coloured persons, Indians and Bantu;

grants for agricultural societies
 the establishment and maintenance of libraries, museums
 art galleries and similar institutions
 the control of public resorts
 the establishment, control and management of cemeteries
 and crematoria
 the regulation of shop trading hours
 the establishment and administration of townships
 the licencing of vehicles and drivers
 the regulation of horse racing
 the administration of town and regional planning
 expropriation of land
 water supply schemes for local authorities
 the provision of insurance cover for certain officials.

In addition, provincial authorities may grant funds for:-

Republic Day celebrations
 advancement of the performing arts
 erection of theatres for opera, drama, music or ballet
 research
 training of staff (including the awarding of bursaries)
 matters of national interest (briefly, defined as the
 promotion of culture, commemoration of events,
 honouring of persons and disaster relief)

Section 86 of the Constitution provides that "a provincial council may recommend to parliament the passing of any law relating to any matter in respect of which such council is not competent to make ordinances."

In spite of this provision, the minute and detailed specification of the powers and functions of provincial councils given above limits considerably a province's power to vary its services, abandon services, or undertake new services. It has the psychological effect of dampening the initiative of provincial officials whose objectives are prescribed for them by a superior authority. It engenders a sense of frustration which came out clearly in interviews, especially with officials who are directly affected by central government regulations in the fields of personnel, organization, and finance.

5.3. Structural/Functional Analysis of the Provincial Administration

Political control of the Provincial Administration is vested in the Administrator, the Executive Committee, and the elected Provincial Council, whose appointment, prerogatives, and terms of office are laid down in part VI of the Constitution. Briefly, the Administrator is appointed by the State President and is the political link with the ruling party. He attends and takes part in the Council's debates, but does not vote in them. The four members of the executive committee are elected by the Council, usually (but not necessarily), from among their members. The Administrator is chairman of the Executive Committee and has a vote therein. He also has the prerogative of initiating legislation. The Executive Committee has functions analogous to those of the cabinet in the central government, and each member has a portfolio of one or more departments with which he deals directly.

For instance, the Provincial Secretary circulated a general notice (dated 15.5.81) which sets out the 'portfolios' of the Executive Committee as below:-

Administrator	Finance
	Staff
	Horse Racing
	Provincial Council
Member of Executive Committee 1.	Hospitals
	Nature Conservation (and Museums and Resorts)
	Festivals
Member of Exco 2.	Education
	Works
	Libraries
Member of Exco 3.	Local Government (except Divisional Council Road affairs)
	Estimates
	Town Planning and Towns
	Civil Defense
Member of Exco 4.	Roads
	Divisional Council Road affairs

General Affairs

Traffic

Tenderboard

Supplies

Entertainment Tax

Agricultural Organizations

Other

This expresses quite clearly the priorities that have in practise determined the functions of the Political Controllers over the years, for this general scheme is quite constant in principle.

The Administrator deals with Finance, Personnel and Organization (since "Staff" covers the O and W Section). Each member of Exco has one of the major portfolios - Hospital Services, Education, Roads and Local Government. The minor activities are distributed to obtain a reasonably even workload. It is interesting that certain specific matters such as "Horse Racing" or "Festivals" are important enough to gain specific allocations, although the formal organization of the administration hardly acknowledges them, and that some functions (Divisional Council Road affairs) are grouped in ways that cut across organizational lines. This may represent an organizational anomaly.

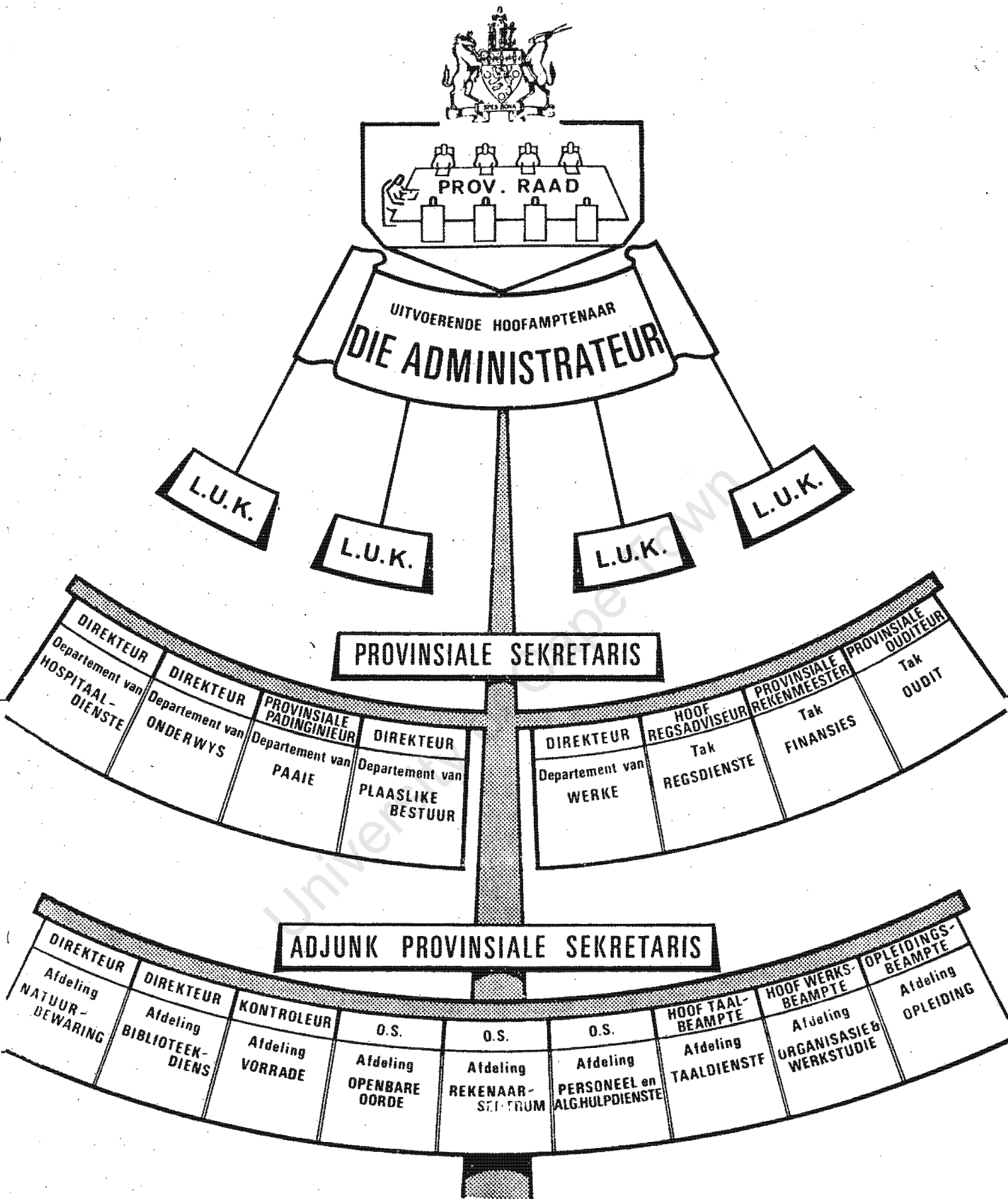
5.3.1. Gross Structure

The structure of the Provincial Administration as a whole has been represented by the province itself as on the diagram 5.1. shown overleaf.⁷ This diagram may perhaps have some function as representing the province's image of itself as a corporate body, but as a model it is not only inadequate but rather misleading. Its main faults are that it does not distinguish between the functional departments which provide services direct to the public, and the 'horizontal sub-systems' which support them, and that the structure and function of the Executive Committee is merely left out.

However for the moment it can be accepted until these relationships have been properly studied.

The source of this diagram is the "Orientation Course" for clerical recruits issued in 1974, where it appears on the title page.

It shows seven departments headed by directors (including the Provincial Roads Engineer, who ranks as a director), which offer



Provinsiale Administrasie van die Kaap die Goeie Hoop

«1974»

Diagram 5.1.

services direct to the public. Although these departments are shown as reporting either to the Provincial Secretary or Assistant Secretary, they in fact enjoy considerable autonomy; the Provincial Secretary is their channel to the Executive Committee, and merely passes their submissions to that body. If he happens to disagree with one, he would not amend the submission, but attach his dissenting view. This is rare, however, and control is largely budgetary control, which is exercised by the Executive Committee. Thus, although the Provincial Secretary is at the head of the administration and is the accounting officer, his ability to exert administrative control is limited because in some respects he is by-passed by the direct links between the Executive Committee and the major department heads.⁸

The other units shown are either branches or elements of the secretariat, and provide administrative services for the whole province. They will be discussed individually below.

5.3.2. General Environment

The structural features of the socio-political environment in which the Provincial Administration finds itself are far from simple. The boundaries of the organization are not as clear cut as it might appear from the idealized diagram shown above. According to system theory, a "holon" can be identified as having its own canon or code, which regulates its internal activities and boundary transactions. But the Administrator, for instance, is appointed by and bound by the code of his political party. The powers of the province are laid down by the constitution, which is the canon of the central government. Numerous Acts of Parliament apply directly to certain departments of the administration and thus throw into doubt the order of the governmental hierarchy. If we ask what the province's canon is, the answer must be "the rules by which it operates and the norms by which it is guided". As so many of these rules and norms are laid down by bodies outside the Provincial Administration, it is theoretically valid to ask whether the province qualifies as a "holon" at all. If it is, it is a very open system. The situation is clarified by looking specifically at the locus of the Provincial Secretary, the accounting officer and formal head of the administration, (see diagram 5.2.).

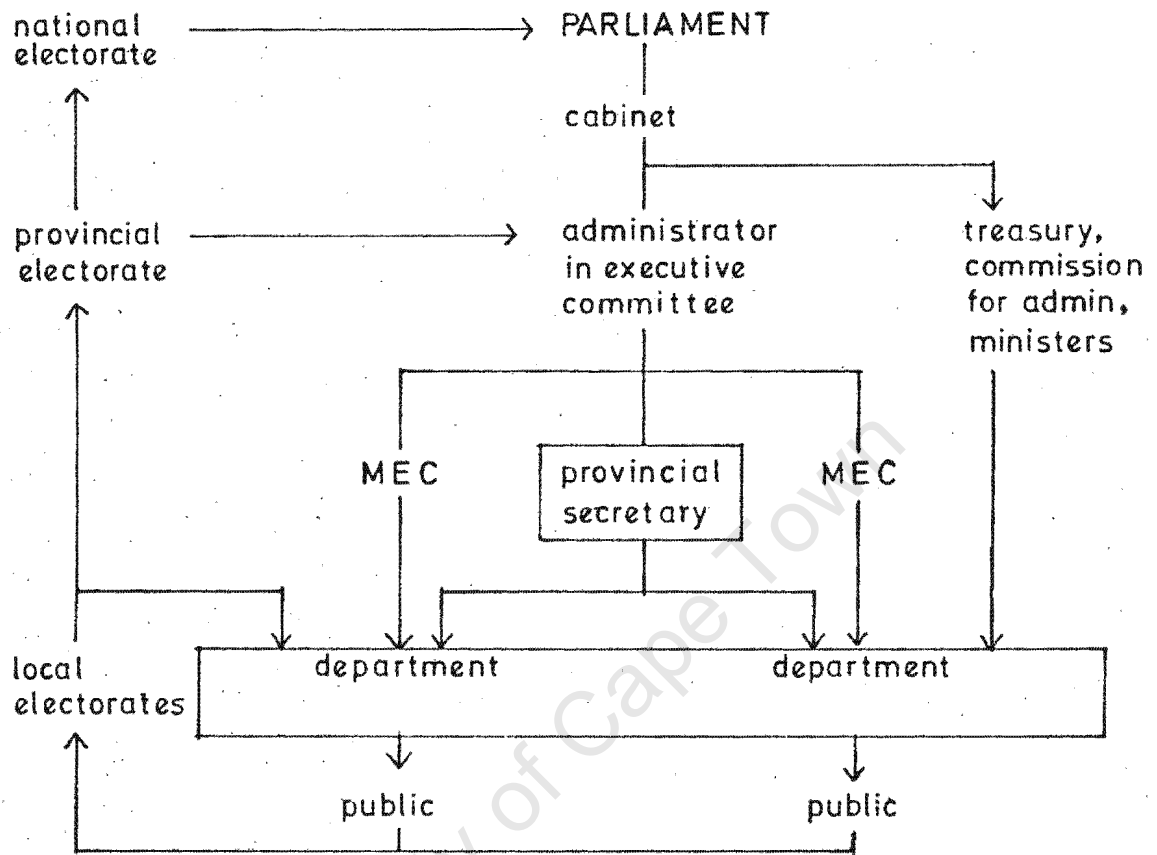


DIAGRAM 5.2.

The status of the Province as a holon will be resolved in the next chapter, but in the meantime this diagram gives some idea of the position of the Provincial Secretary, sitting in a web of political and administrative structures which multiply the pressures on him and at the same time by-pass his authority over his departments.

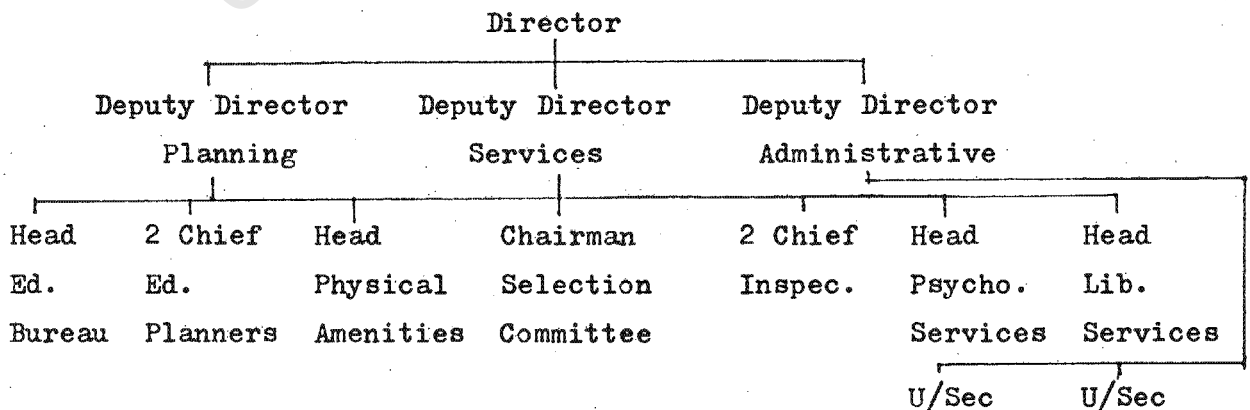
This situation will become more explicit as each department is analysed, but clearly the provincial secretary is in a position analogous to that of the town clerk in a British borough, and one object of corporate planning will be to extricate him.

5.2.3. Education Department

The Education Department fall under Budget Vote 2.⁹ In each vote a table is given which classifies the staff first into higher posts (Under Secretaries and their equivalents and higher), and other staff; and secondly into administrative, professional, clerical, technical and general divisions. The tables show only staff on the establishment of the Public Service Commission. As these are the officials with which the study is directly concerned, this table will be shown for each department. For the Education Department the table is as below:-

Higher Posts		Other Staff		
Professional	Administrative	Administrative	Clerical	General
3	3	28	70	41

The total is 145. The structure of the department is as shown below:-



Because there are provincial officials on the head office staff, as well as the establishment staff tabled above, the total number at head office is 186, while the 'field staff' is 20,867.¹² The three professional higher posts are the Director and the Deputy Directors of planning and services. The officials who fall directly under them are also professional and the functional planning of the department is in the hands of the professionals.

The Deputy Director (Admin.) has as his chief function the preparation of the budget for the department. Under him the two Under-Secretaries control seven sections of administrative, clerical and general staff who deal with:-

- Appointments
- Conditions of Service
- Supplies
- Syllabuses
- School organization
- Hostels and transport
- Inspectorate

Some of these sections simply give clerical assistance to inspectors, for instance, but their main concern is with personnel matters, financial control, and the organization of those functions of the department which are not directly related to education, such as the running of hostels.

The formal channel to individual schools is a double one. The direct control over educational affairs runs through school inspectors, who are decentralised on a regional basis over the province. Their line of authority runs back to the Director. Their concerns are for educational standards, curricula and the like. For other matters, control runs through the system of school boards. The whole province is divided into school board districts, and in each district there is an elected school board. If sufficient candidates do not come forward, the Administrator may appoint. There is also a school board secretary with a small staff.

The senior officials form two committees, a smaller one which meets daily and a larger one which meets monthly and discusses general

overall policy.¹³ These are the organisms where substantive and procedural planning takes place, although the officials themselves naturally do not use these terms.

At this stage it is essential to bear in mind the question of hierarchical levels, or the central thread of the enquiry may be lost from sight. In education, the operational level is the school. Each school is undoubtedly a holon, a discernible unit. The Department co-ordinates the activities of all the schools in the province, and as far as they are concerned it is the meta-system. The Department must therefore perforce practise a form of corporate planning. It has information on demographic and social change, it is aware of technological changes in the educational field, statistics on pupil performance and pressure on school places are available and used. There is a system for priorities for school buildings, there are bursary schemes for teacher training which rely on computer projections. Thus in the Field of Education the operation is planned, subject to the constraints on resources. Full corporate planning implies that the Goals, the operations and the resources are integrated into a scheme, and this is one aspect which must be considered.

The other aspect is concerned with the next hierarchical level, which is the Provincial Administration as such, and the degree to which it acts as a meta-system for this and other departments. This aspect will be discussed when the Secretariat and the Finance Department are analysed, as they are the organs concerned at Provincial level.

As far as the Education Department is concerned, the links with these organs are the functions of finance, personnel and organization at departmental level, to which we now turn.

As far as budgeting is concerned, I was informed that financial planning is very difficult, because the department does not know from one year to the next what its money supply will be. In the face of rising costs and an establishment which grows with the population, they have a source of income which in real terms is diminishing in value, and the result is a situation of slow squeeze. In this climate, they cannot look very far ahead.

Staff on the Public Service Establishment have their affairs dealt

with by the Staff and General Section in the central secretariat, but all the provincial staff have personnel matters dealt with in the department itself.

The province tries to keep in line with central government policy in personnel matters, and the conditions of service and post structure and the classification of staff are all done on the same lines. If a problem crops up, departmental staff will sometimes consult the secretariat, but structurally they are independent. There is no manpower planning.

The organization of the department and its extensions into the field is stable, routines are established and work reasonably well and organizational problems rarely crop up. If one should arise, the Organization and Work Study Section (familiarily known as O & M) would be called in.¹⁴

It is interesting that each sub-system has its own control mechanism - school inspectors for education, inspectors on the general staff for hostels and administration, and auditors for finance. The auditors are, of course, independent in that they are on the staff of the provincial auditor.

The environmental condition of the department is as set out in diagram 5.3.

Here again, it is clear that the Director is located in a complex web of constraints and that the 'official' line of hierarchical authority is not a simple relationship. Depending on the matter of any decision, the weight of influence may shift in favour of the provincial councillor, the Provincial Secretary, the Minister, the local electorate, or the Director's conception of his professional duty. Any M.E.C. who is bold enough to make promises to his electorate is liable to find himself thwarted by a mass of counter-manding imperatives. The Minister may lay down requirements which his colleague in the treasury is unable or unwilling to support with funds.

The diagram omits the link with the Works Department, which is important because the Works Department handles the capital programme and the maintenance of fixed plant (i.e. school buildings).

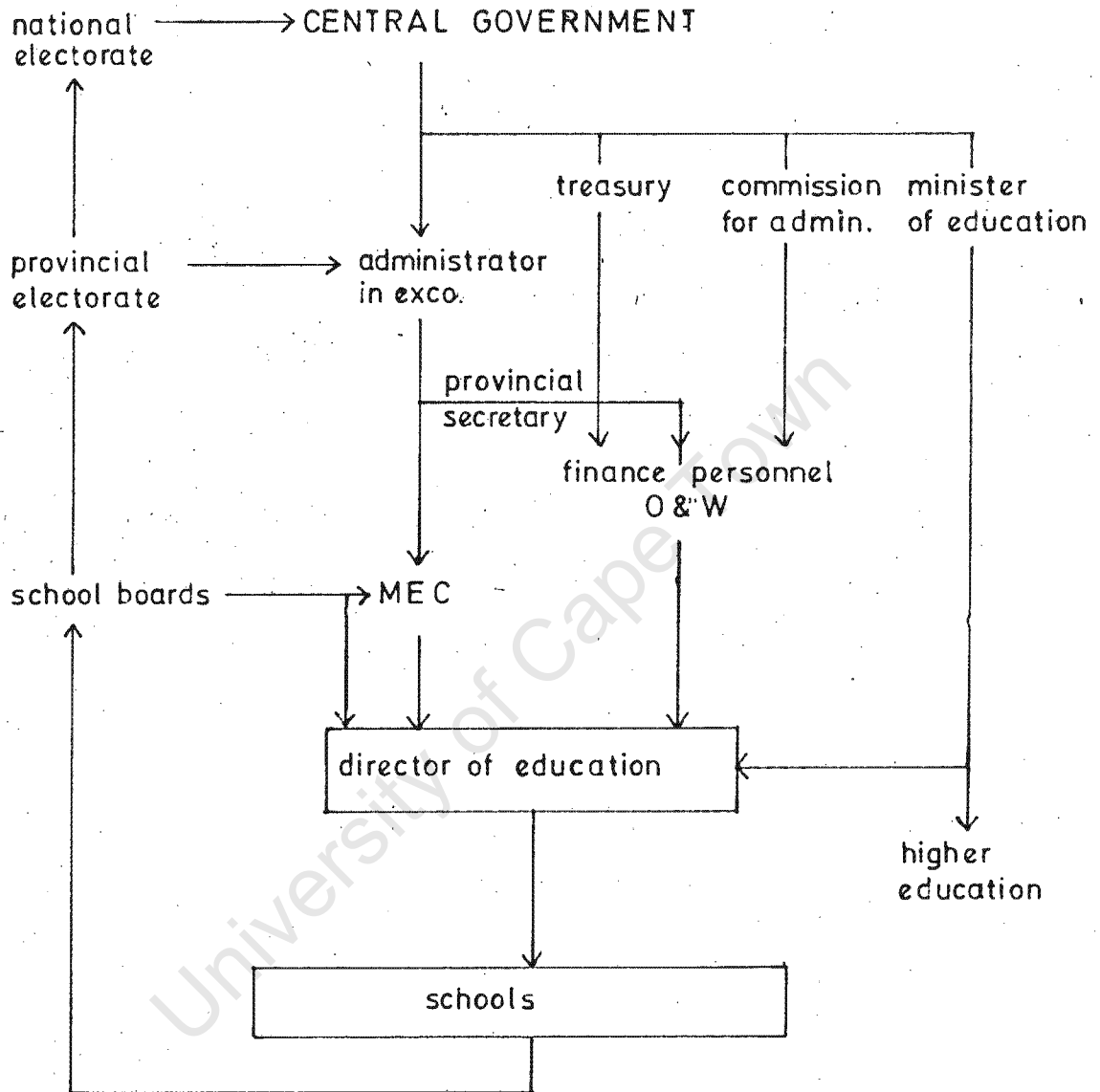


DIAGRAM 5.3.

Thus from the corporate planning point of view, while the Director can control the planning requirements of his own department, it is far from clear how he should relate to the next hierarchical level, or even what that level really is. Because of the problems of co-ordinating education on a national level, various means were tried such as the National Education Advisory Board founded by a central Government Act in 1962. In 1968 this was replaced by the National Education Board, according to the National Education Act of 1967.¹⁵ Thus in Educational matters this board is the meta-system, not the province. This may give some insight into the problem that arose recently with the salaries of teachers. Teachers are provincial employees. They are not on the "fixed establishment" whose terms of service are laid down by the central government. Nevertheless, their salaries could not be increased without the sanction of the minister. The provincial authorities were unable to resolve the matter. The Provincial Secretary, who is the accounting officer for the provincial budgets, and the Administrator, who is supposed to see that government policy is followed in the province, showed themselves to be impotent in this case. Nobody consulted the electorate.

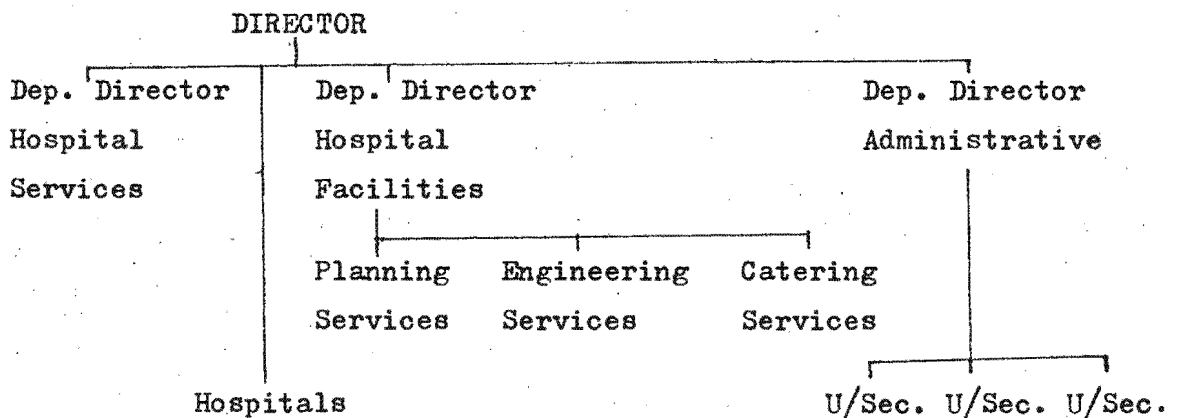
Gross expenditure on the education vote for 1979 - 80 was estimated at R197,444,000 or 24.48% of the total provincial budget;¹⁶ this department is one of the three major departments of the administration.

5.3.4. Department of Hospital Services

This department falls under budget vote 3. The Public Service establishment is as shown below:-¹⁷

<u>Higher Posts</u>		<u>Other Staff</u>			
Professional	Admin.	Admin.	Clerical	General	Total
3	4	22	56	14	99

The organizational structure of the department is as below:-



The organization chart was obtained from the department. The three professional higher posts are the Director and the Deputy Directors of services and facilities. There are also twelve professional provincial posts on head office staff, (all doctors, of course), and these officials form the top echelon as far as the central function of the department is concerned.

The Deputy Director (Admin.) prepares the budget, and the three under-secretaries deal with:-

Staff

Finance and accomodation

Supplies and services

There are 82 provincial hospitals, 56 provincial aided hospitals, and the total staff is 39,737, including the 99 on the fixed establishment.¹⁸

As in the Education Department, there are central government acts which apply to provincial services and to that extent the direct control by the provincial authority is weakened.

The operational unit here is of course the hospital, and just as in the Education Department, the Department of Hospital Services has to act as the corporate controlling body. Departmental officials must allocate resources of money and manpower, organize their general services and make policy decisions on the health matters which fall within their competence. To the extent that they do this they undertake all the functions of a meta-system. The individual hospital budgets give them their financial parameters, they have the figures on available beds, the pressure on services, and the utilization of

facilities. Their teams of inspectors provide a stream of information on the state of the system.

Thus what they do is not far from corporate planning at their particular hierarchical level, and in relation to their particular operations. As in Education there are committees of senior officials which meet at regular intervals to plan and co-ordinate the activities of the department. The administrative staff under the Deputy Director deal with expenditure control, financial planning, income control, and the maintenance of buildings and plant. But here too the constraints of the financial allocation were referred to as soon as the question was raised. (The official concerned, when asked about financial planning, declared roundly that it was a waste of time).¹⁹

The staff section handle personnel matters of all provincial staff, - there are six sections which deal with professional staff, nursing and technical staff, administrative and general staff, service record and general staff policy, pensions and accidents, and general personnel matters. There is no manpower planning.

Although the head office staff and organization is stable, problems crop up in the organization of hospitals, and in these cases, the O & M Section is called in.

In this department too, control follows the sub-systems. There is an inspectorate divided into medical, pharmaceutical and nursing sub-sections, as well as the normal financial controls.²⁰ The environment of the department is patterned in exactly the same way as that of the Education Department: (see diagram 5.4.).

The hospital boards are rather less influential than the school boards, but the political hierarchical channel is split between the Provincial Council and the Minister, and the group of administrative parameters lies along another channel again.

Thus all the considerations put forward under the Education Department apply in the same way.

The gross expenditure of the department for 1979 - 80 was estimated at R256,602,000, which is 31.82% of the total budget.²¹ This is the largest single vote.

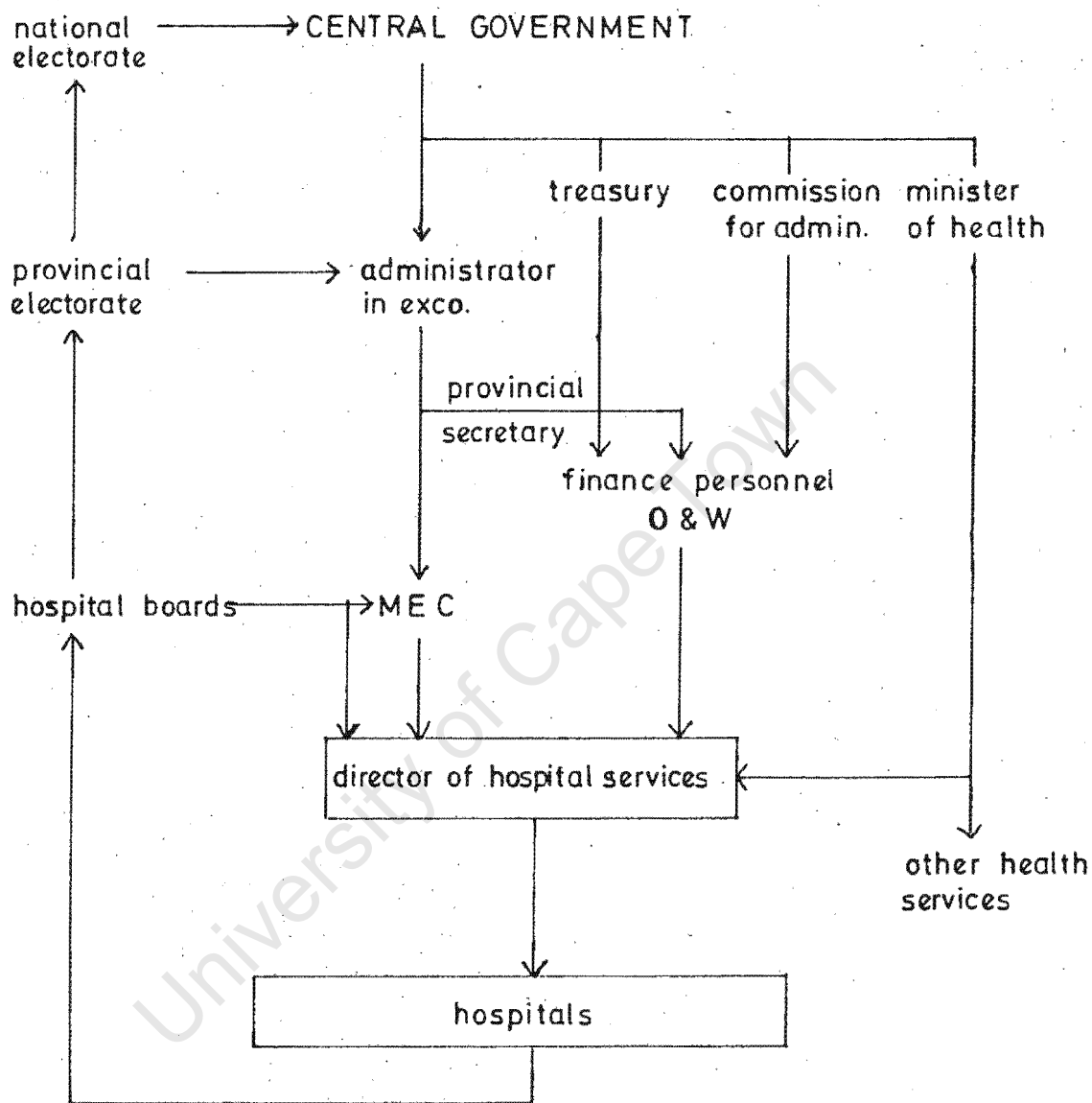


DIAGRAM 5.4.

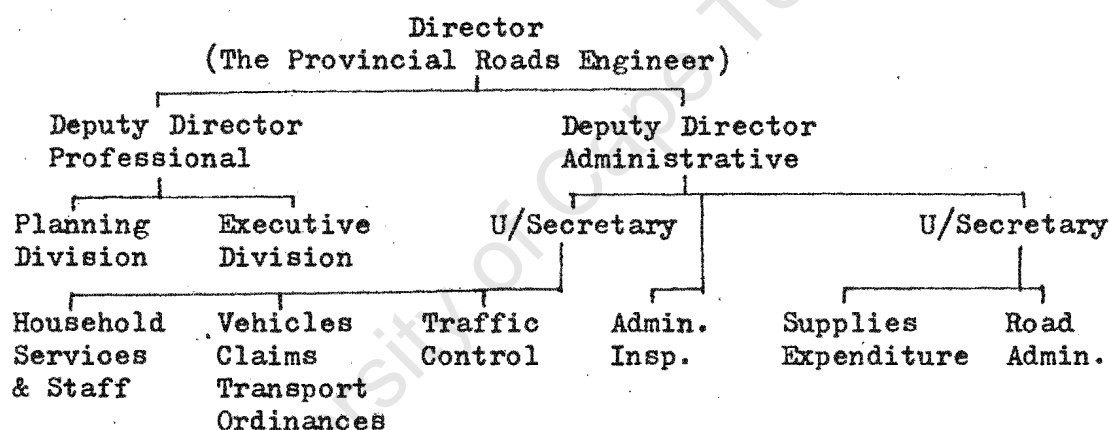
5.3.5. Department of Roads and Bridges

This department falls under budget vote 4. The table of Public Service Establishment staff is as follows:- ²²

	<u>Higher Posts</u>			<u>Other Staff</u>			
	Prof. or Technical	Admin.	Gen.	Prof. or Technical	Admin.	Clerical	General
A	45	3		196	23	54	237
B			1				298

The grand total is 857, which is the largest establishment staff of any department. A refers to roads and B to Traffic Control, which are treated separately in the budget.

The organization chart (supplied by the department) reads as below:-



The core of the department is the corps of professional engineers - the Director holds the title of Provincial Roads Engineer, the Deputy Director (Professional) is an engineer, there are five chief engineers, fifteen assistant chief engineers, an urban transport planner and twenty principal engineers. Basically, the operation is divided into maintenance, for which there are regional engineers in nine regions, and construction. Just over half the latter is put out to tender, and the rest handled departmentally. Over and above the fixed establishment, there is a temporary staff of about 5000 at any one time, mostly artisans and labourers.

The activities of the department are heavily influenced by central government legislation. For instance, in 1979 the Minister of Transport proclaimed Metropolitan Transport Areas in the Cape Peninsula and the Port Elizabeth - Uitenhage - Despatch areas in terms of the

Urban Transport Act of 1977.

The province has to provide chairmen and secretaries for the proposed advisory boards in terms of the act. The Director's report reads "my department is being organised to meet the additional responsibilities arising from the provisions of the act".²³

The planning of the main departmental function, namely roads, lies with the professional engineers, who also supervise the execution of projects. In this department therefore, the operational units are either directly employed by or under contract to the department. (Hence the large staff). The department is not a meta-system to a subordinate level as is the case with schools and hospitals, although it does control some aspects of the local road systems. In its physical planning function it is related to the town planning branch of the Department of Local Government, and officials from both departments sit on some of the same boards. (See above). Thus although this department undoubtedly plans and co-ordinates projects, it does not act as a meta-system to any subordinate authority, and in that sense does not practise corporate planning as we understand it here.

The Deputy Director (Admin.) prepares the budget, and apart from the departmental budget has access to the provincial revolving loan fund, most of which is used directly to finance projects but some of which goes to other local authorities to subsidise local roads. As the department's funds come partly from the central government's allocation, partly from specific institutions such as the South African Railways - for specific projects, and partly from the revolving loan fund; and as its expenditure rate varies with the rate of cost escalation in the engineering industry and the vagaries and problems of individual projects which affect the rate of cash flow, it is meaningless to budget for more than a year ahead. The department does know its approximate commitments for some years ahead on contracts, but has found attempts at long-term budgeting to be highly inaccurate. As with other departments, staff on the fixed establishment are served by the staff section in the secretariat, but the department handles personnel matters for provincial staff itself. There is nothing in the way of manpower planning,²⁴ and a high turnover situation among the traffic police has been allowed to become chronic. In view

of the fact that the pay scales of these officials are related to those of national and municipal police, this comment might be thought unfair, but it illustrates another problem which the province is powerless to solve unilaterally.

Organization and procedures are well established and stable. Where a problem arises, O & M will be called in, and have indeed been asked to deal with the problem of the collection of motor licences, for instance, which apparently they were able to solve.²⁵

The locus of the Provincial Roads Engineer is as in diagram 5.5. Here again, it is clear that, apart from the confusion of multiple authorities, one type of transport activity - namely roads - has been divorced from other types such as rail, air and sea, for no particularly good reason, and assigned to the province. It is particularly clear perhaps in this case that the Minister must direct the Engineer, because so many transport systems must be integrated, and because they visibly and clearly cross provincial boundaries, and thus require nationwide co-ordination. The Provincial Roads Engineer is not discernably different in function from a Regional Director in the railways, except that his finances are (mostly) channelled through the provincial budget. The Directors of the other two major departments are in effect in the same position.

The gross expenditure of the department (including R85,000,000 from the revolving loan fund) was estimated to be R143,290,000 for 1979 - 80, which is 17.77% of the total provincial budget.²⁶ Thus this is the third of the major three departments, which between them account for 74% of the province's budget.

5.3.6. Miscellaneous Services

This is the heading of budget vote 5, which covers Nature Conservation, Libraries and Museums. The Public Service Establishment is as shown below:-²⁷

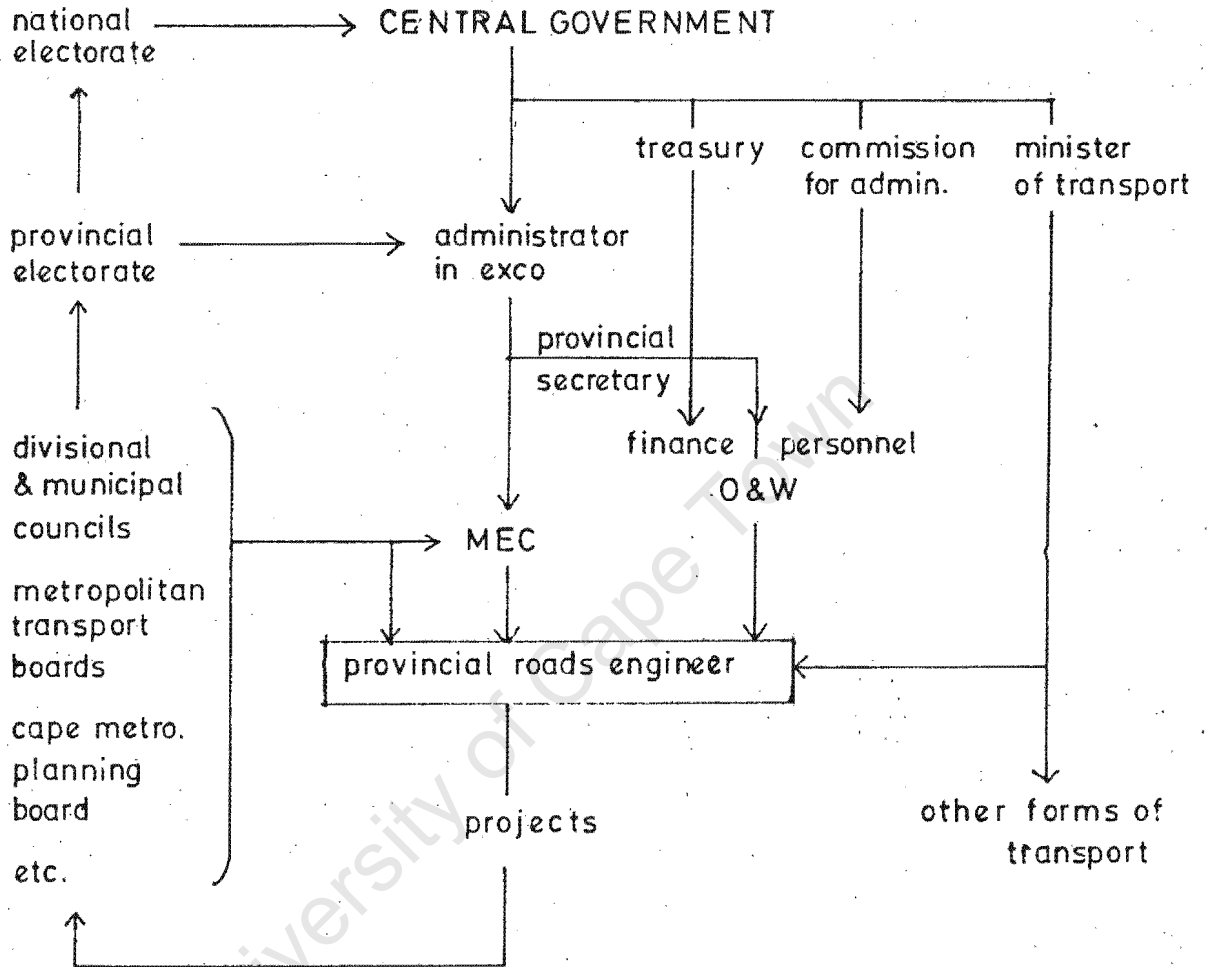
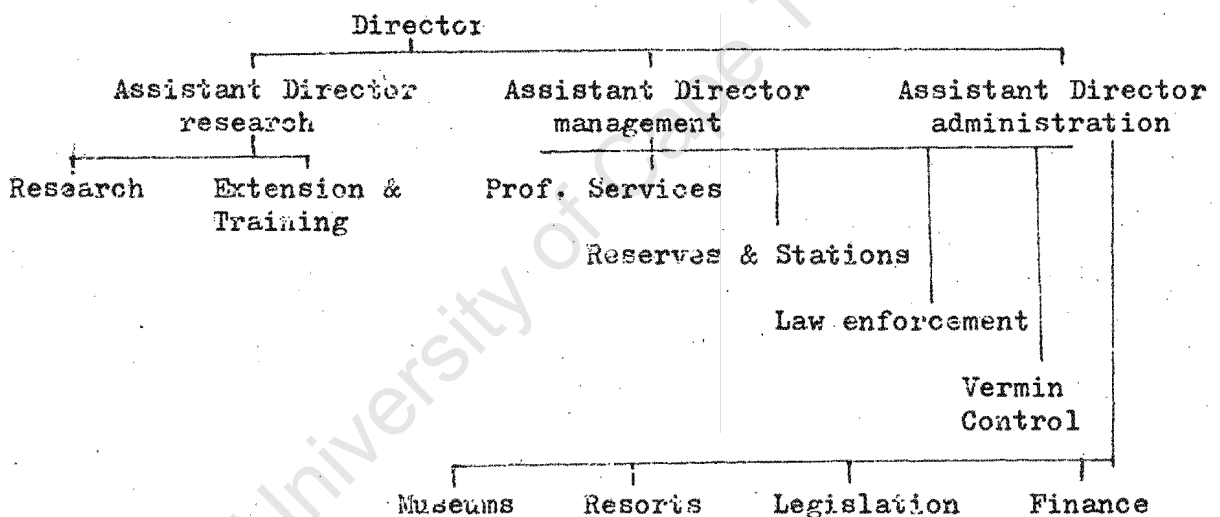


DIAGRAM 5.5.

	Higher Posts		Other Posts			
	Professional	Admin.	Prof. or Technical	Admin.	Clerical	General
A	2		46	1	31	93
B	4	1	38	6	16	109

A refers to Library Services, B to Nature Conservation, numbering 353 officials. In addition, there are 442 provincial officials on the museum staff, who fall under Nature Conservation for administrative purposes. Most of these officials are decentralised all over the province in local libraries, museums and conservation stations, and the head office staff is small.

The organizational structure of the Department of Nature conservation is as illustrated below:- ²⁸



The research and management sections are decentralised over four regions - North, South, East and West Cape. As in the other departments, planning in the field of conservation is undertaken by the professionals in the department, the Assistant Director (Admin) deals with the finances, personnel and organization functions are not prominent. It would be out of order to expect corporate planning from such a small staff (only seven in the administrative class), and the same applies to Library Services. In these small departments the scale of operations simply does not warrant an elaborate and sophisticated approach in the administrative field, and we do not find it. (Of course in the scientific field the case is otherwise).

In these two departments, pressures from central government and local electorates are minimal (although not absent), and therefore, the environmental conditions are simpler and closer to what was evidentially intended in the original constitutional concept. The environment could be depicted thus for Library Services as in diagram 5.6.

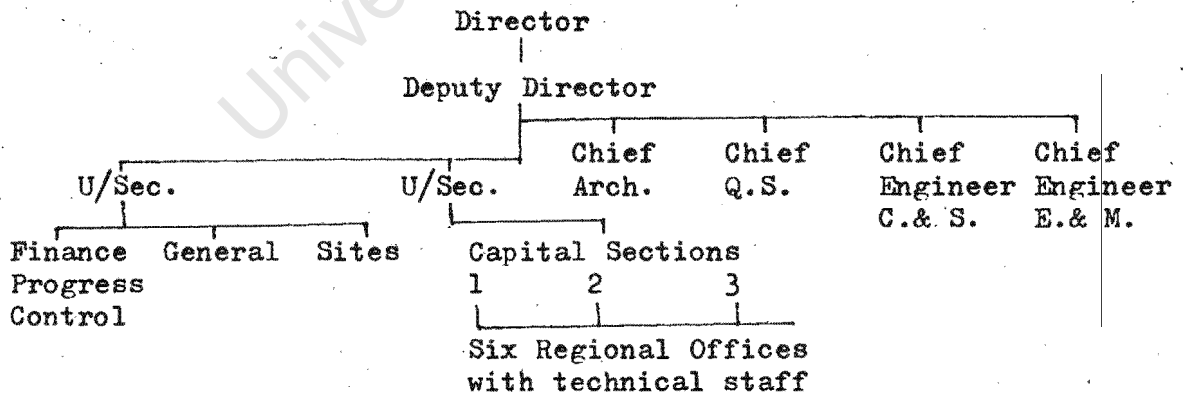
It must also be pointed out that the budget of this vote falls well within the approximately 15% of its revenue which the province gets by direct taxation. It can therefore run these activities on its "own" money. Expenditure on this vote was estimated at R14,871,000 which is only 1.84% of the total.²⁹

5.3.7. The Department of Works

The Works Department falls under budget vote 7, and the Public Service Establishment is as shown below:-³⁰

Higher Posts		Other Posts			
Admin.	Prof. or Technical	Prof. or Technical	Admin.	Clerical	General
4	31	205	18	37	21

This is a total of 316. The departmental structure in the latter half of 1979 was as follows:-



(79) Budget, p. 12.

This organization chart was obtained from the department, but since then it has been re-organized by the addition of an Assistant Director and the increase of the under-secretaries to three, with accompanying changes of structure. The professional sections were not changed. In this department, the Director and his deputy are administrative

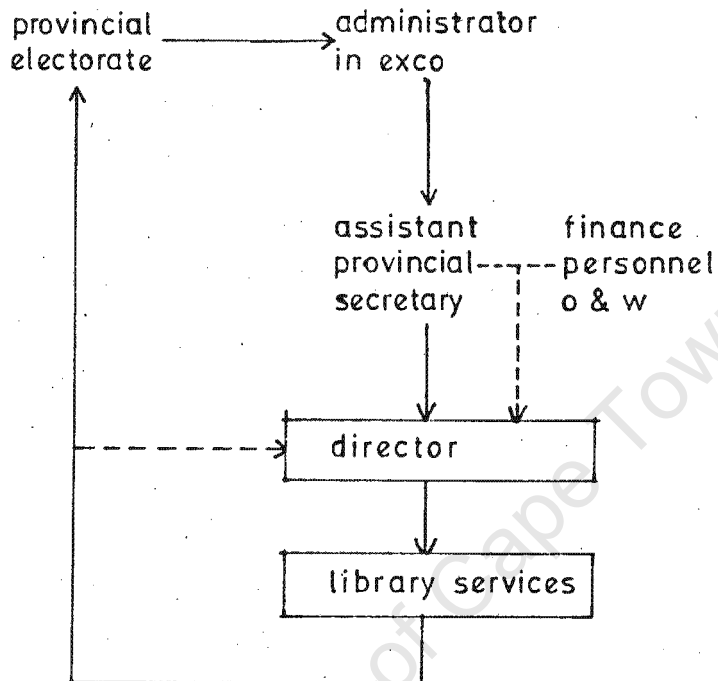


DIAGRAM 5.6.

staff, which is a departure from the pattern encountered so far. There is a large professional staff quartered at head office, falling under the chiefs in their respective disciplines, and it will be noted that each chief reports directly to the Director.

The department is really a service department, for although the Constitution delegates to the province the function of constructing local works, the department does not do this directly. It constructs and maintains buildings for the other departments, which are its clients, and so provides its services indirectly. Its main clients are the departments of Education and Hospital services. New buildings are constructed out of the capital vote, so the Works Department manages this vote as well as its own departmental vote, which includes funds for maintenance.

As a service department which does not deal directly with the public the Works Department is the first in this survey that is part of the Provincial establishment as such - it therefore belongs on a different hierarchical level from its client departments, as does the secretariat. The Director of Works therefore has a role in the meta-system of the Province-as-a-whole, namely the management of the capital account, which is quite unlike that of a line director. For this reason the planning function in this department has two aspects, namely project planning, which is a professional matter, and co-ordinating the priorities of the client departments from a financial point of view. The latter is part of the corporate planning process of the Province as a whole (or would be if there were such a process). It may be for this reason that the director has been able to resist the professionalization of his post (see below).

There is a management committee of senior administrative officials, who also co-ordinate the affairs of the administrative sections including the regional technical staff who handle maintenance. There is in addition a committee of professional chiefs, with the Provincial Architect in the chair whose function it is to advise on capital projects. Planning of such projects is done to some extent by the architectural staff, but generally by outside consultants. In either case, professionals obtain and discuss the brief from the client departments, see that the documents satisfy it, and control

the contracts through the consultants when they are awarded.

The departmental budget is prepared by the Deputy Director. The Executive Committee must authorise capital appropriations, but the department controls the subsequent expenditure. As far as financial planning is concerned, an effort is made to project expenditure over the long term, particularly for very large projects which absorb a high proportion of the capital fund. The problems are the same as those of the Roads Dept., where the uncertainty of the money supply and the cash flow to individual projects makes any kind of prediction inaccurate by factors which increase rapidly over time. The budget gives the figures in the capital vote of the estimated total cost of each project, expenditure on it in the previous year, estimated expenditure in the current year, and the balance to be spent in future years. For the whole capital vote, this balance is much larger at R57,081,000 than the current vote of R42,600,000 which gives an idea how planning flexibility is restricted by contractual commitments at any one time.³¹ Furthermore, the priority lists of the client departments are also in constant flux, thus increasing the uncertainty inherent in the whole exercise. The computer is used to try to make predictions, but their value is problematical.

The organization of the department is not appropriate to its function, which, as has been said, is to accept briefs, set up contract documents and manage building and maintenance contracts. This is the professional field of the architect, assisted by his team of professional consultants, and it would seem to be structurally correct for the Provincial Architect to be at the head of the department, as the Provincial Roads Engineer is in charge of his. The role of organizing interdepartmental priorities referred to above would not disqualify an architect from the post - in fact such matters fall well within his professional capability.

The present system whereby the Chief Architect "advises" the Director how to act is therefore a kind of administrative fiction which gives rise to endless petty conflicts. For instance, if the Chief Quantity Surveyor thinks that certain contracts should be measured one way and the Chief Engineer thinks they should be measured another way, they both take their case to the Director. He may or may not

ask the Chief Architect for his opinion, but even if does, he ends up with three opinions which he is unable to resolve, since he does not have the necessary professional judgement.

Likewise at the technical level, if an inspector comes across a problem which is beyond his capability, his natural course is to turn to the professional in his particular discipline for advice. As there is no direct channel of communication between professional and technical staff, both resort to informal channels which do not always work.

In spite of these difficulties, the department manages to perform its function with reasonable efficiency, thanks to the experience and ability of its director, and the latitude for exercising their own discretion which is accorded to the professional staff. The environmental conditions for this department are as illustrated in diagram 5.7.

This is a tolerable situation because in practice the central government's Department of Public Works does not have any direct line to the province. The department is buffered from the public by its client departments, and in fact, is not much exposed to direct political pressure.

As the staff are all on the fixed establishment, with a few minor exceptions, personnel matters are handled by the staff section in the secretariat. The departmental vote was estimated at R21,490,000 for 1979 - 80, and adding in the capital vote of R42,600,000 which the department manages, Works Department accounts for 7.94% of the total budget.³²

5.3.8. Local Government

Local Government comes under budget vote 1, General Administration, but it has its own Director and the same standing as departments with their own votes. The Public Service establishment is as shown below:³³

Higher Posts		Other Posts			
Admin.	Prof./Tech.	Admin.	Prof./Tech.	Clerical	General
5	10	27	29	47	14

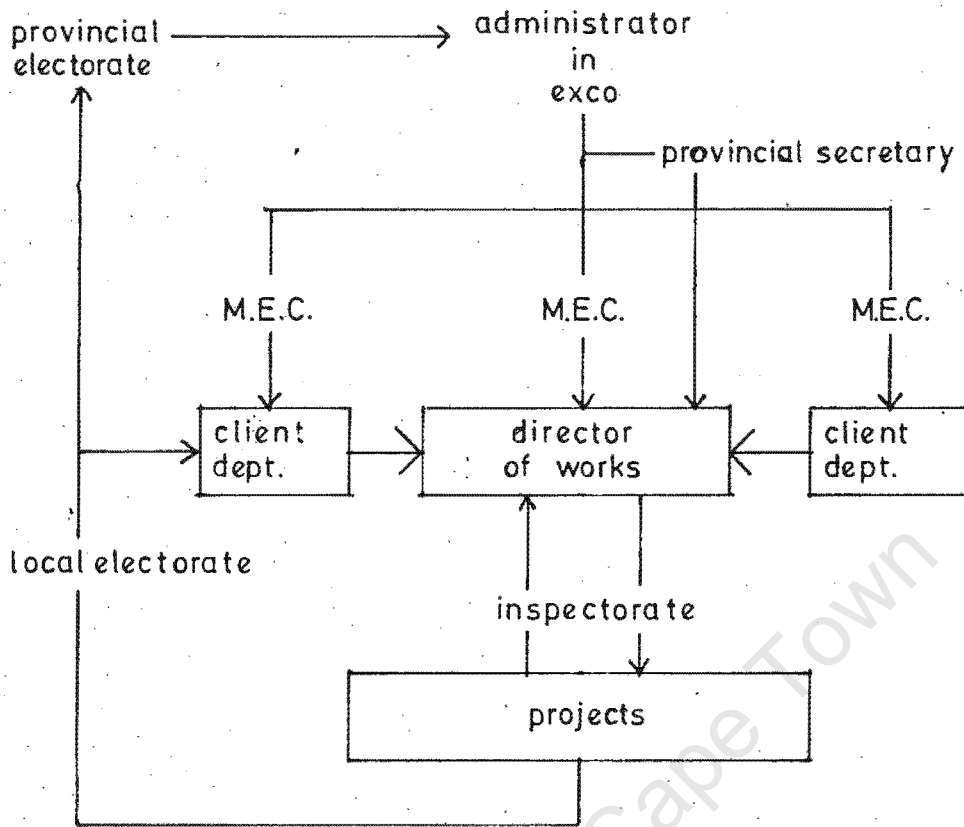
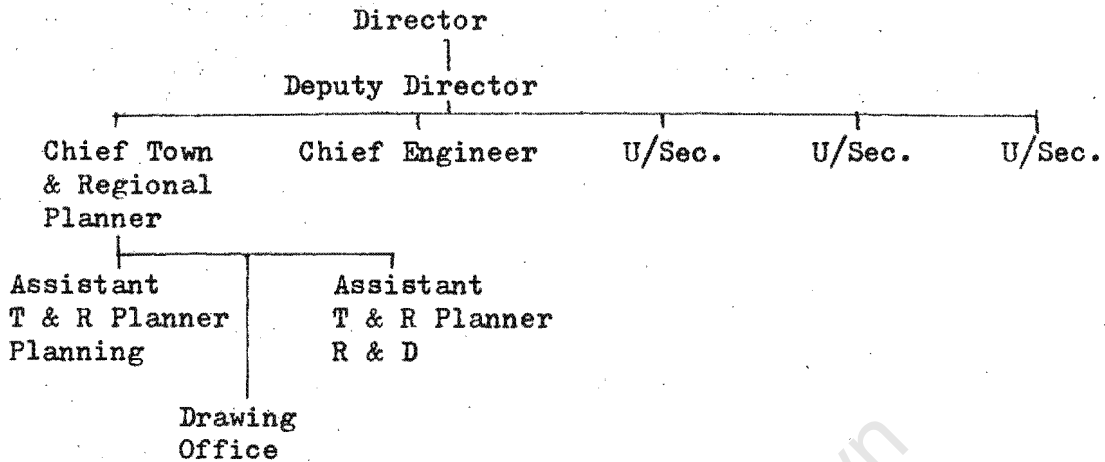


DIAGRAM 5.7.

This is a total of 132 for the department. The organization of the department is as below:-



This chart was obtained from the department. The position in this department looks as if it is the same as that in the Works Department, where there is an administrative Director controlling professional specialists, but the organization chart is misleading if taken on its own. In the first place, the department does not execute town planning contracts. It monitors schemes proposed by other parties. The research and development it does relates to a framework within which other parties may make specific proposals. In this sphere, the Chief Town and Regional Planner is the authority, has direct control over his own staff, who are indeed in a suite of offices of their own on a different floor from the offices of the rest of the department. If the Chief Planner has to go to higher authority for a decision, the Director is merely his channel to the Executive Committee. To all intents and purposes, he is thus independent, because the administrative and clerical sections of his department deal with altogether different matters, such as the finance and subsidies of local authorities, their by-laws and their legal affairs.³⁴

The functions of the Chief Planner are to control the town planning activities of local authorities, scrutinise development plans, assist the smaller authorities with technical help, and approve and monitor their building regulations. Under the provisions of the Financial Relations Consolidation and Amendment Act (Act 38 of 1945), regional planning is reserved for the central government, but the province does some sub-regional planning and occasional work on behalf of the

central government, which does not have the staff or the local knowledge to do all they would like to.³⁵ The Chief Planner serves on such bodies as the Cape Metropolitan Planning Committee and the Metropolitan Transport Board. It is in this sphere, of course, that 'planning' in the sense of overall government control of the physical environment is actually carried out, but administrative officials play virtually no part in it - it is regarded as a professional field. Whether this is a good thing or not is outside the scope of this study.

The Chief Engineer deals with municipal services with an engineering cast, such as sewerage, stormwater drainage and water supply, including the building of dams and pipelines.

The administrative sections deal with the monitoring of by-laws, proclamation of townships, land transactions, loans and subsidies, financial control and valuations.

The Deputy Director deals with the departmental budget, and there are not enough provincial staff to justify a staff section. The Organization and Work Study Section was recently called in to re-structure the town planning branch.³⁶

The environment of this department is best described by splitting it as in diagrams 5.8. and 5.9.

The fact that the two sections can be so easily separated, and have their own clientèles and lines of communication suggests that they should be separate departments. Note that the Chief Planner sits on the Metropolitan Transport Boards as does the Provincial Roads Engineer, and for the same reasons. Note also that the M.E.C. who deals with Local Government does not deal with divisional council road matters. Thus from the point of view of planning as well as that of roads it appears that these two functions are more closely related than are planning and the rest of local government, which is dominated by legal and financial affairs. Both branches of this Department act as meta-systems to the local government level of the national hierarchy, although in completely different spheres. The department might therefore be thought to have a corporate planning function. However in this case the operative units have their own

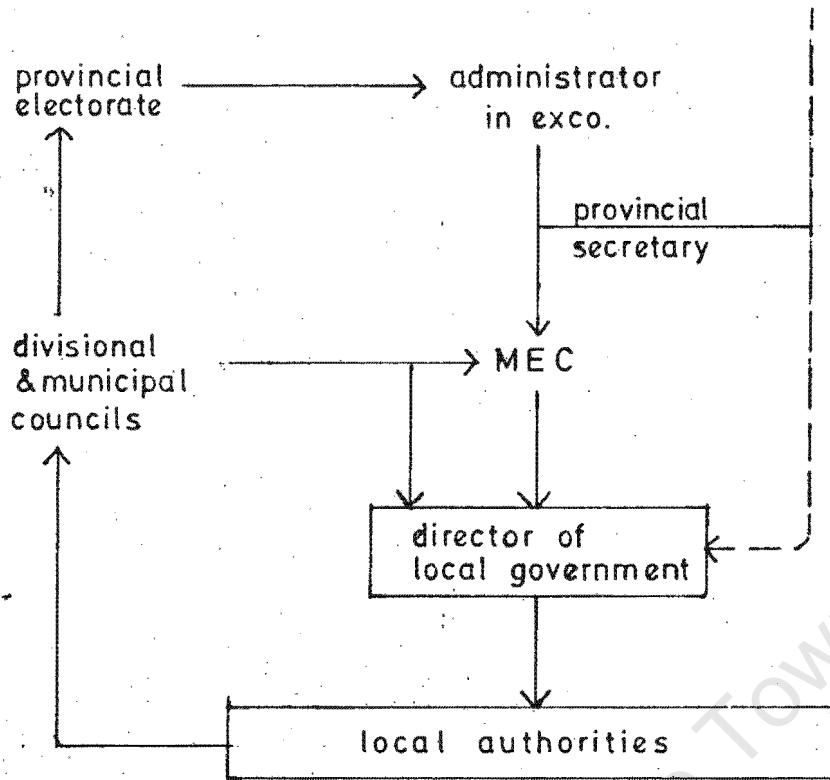


DIAGRAM 5.8.

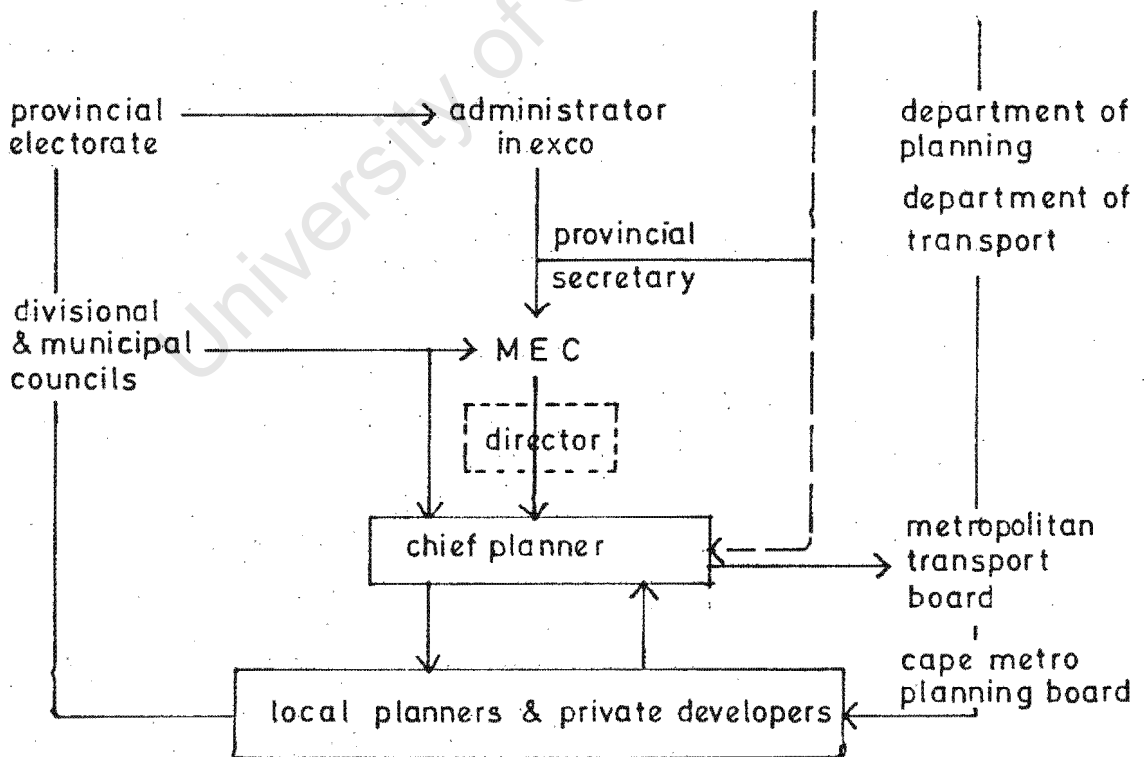


DIAGRAM 5.9.

political control systems and their own tax bases, and are on a completely different footing to a school or a hospital. The department does not, in other words, usurp the proper legislative functions of a local authority, although it must see that their by-laws do not conflict with superior legislation. Although the province may occasionally impose some measure on a local authority this is not the rule.

Unfortunately perhaps, the corporate planning function in the physical sphere has been devolved to such bodies as the Metropolitan Transport Boards and the Cape Metropolitan Planning Board, and so taken out of direct provincial control. This seems to be a case where the provinces as geographical units have lost control of functions which are appropriate to them, to bodies, moreover, who are not responsible to a suitable electorate.

It is not possible to sort out the budget of this department from budget vote 1 as a whole, because of the line/item format which will be discussed later, but the whole of this vote is only just over twenty million rand - less than two percent of the total.

5.3.9. The Secretariat

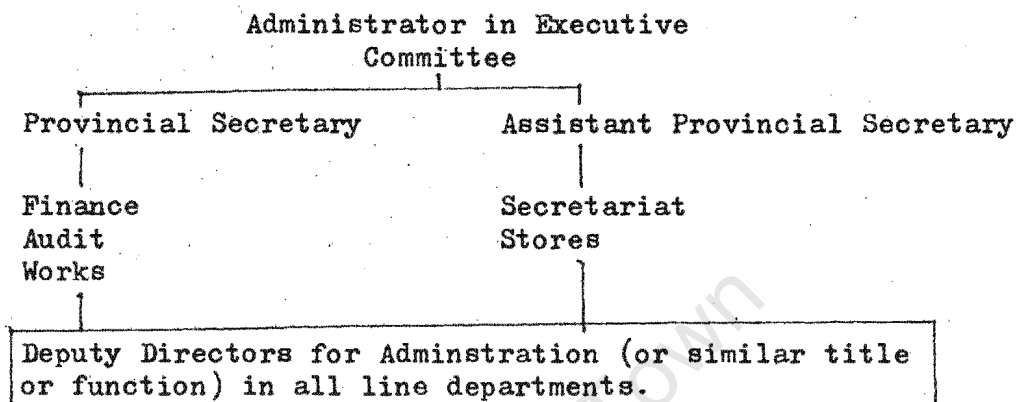
The secretariat falls under budget vote 1. The Public Service Establishment is as shown below:- 37

Higher Posts			Other Staff			
Admin.	Prof.	General	Admin.	Prof./Tech.	Clerical	General
6	2		53	2	77	62

The total is 202. The professionals among the higher posts are the legal advisers, who in this case do act in an advisory capacity and have no executive function. The top administrative posts are held by the Provincial Secretary himself and his deputy, the Data Processing Manager and the Control Programmer from the Computer Centre, the Under-Secretary (Staff and General), and the Chief Work Study Officer. In fact the Computer Centre, the Staff Section and the Work Study Section form three independent units, which will be dealt with separately.

Before dealing with these some remarks might be made about the

Secretariat as a whole, because as in the case of the Works Department, the Secretariat (with the Finance Branch, Audit, and Stores), is proper to the provincial establishment as a whole, and therefore on a different hierarchical level from the line departments. This could be illustrated as below:-



The Provincial Secretary is the accounting officer, and must sign all the audited accounts. He is concerned functionally with finance. The Assistant Secretary normally concerns himself with personnel matters. However they can only actually manage the system in so far as they are in a structural and functional position to do so, using the staff available to them. We now examine them unit by unit.

5.3.9.1. The Computer Centre

The Computer Centre staff is organized into two main sections, on one hand Programs and Systems Analysis, and on the other, Operations. The former section has four main functions - Batch Processing, Systems Analysis, Real Time Programs, and Software. The latter section operates the hardware.

As a matter of interest, the computer used is a Univac 1100/22. It is supposed to operate in two parts - in fact, it is really two computers, one of which is the back up to the other. At present, the pressure on the system is so great that both parts are in continuous operation. Because of the real time function, the computer in fact never ceases working, and the staff work in shifts and keep the machine going twenty-four hours a day year in and year out. A third unit is on order which will relieve the pressure somewhat.

The Computer Section keeps personnel records and handles the payroll for all 58,000 odd employees, both provincial staff and those on the

Public Service Establishment. There are terminals connected through the telephone system from any location that needs one for any of the three main uses, namely, real time, batch processing and demand users. There are about 250 terminals for the real time function alone.

The computer also holds all the financial records and is used for budget and financial forecasting. Computer science is now beginning to be taught at schools, and three schools in the province have their own terminals and are keen demand users.

The computer can deliver a great deal of information on demand, but there is no section for statistics and no publication of statistics or trends. Projections of capital expenditure are made over future years and requirements are forecast, and the Works and Finance Departments use these forecasts, but they are of limited value. Some forecasting is also done for the staff section for the awarding of bursaries. The idea is to promote the study of subjects for which teachers are scarce. Figures on reasons for resignations and staff turnover could be extracted, but are not called for. As might be expected, some officials are computer minded and keen to use the machine, a declining few distrust it and fear it will make their jobs redundant.

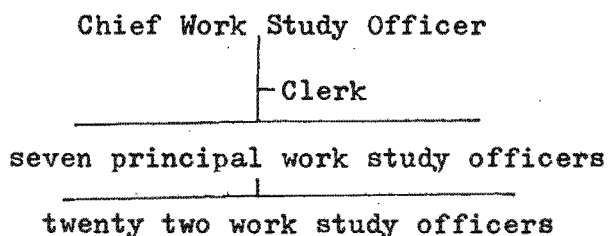
The systems analysts in the computer centre study various kinds of operation to see if they can be computerized or even mechanized. (This is work that used to be done by the Organization and Work Study Section, which has recently been transferred to the Computer Section for technical reasons.)

The Roads Department has a computer of its own, but this is only used for engineering purposes.

The Computer Centre is the information system of the province in the two fields of staff and finance. It responds to demand, and any shortcomings in its use must therefore be laid at the door of the client departments. As the whole system is operating under pressure, the staff are not exactly going out looking for work, but the head of the section did feel that something could be done by way of lectures or symposia to educate the provincial staff at large in the possibilities and limitations of the computer.³⁸

5.3.9.2. The Organization and Work Study Section

The structure of the Organization and Work Study Division is very simple and straightforward, as shown below:- ³⁹



The unit is very flexible to cope with a work load that is variable in scope and nature. As problems arise, teams of officials are put together to deal with them, and the two types of problems are in the fields of organizational structure and working methods and procedures. It is in the latter section that systems analysis was done before this function was handed over to the Computer Centre, but it seems so natural a part of the work study process that it would surely have been more correct to train work study officers in this kind of work, give them a terminal, and let them use the computer experts as consultants if necessary, rather than split up the function.

The division has strong links with the Public Service Commission, reinforced by personal contacts. Reports made on organization and posts on the Public Service Establishment must be passed to the Public Service Commission before they can be released, but in methods and procedures they are autonomous. Thus to some extent, the responsibilities (and hence the loyalties) of the staff are split between the province and the central government. The Chief Work Study Officer does not see this as a problem, however, and would have no hesitation in referring any matter to provincial politicians if he wanted to put pressure on the Public Service Commission. It is also of interest that, in all the interviews conducted, this was the only one where there was any mention made of politicians at all!

The training of officials is on the job training, but it is comprehensive and quite enterprising in approach - periodic lectures and in-house symposia are held in which junior officials are encouraged to prepare papers on different subjects. No academic qualifications are required for posts in the division, but the Chief Work Study

Officer - in common with a fair number of other ranking administrators - has the National Diploma in Public Service Accounting and Auditing, and his approach to his work is very professional. He and his staff make use of the South African Institute for Organization and Methods, which gives them contacts with their counterparts in other large institutions in the peninsula - notably Cape Town City Council and Sanlam. It also gives them common ground with their counterparts in the Public Service Commission, who share the same cadre identification. There was a strong feeling that senior officials at least should be classed as professional, but it is difficult to decide if this is a personal or a general view. At the same time, university training and a degree was not felt to be indispensable.

While the training of work study officials combined with their practical experience gives them a good grounding, which is not to be disparaged, it is all oriented to a particular job in a particular environment - which is inclined to promote "tunnel vision". A professional training which opens the mind to the whole field of study is superior. It is interesting that administrative officials in higher posts often disclaim the need for any specialist training until they have been exposed to symposia or short courses when they at once express interest in further study, especially in organization.⁴⁰

Professionalism seems also to be linked with the question of status, which appears to crop up in the work situation when work study officers are called on to advise professionals in other fields and are at a disadvantage in that their speciality is not given the same recognition.⁴¹

According to the analysis made in previous chapters, corporate planning revolves around organization, and organization theory is of prime importance in the design of any system. The limitation of the O. & W. Section both in the scope of their training and the hierarchical levels they can deal with constitute a major constraint.

5.3.9.3. The Staff and General Section

The Under-Secretary (Staff and General) controls a rag bag of minor functions such as the typing pool and the messengers and cleaners who oil the wheels of the administration, but his most important

function is in the field of personnel. An organization chart of the division was not available, but it is a simple hierarchy of administrative and clerical personnel who keep records and carry out the normal personnel functions of recruitment and placement, transfers and promotions, remuneration, retirement and pensions, and collate all the merit assessments which are made at different levels departmentally.

The division deals only with posts on the Public Service Establishment, of which there are 2,658⁴³ mainly at head office in Cape Town. Thus the staff sections of the three major departments of Education, Hospital Services and Roads, who deal with the much greater number of provincial posts, in fact operate on a larger scale than the central staff division. Furthermore, the division is very much an outpost of the Public Service Commission, which authorises the posts and lays down the conditions of service. The staff function is therefore at once more dispersed through the administration and limited in scope than the organization and work study function.

Some contact between sections is achieved because the conditions of service pensions and other benefits of provincial officials are the same as those for the establishment as far as they apply. Therefore, if a tricky problem arises in such areas, departmental staff sections may apply to the central division for a ruling so as to maintain consistency with central government policy. Thus the various staff sections try to maintain common parameters, and officials who are experienced in personnel matters can be transferred from one section to another irrespective of whether it deals with provincial staff or the Public Service Establishment. In spite of these features, the personnel function of the province is fragmented.

Nowhere is manpower planning in the formal sense practised, no projections seem to be made of staff losses in different grades, or recruitment potential, or turnover, or possible shortages in various specialised cadres (except in the case of bursary awards). It appears from the annual reports of some departments⁴⁴ that there are certain categories of staff which experience a high rate of loss to the private sector, but the staff sections do not keep their statistics in such a way as to reveal such problems, or to show whether it is due

to dissatisfaction with working conditions or whether officials use the province as a training centre and then take better paid jobs in the private sector.

No special training is given to the staff in the personnel sections beyond acquaintance with the legislation and procedures involved. If an official happens to have qualifications they try to use them - for instance, an official in the central staff section who has a degree in industrial psychology is used in interviewing potential recruits. But no qualifications are required for any of the posts and the officials,⁴⁵ although they specialize, do not have anything like the professional approach of the work study officials, and their attitude to the Public Service Commission seems to be one of dependency rather than professional rapport. The small group of training officers who have degrees and are much more professional in their approach are not even on the same floor as the staff division, but perform their duties in isolation.

Thus there is a considerable difference in style between the staff and the Organization and Work Study divisions, due to the fragmentation of the former and its dependence on regulations and procedures, minutely specified by the central government, leaving it with very little room for initiative or manœuvre. The staff's lack of specialised training means that they are unaware of the potential of their function, unable to identify problem areas let alone solve them.

This does not imply that they do not perform their allocated functions efficiently. They do. It does imply a lack of awareness at higher level of the potential value of skilled personnel management and manpower planning. It appears obvious that the distinction between provincial officials and the Establishment is artificial - their particulars are all on the same computer - and that a work force of nearly sixty thousand demands a central personnel division with qualified professional personnel at the top, ranking high enough to carry weight with the executive committee.

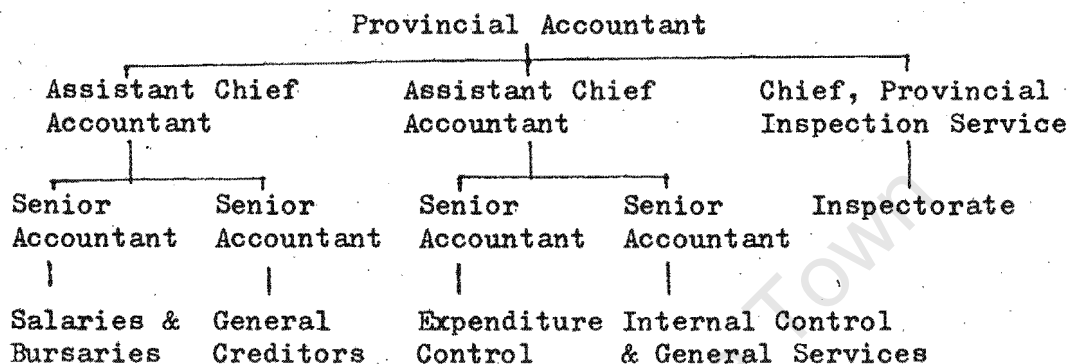
The environmental conditions of these three work groups relate to each other and to those of the Finance Branch. They will therefore be taken together, when the latter has been described.

5.3.10. The Finance Branch

The Public Service Establishment of the branch is as shown below:- 46

Higher Posts		Other Staff		
Administrative	General	Administrative	Clerical	General
3	1	24	65	196
289				

The top structure of the branch is as follows:-



(This chart was obtained from the Branch.) The main tasks of the Branch are to keep the books of the province (which are integrated into a single system) and prepare the annual budget. Technically speaking, the budget is a "line-item" budget, that is to say, all the expenditure is accounted for under sub-heads, which group together the total expenditure on similar items. However, as the budget is so important as an instrument for planning, it will be described a little more in detail.

The budget has been divided into eight posts, as indicated previously. Each post is further divided into sub-heads. For budget post 1, there is a list of twenty sub-heads which begins:-

- A Salaries wages and allowances
- B Vacation savings bonus
- C Contributions to Pension and Provident Funds
- D Other staff benefits
- E1 Subsistence and Transport Allowances
- E2 Transport
- etc.

However, in subsequent pages the sub-heads are further broken down into detail. Thus under sub-head A, the staff is grouped into the

structural units of the post, and for each unit the higher posts are named and their salary scales, payment for the previous year and payment for the current year are given for each grade. Under the heading "Finance Branch", the following figures are given:- 48

	Salary Scale	Paid in 79/80	Paid in 78/79
1 Provincial Accountant			
2 Assistant Provincial Accountants	"	"	"
1 Chief Prov. Inspection Service	"	"	"
285 Other staff on the Fixed Establishment		"	"
Provincial Staff, temporary assistance		"	"

At the end of the vote, there is also a table which gives a complete breakdown of all the posts on the fixed establishment, classified into professional, technical, administrative, clerical or general, with the numbers of incumbent under each grade, for which the salary scales are also given. (These are the tables that have been used in this study, simplified by omitting the grades.)

Under the capital vote - i.e. budget post 8, there are seven sub-heads which are first listed (with figures) in an abstract, and then given again with the figures split up in various ways, such as re-voted services and services not previously voted, then the list is repeated again giving under each sub-head the total cost of projects, cost in previous year, cost in current year, and the balance to be spent in future years. Therefore, every single project in each sub-head is listed in the same way. For instance, the first item under sub-head A - schools, reads:- 49

Serial Number	School Board	Institution	Service	Estimated Cost	Est. Cost to 31/3/79	Est. Cost 79/80
2868	Albany	P.J. Olivier Hall & High School	Hall & additions	496,000	83,000	359,000

Balance

54,000

Of course the actual costs are afterwards given in the audited accounts, which also show the difference between estimated and actual expenditure, with explanations in cases of large discrepancies.

From the sub-heads of vote 2, Education, one can see what has been spent on School Boards and School Committees, Teacher Training, School Inspection, Pre-Primary, Primary and Secondary Education, Vocational Schools, Agricultural Schools, Hostels for each kind of school, furniture for each kind of school, details of all the provincial officials employed, to name but a few.

From this brief indication of the nature of the budget document, it can be seen that far more information is contained in it in an accessible form than could be expected from a mere list of priced items.

It has been suggested that all budgeting reflects three main processes⁵⁰ namely, planning, management and control. These processes can be related to three levels of activity in any institution - at the top, policy making and planning, in the middle, management or administration, with the operational level at the bottom. The theory is that budgeting develops first in relation to the bottom level as an expenditure control mechanism. The next step is the performance budget which takes efficiency into account and is meant to assist management in the application of resources, while the final step, known as Planning Programming Budgeting Systems, or P.P.B.S., uses cost-benefit analysis, multi-year projections, and the comparison of alternatives to enable the top level directorate to pinpoint their problems and evaluate their options. There is an extensive literature on the subject, and P.P.B.S. was officially adopted in the United States by President Johnson in August 1965.⁵¹ In the Republic, P.P.B.S. is also sometimes referred to a budgeting by objectives, or management budgeting. It has been accepted in principle by the central government and most state departments already practise it. The provinces were also encouraged to adopt the system, and in 1978, the Transvaal Provincial Administration investigated the possibilities and made a recommendation which is set out in a detailed memorandum to the Executive Committee from the Provincial Secretary, dated 8.8.1978.

Rather than repeat all this work, the Cape Province sent three officials to study the memo and see all the people concerned. The officials were the Chief Work Study Officer, an Administrative Control Officer from the Hospitals Department, and an Assistant Provincial Accountant.

These men were in complete agreement with their colleagues in the Transvaal, and laid the Transvaal memo before the Cape Provincial Executive Committee as part of their report, ⁵² with the result that in the Cape as well as in the Transvaal P.P.B.S. was rejected. This question will be more closely examined in the next chapter.

If we regard the Computer Service simply as a (highly sophisticated) administrative aid, then it is clear that the Secretariat and Finance Branch together handle the three major parameters which define the capability of the administration, as discussed in Chapter 3, namely finance, personnel and organization. Diagram 5.10. illustrates the administrative locus of these three functions set in the context of the province as a whole.

With this diagram, several points of importance can be illustrated.

- a) There are multiple sources of authority and policy emanating from the provincial and national levels.
- b) The relationship between these service units and the departments is not of authority. It is a demand relationship: if the departments want more staff, they take the initiative and motivate requests. The budget is based on a reconciliation of the demands of each department, which always and inevitably exceeds the supply. The O. & W. Section do not attend to any problem unless they are called in by the department concerned.
- c) At the same time, each section is strongly bound by constraints from central government regulations.
- d) The Administrator is not a final arbiter, but when the service departments cannot solve a problem or resolve intransigent conflicts, his role is limited to interceding with the central government for various kinds of relief. He is thus a mediator.

Under these conditions, where authority is always at a remove, where initiatives lie outside the unit, where most responses are automatic, the role of officials is enforcedly passive.

5.3.11. The Audit Branch

The Provincial Auditor, who is the head of the branch, does not appear on the tables of the establishment, for the interesting reason that

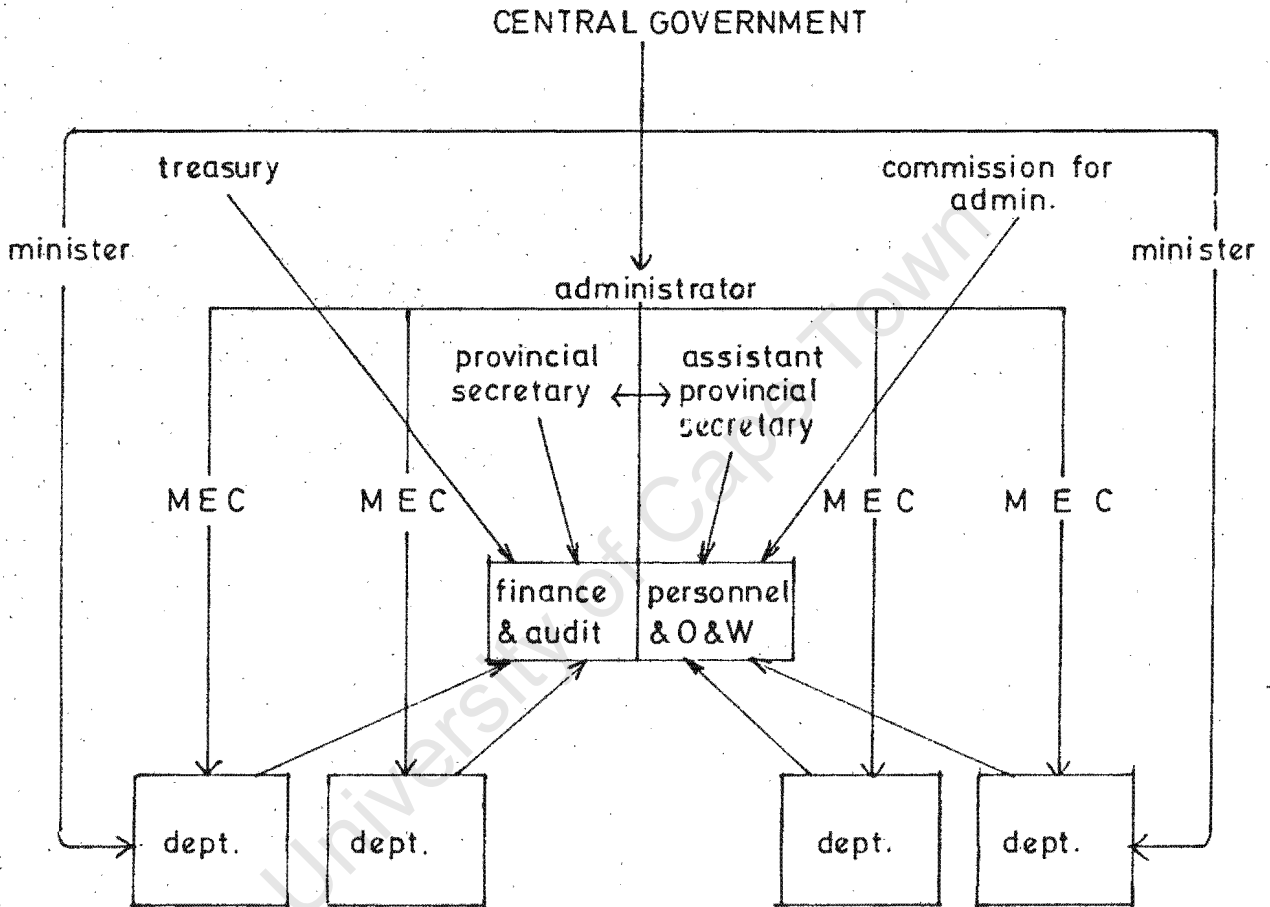


DIAGRAM 5.10.

like the Administrator, he appears on the estimates of the central government. Apart from him, there are five assistant chief auditors and an audit staff of 181,⁵³ organized into a hierarchical system. Their main task is a regularity audit of the provincial accounts. This audit, together with a number of reports comes out in the September after the financial year ending concerned. (The financial year ends on 31st March). It is thus mainly a post facto audit.

The Provincial Auditor's Annual Report, which comes out with the accounts, contains a series of reports from the Provincial Select Committee on Public Accounts which deal with fruitless expenditure, over expenditure, and unauthorised expenditure.⁵⁴ The report deals further with comparisons with the estimates of revenue, Administrator's Warrants, audit queries, losses arising from criminal action, contractors placed under liquidation, and in fact any matter with financial implications. It is to some extent therefore an instrument for controlling waste, but it is not an efficiency audit.

Although it is mainly a post facto audit, there is a system operating which checks current expenditure, although only for regularity. During the year under review (I.E. ending March 1980), 2852 audit queries arose out of such checks, over R25,000 was disallowed and over R18,000 recovered.⁵⁵

Every detail of the provinces finances is minutely discussed, and the report seems to be to a layman in every way an admirable document. However from a cybernetic point of view the audit would seem to be one of the main instruments of financial feedback, and without carping unnecessarily it is nevertheless the case that the time lag involved is too great for it to act effectively as such. This is of course no reflection on the Auditor who fulfills his designated function in the face of great difficulties such as a chronic shortage of qualified staff.

These qualifications are internal. Some of the higher officials hold the National Diploma in Public Service Accounting and Auditing, but as in the Finance Branch, no true professional qualifications are required. The question again arises whether this part of the Provincial Administration ought to be professionalized, if possible, both to improve the feedback system and to ensure an efficiency audit.

in conjunction with a programme budgeting system. There seems to be no move at present towards such an ideal situation.

5.3.12. Provincial Council

There is a staff of five who act as clerks to the Provincial Council and the Executive Committee.

5.3.13. The Stores Branch

There is a Controller of Stores and 73 other staff on the fixed establishment ⁵⁶ who hold stores for schools and hospitals as well as supplies for the general administration. There is naturally a system of stock control and the computer is used to forecast such things as the seasonal fluctuations in demand for anything from Pharmaceuticals to furniture. However, the functions of this branch are not particularly pertinent to this study, and will not be analysed in any further detail.

5.4. The Information System

The basic system, common to that of government departments throughout the world, is known as the system of the rotating file. Each department has its own set of records kept in a departmental registry, and these records of course constitute its memory. There is a central store for 'old records' to which files are relegated when they are no longer current. The records consist of files, catalogued according to an appropriate system, fastened with the pink tape with which critics maintain the government is strangling itself.

Such files are circulated only within the department concerned, which therefore has a closed information system. When a letter, or a memo from another department arrives, it is placed by the clerks on the appropriate file. This is a switching mechanism. The file is then taken by a paper-keeper to the official or officials concerned. Any matter starts at the bottom of the hierarchy, and rises automatically until it reaches an official who is competent to deal with it. The more complex the matter, the higher it rises. The system therefore acts as a series of thresholds, remarkably analogous to the functioning of the nervous system. If a matter has to be passed to another department, or to the Executive Committee, it is summarised on a memorandum, and this summarisation acts in a classic manner to reduce

variety in the system, and especially in the case where it moves up in the hierarchy.

The snag is that it is the prerogative of the lower levels in the hierarchy to use the filtering mechanism and so screen out information from their superiors. This possibility is reduced by the fact that the latter can call for a file at any time, and have sufficient alternative lines of information to alert them to matters which need their attention. An official is usually so placed that there are some matters that he is compelled by regulation to send to a higher level, some matters are at his own responsibility, and in between the extremes there is a greater or lesser grey area of discretion. This discretion is an important variable in the system. If there is too much, the higher ranking officials lose some control, if there is too little, they are overloaded. In this respect officials are very shrewd at judging how much discretion they may 'capture' without offending their superiors, and so the system maintains a sort of dynamic equilibrium.

Although this system of the circulating file is so universal there does not seem to be any treatment of it in the literature. This is unfortunate because it has some interesting properties. For instance, if a problem were to arise in some project in the Works Department, the file containing the problem would be 'marked' out to a series of officials for their comment - let us say the Chief Quantity Surveyor, the Chief Engineer (C&S), the Chief Engineer (E&M) and the Chief Architect. The problem might be thought of as having four facets, or variables, pa , pb , pc , and pd , adding up to a solution S . thus:-

$$pa \times pb \times pc \times pd = S$$

As the file passes each official, or gate, the comments of the officials limit the value of the variable concerned. Thus the variable pa is determined by one official, pb by the next, and so on, so that the uncertainties in the problem are successively reduced as the file circulates. By the time it gets back to the official who is responsible for the final decision the problem is usually solved.

Now the only other way to solve a four term problem like this would

be to call a meeting of the four officials, which would undoubtedly solve the problem. But suppose it takes a definite time t for each official to resolve the variable he is concerned with, we see that the meeting will have to sit for a time of $4t$ to solve the problem collectively, and of this time each official will be doing nothing for $3t$.

If he were sitting in his office, he could deal with 4 matters in $4t$, not just one. All four officials, sitting in their offices, could make a total of sixteen decisions using the rotating method, whose efficiency is therefore the square of the efficiency of the joint method where only four decisions could be made in the same time. One can deduce from this that the time wasted in committee is a direct proportion of the number of members.

Thus the rotating file system has great advantages, which accounts, one supposes, for its persistence.

These remarks only apply of course to problems of a linear nature where uncertainty can be reduced progressively, but then these seem to be in the majority. Where a problem is non-linear, a committee is probably the only answer.

Such an information system would not be complete without feedback loops, and following cybernetic principles such loops must run from the output exchange function. There are in every department reporting systems which provide internal feedback, and these are valuable for the department concerned.

But in Public Administration the main loop is political. Parallel to the administrative system runs the system of political control. Any constituency, if it finds its interests are not met to its satisfaction, will have recourse to its M.P.C. who has access to the M.E.C. concerned. The latter may call for a report or even examine the files himself. In addition the M.E.C.s and the Administrator all make regular tours through the province, meet constituents, open buildings, attend functions are therefore exposed to public opinion and political demands. Thus the political system acts as a monitoring faculty for the administrative system as well as a legislative organ.

One of the reasons that appointed boards - even if the appointees

have been elected to some authority or other - so often fall into error, is surely that they lack this feedback line to a concerned constituency. Who, for instance, are the concerned constituency of the Cape Metropolitan Planning Board and what control can they exert over its doings?

The function of the Provincial Audit as a feedback system has been mentioned under that heading. Although it is a post facto system, and thus a line of last resort, the system of current checks and audit queries is sufficient as a regularity control measure. The computer can tell any director at any time how his expenditure is matching the estimated pattern, and this is also a very valuable feedback mechanism.

Thus the main information system, the filing system, operates to reduce variety in the system by using a system of thresholds, and has three feedback loops or bypasses with different terminals - the internal loop of reports into the department, the external loop of political demands into the executive level, and the financial loop into the management level. From the cybernetic point of view there is nothing wrong with this system except its speed of operation. From time to time talk is heard in the corridors of using more advanced techniques - micro-filming for instance is already used in some instances.

To convert the provincial records into any kind of electronic system would be a mammoth task of fantastic expense, because the memory goes back to before Union. Furthermore, the filing system is not only an information system, it is tied up with the question of accountability. Every decision must be written and signed and placed on file. Just as a line item budget would have to be retained under a P.P.B.S. system so the system of the rotating file would have to be retained whatever expensive electronic gadgetry were to be added to it.

Thus although the system seems somewhat old-fashioned and does occasionally clog up and malfunction, any reform lies not in a wholesale replacement of the system, but in some attention to its more mechanical aspects - circulation, retrieval and so on. Since the system has been so little studied, nothing much further can be said about its improvement.

5.5. Summary

In this chapter the constitutional background, the structure and the functions of each unit of the administration were examined in detail. It was found that in the three major departments of Education, Hospital Services and Roads there is a complex planning process going on continuously which is directed to the functional field concerned, and which is not far from corporate planning as a technique. In the Department of Local Government corporate planning does not exactly correspond to what the department is required to do, except in the field of physical planning, where unfortunately the province has lost control over metropolitan and regional planning.

In the minor departments affairs can be managed without resorting to elaborate techniques such as corporate planning, and this is what happens.

When the central service departments are considered, however, we find that planning in the main functions of finance, personnel and organization is inadequate, partly for structural and partly for dynamic reasons. The information and feedback system seemed to be sufficient.

Such a survey of a set of units one by one is very valuable, but it does not give a picture of the working of the Province as a whole. While the question of corporate planning at departmental level has been clarified, the main line of investigation is the operations of the next hierarchical level where true corporate planning could be expected to play an important part. This is considered in the next chapter.

References

The main source of information is the Budget for the year ending 31 March 1980. The full title of this document is:- Republic of South Africa, Province of the Cape of Good Hope, Estimates of the Revenue to be collected and Expenditure to be defrayed from Revenue Funds during the year ending 31 March 1980, Cape Town, 1979. For the sake of brevity this will merely be referred to as the Budget. The other main source of information is interviews with provincial officials. These were generally of Deputy Director or Under Secretary rank. As it would be invidious to quote them directly, and as any opinions expressed are in any case my own, any facts gathered in this way will merely be referenced 'Interview'. Likewise the Provincial Yearbook and Diary for 1979 will be referred to as 'Yearbook'. Any other sources will be given in full.

1. Budget.
2. J.J.N. Cloete, Sentrales, Provinsiale en Munisipale instellings in Suid Afrika, 4th Ed., Pretoria: van Schaik, 1973, p. 153.
3. J.J.N. Cloete, op. cit., p. 153.
4. J.J.N. Cloete, op. cit., p. 175.
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CHAPTER VI

THE CORPORATE PLANNING CONCEPT APPLIED

6.1. Introduction

Having conducted a lengthy review of the Provincial Administration and determined its structural and functional characteristics, it is now possible to apply the criteria of corporate planning to the institution. First of all the line departments are considered, and the application of corporate planning parameters brings out some of the disabilities they suffer as a group.

However the central administrative units at the next hierarchical level, the Cape Provincial Administration itself, as a holon, is of much more interest, being in fact a true corporate system. This is first discussed in the light of a conventional structural model, and then compared to the cybernetic model developed in chapters three and four.

First of all the organization system is discussed, and then the parametric controls. The most important of these relate to the management functions of finance, personnel, and organization, and the administrative capabilities of each are discussed in depth. Finally the position and functioning of the Executive Committee is analysed, both from an administrative and a political point of view.

6.2. Corporate Planning at Departmental Level

In the previous chapter a distinction was made between the hierarchical level of the line departments, those which provide a direct service to the public, and the cluster of service units which lie at the higher level of the Province as a whole. With regard to the former, three of them - Education, Hospital Services and Local Government act as corporate bodies to units at a still lower hierarchical level. The first two of these act as meta-systems for these lower levels, and undertake something very close to corporate planning for them. For the third, the regulatory function is more passive and corporate planning is not an appropriate technique. The other line departments such as Roads and Nature Conservation do not control subordinate units, and therefore ordinary management and planning techniques suffice. It is because these departments do function effectively in

their separate spheres that the functions of the provincial Administration are in fact carried out.

However if we look at the set of control parameters suggested in chapter 4, the weaknesses of the system are soon exposed. The parameters are:-

1. Capability to improve services.
2. Capability to innovate services.
3. Capability to improve efficiency.
4. Service/public inertia (power to respond).
5. Tax/money Market inertia (power to finance).

If these are taken in order, first of all there is no formal constraint on the improvement of services. The professional expertise required to assure good services is likewise available, and there is no doubt that the province delivers services of a high quality. The constraints are rather in the field of resources.

When it comes to the second parameter the constraint is constitutional. The Province cannot go in for any innovation without central government approval, and this is asked for or given only rarely.

Capability to improve efficiency depends on effective control and management of the functions of finance, personnel and organization, and here the tone is set by the service units of the central provincial system. Insofar as professional planning in these fields fails, the departmental units are handicapped in their management functions. This will be discussed further in the next section.

The power to respond to political demand has two aspects. Where it means responding to feedback information about the effectiveness of services, then it can be said that response is good. However if a legislative response is required, the province is in a poor position, because of the intrusion of central government departments into its functional fields.

Likewise the power to finance lies in the hands of the treasury.

The effect of this is to separate the clientèle of a service from the source of financial supply. In other words clients demand services for which a third party must be induced to pay. In a democratic

system this is a poor arrangement because it weakens the responsibility of the electorate. The legislative power to provide a service should go hand in hand with the legislative power to levy the necessary tax. This aspect will also be taken further in the next section, but from what has been said it is clear that however valiant their attempts the provincial departments do not have the power to carry out full corporate planning in the instances where it might help them to do so. What they do would probably suffice under stable conditions, but where socio-economic and political change gathers pace they are at a distinct disadvantage.

6.3. Corporate Planning at Provincial level

If any sub-unit cannot carry out corporate planning itself because it is in a subordinate position in its hierarchy, then the next hierarchical level, the meta-system, must perform the function for it. Indeed this sort of situation is to be expected in a corporate organization. In the case of a provincial line department the meta-system is formally the Cape Provincial Administration, with the Administrator as its political and the Provincial Secretary as its Administrative head. The Provincial Administration is a constitutionally established corporate body with a proper legal persona, which can own and dispose of property, sue and be sued, and so on.

However it is clear from the description in the previous chapter that the Provincial Administration does not in fact fulfil the required function for various reasons, and these reasons must now be set out.

First let us consider the basic structure consisting of the Provincial Administration set in its total environment. This is shown in diagram 6.1. which is a sort of simplified summation of the structural diagrams developed in chapter five. It shows schematically the authority relations which actually prevail, and this is basic, because public administrative structures are determined by the necessary system of accountability, which usually generates a strictly hierarchical form. It is clear from the diagram that the hierarchical form has been distorted by the intrusion of the central government into the details of provincial affairs and finances, and fractured by the 'cabinet' system whereby M.E.C.s reign undisputed masters over their

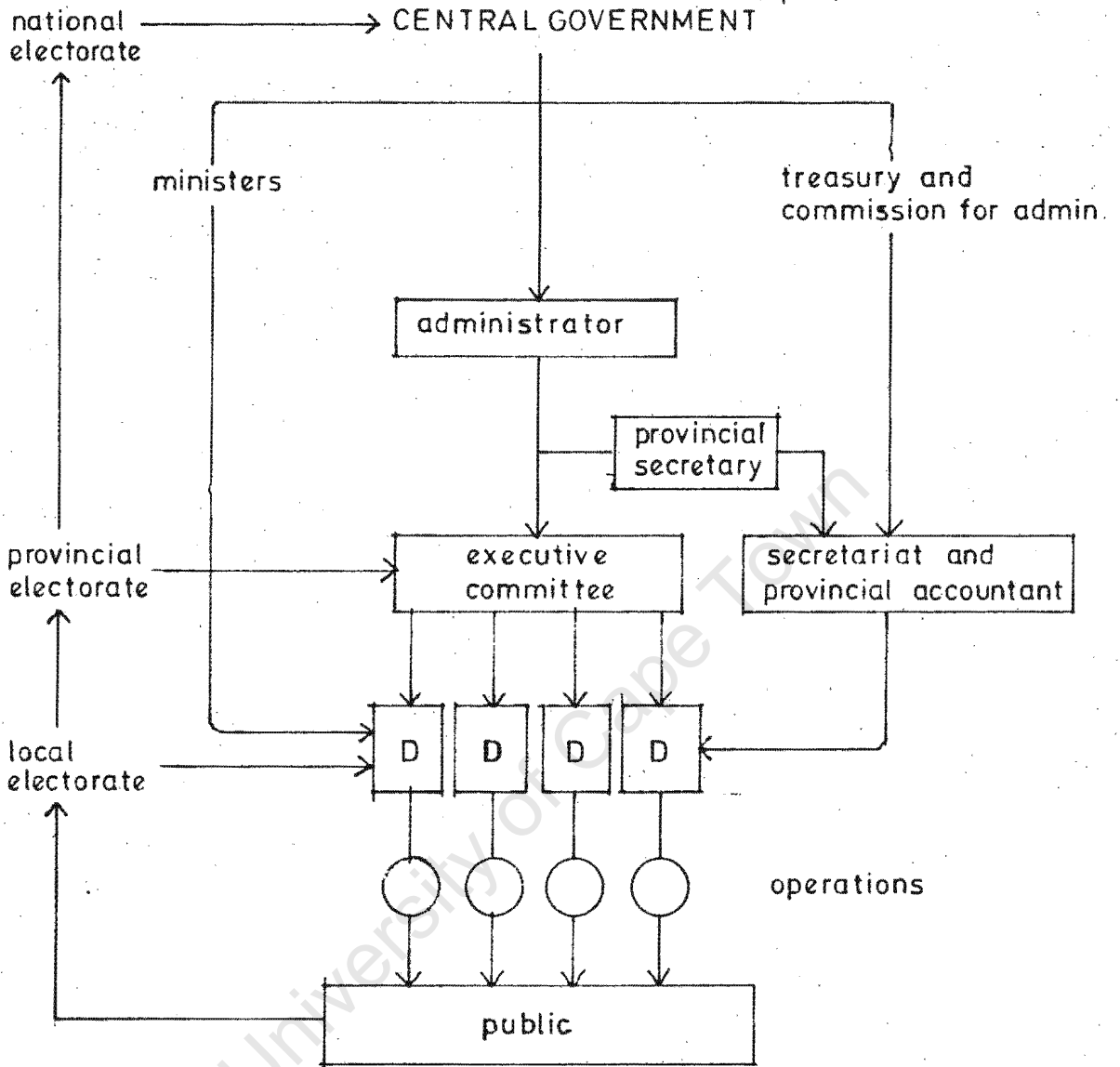


DIAGRAM 6.1.

own particular 'empires'. The Provincial Secretary is in the invidious position that the state of the control parameters which he should be using to manipulate and control the system is decided either at governmental level, or within the departments at operational level. Thus the Province as a meta-system fails to work.

The qualification which might be made to this statement is that it fails to work formally. As we have seen, Beer holds that whether or not the structure he recommends actually obtains, the basic functions which these structures are designed to perform must nevertheless be carried out somehow. The 'somehow' means that there will be informal systems of some sort operating to carry out the necessary function. If there is not even an informal system operating, this is a symptom that the system has lost its coherence and is not a viable system.

At Departmental level there is an informal system operating through committees and meetings, and through the contacts which officials make in the corridors, over lunch in the canteen, and by using networks of acquaintances and colleagues with whom they have worked with in different capacities over the years. These networks operate outside 'channels', which is the jargon for the formal structure.

However, although such networks may form admirable supplements to the information system, the necessity for strict accountability in any public organization means that formal channels must exist to legitimise any decisions or conclusions officials may come to in the informal sphere. A completely formal structure is therefore a necessity in any administrative bureaucracy,¹ and is one of its strengths, a fact of life which has been recognised since the days of Max Weber.

At Provincial level there are also no doubt informal structures operating, particularly in the political sphere. However, in the nature of things such structures are elusive and changeable, and would demand a mode of research which could hardly be substantiated in a formal academic paper. The facts would be personal and transitory, probably confidential, and would not be a satisfactory basis for the formation of any viable general conclusions.

Since the formal back up is in any case absolutely necessary in a government organization, this paper concentrates on the formal aspects

of the system, irrespective of how it may be 'operated' by knowledgeable officials. It is often pointed out in the literature that permanent officials must make policy although this is formally the function of the politician. The Cape Province is no exception in this respect, but this study is not concerned directly with policy-making, it is concerned with a specific administrative technique, namely corporate planning. The experience of Argenti, for instance, among others, is that this specific function must be formalised to be effective. Therefore it is felt appropriate and sufficient for the purpose to concentrate on formal matters.

6.4. The Cybernetic view

6.4.1. Structure

Having considered the authority structure the Provincial system must now be examined in the light of the cybernetic model. For convenience the cybernetic organization chart is reproduced in diagram 6.2.

Applying this diagram to the province we can identify the systems as follows:-

System five, Board level, is the Administrator-in-Executive-Committee, in its political capacity, occasionally augmented by the Provincial Council. There is no need to labour the point that they are substantially restricted by superior legislation. Although the Provincial Council, before which the budget is annually presented, is theoretically the body which should legitimise all the necessary policies, it has been overridden in so many of its legislative functions by the central government that except in minor matters it merely acts as a rubber stamp. (It still has a proper function in the information system, however). This situation has been marked since the provinces gave up their powers to exact income tax partly for the sake of simplifying the tax system, and partly in exchange for a more equal distribution of the total tax yield, which was to the benefit of the poorer provinces. As a result a very high proportion (85%) of revenue is fixed outside the province, and therefore its ability to respond to fluctuations in the economy or any other financial factor is drastically limited. This matter will be taken further later in the chapter as it is a very prominent factor in the minds of provincial

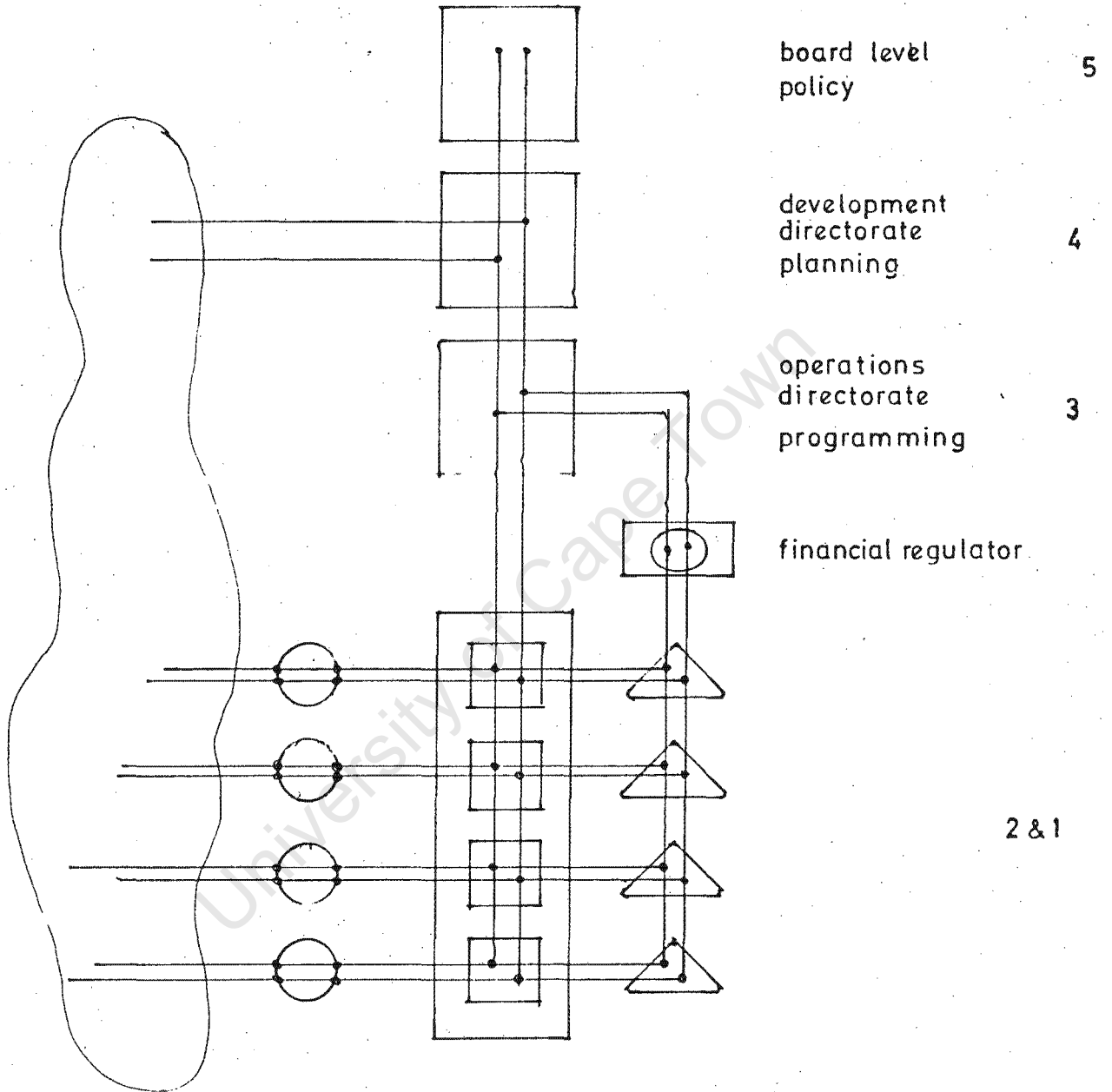


DIAGRAM 6.2.

officials.

What is just as important, although not so prominent, is that it has made the provincial electorate irrelevant as responsible tax payers. They pay their income tax, but have no control over how much of it should be devolved to provincial matters because it all vanishes into the coffers of the central government. Thus the power to propose and dispose is lost, and along with it the all-important capacity to set their own goals which is of such prime importance in corporate planning.

System four should again be the Administrator-in-Executive-Committee in their executive as distinct from their legislative capacity. This is where the corporate planning function par excellence should lie. Now in some respects this body does fulfill corporate planning functions. It is indeed the Sensorium which collects information from the environment, it does co-ordinate provincial affairs, and it does allocate funds and organise the annual budget besides authorizing all the expenditure. There is no doubt it is in the controlling seat in provincial affairs. Nevertheless corporate planning as a specific technique is more than efficient day to day management of a complex business - has indeed come into being exactly because in conditions of social and economic change, public, no less than private corporations need to pay attention to the four elements of corporate planning listed in chapter four.

The Executive Committee cannot do this without instruments for research, for prediction, for programming, in short for corporate planning in the long term. The research has shown that these instruments, insofar as they exist, are not adequate to the purpose.

System three as the operations directorate should consist of the Provincial Secretary and all the central service units functioning as a management team for the whole province. The research makes it clear that they do not so function - through no fault of their own. It seems to be considered, or at least accepted, that it is more important for the executive to exert direct control over the line departments while the service departments are merely facilities to be called on when necessary. Both the British and American experience of local government has shown that this assumption is mistaken, and

leads to malfunction. Whether their experience is a valid analogy for a larger territorial authority may be open to question, but there is no doubt that there must be an effective operational management system for any organization.

Even if these functions were not considered as a management system, there seems to be no valid reason why they should be exercised by remote control by the central government.

System two as a homeostatic mechanism or regulator of interdepartmental transactions does not exist except in the form of the annual budget exercises. However since interdepartmental transactions are few and far between this is not a serious handicap. The most serious difficulty at this level, taking the departments as a group, is rather that such a large regulatory function is exercised by various departments of the central government. Insofar as any department turns to the central government to solve its problems rather than the Provincial Council, by so much is the viability of the province weakened, by so much is it in danger of becoming a mere collectivity serviced for historical reasons at provincial level rather than national level. One is very close to concluding that this position has already been reached.

The only remedy for this situation seems to be to choose functional fields for the province which refer specifically to the provincial electorate and which could be legislated for at provincial level, thereby avoiding the centrifugal effect of the national institutions. This is a matter of intergovernmental relations which will be briefly discussed in the next chapter.

6.4.2. Dynamics

The operation of a model or of the organization itself is managed by the manipulation of the control parameters which were again listed in the first section of this chapter. The remarks made there apply with equal force to the central control system of the Province. However the very important management functions of finance, personnel, and organization are seated in the finance branch and the secretariat at the centre of provincial affairs, and the capability to improve efficiency right through the province and in every department depends

directly on the performance of these functions. They will therefore be dealt with in more depth below.

6.4.2.1. Finance

It has been remarked before in this study that the financial system is a different thing from the money supply which as a resource flows through the veins and arteries of the administration. Unfortunately both are often merely referred to as 'finance', and the context decided what is meant. It is the financial system which is being discussed here, and this system was thoroughly investigated, as it happens, in 1978/9, as described in Chapter V. As was indicated there some senior officials visited the Transvaal and obtained the memorandum on P.P.B.S. compiled by the Transvaal officials, which after some thought and discussion was adopted in its entirety in a submission to the Cape Province's Executive Committee in 1979. The submission contains the Memorandum and its slides and tables illustrating how the central government system works.

As financial planning is of such importance, and the attitude of provincial officials to it is clearly and authoritatively set out in the Transvaal memo, the substance of the memo will be summarised hereunder.

It first describes how, in accordance with the terms of reference, a committee was put together which assembled all the literature they could find on P.P.B.S. and studied it. They also attended lectures from central government officials who were familiar with the practical implementation of the principles concerned.²

The memo explains the fact that budgeting programs, sub-heads, activities and elements are set out in the new system and shows that the emphasis is on what is achieved rather than on what is done (i.e. the goal), and not the kind of expenditure involved (e.g. salaries, wages, printing and stationery etc.). It also explains how the order purposes the line-item type of classification of expenditure and that to include program budgeting the classification must be such that accounts must in effect be duplicated. It also states that the standards used in program manager should be applied to all departments and that the fact that the system is a program budgeting system should be clearly stated.

According to the memo there are two phases in the installation of the system - firstly the rationalization of the functions concerned and their breakdown into identifiable programs, and secondly cost/benefit analysis of the programs so that the scarce resources of the community can be applied where they can do the most good. An information paper from the treasury is quoted as follows:-

"Die vraag wat gestel moet word, is waarheen ons met 'n bepaalde doelwit wil; wil ons uitbrei om die behoefte vinniger of in groter te bevredig; of moet ons teen die huidige tempo voortgaan; of kan die program ingekort of selfs afgeskaf word? Wat is die finansiële implikasies van ons alternatiewe en hoe beoog ons om ons prioriteite binne die perke van die middele wat oor die eersvolgende paar jaar rederlikerwys beskikbaar sal wees, te rangskik?"

The memo then recounts how the committee tried to establish the cost of setting up the system. This proved difficult, but they came up with a figure of about R2,000,000 so far. They also tried to establish whether the system was successful - whether it saved its own expenses. Apparently officials in the treasury were enthusiastic over the system and claimed it had proved itself highly effective, but the Accountant General could give no actual examples of savings made. He did say it made officials more cost conscious.

The memo then goes into the possibilities of using the system in the province. First of all it gives a number of objections:-

- a. Parliament is sovereign and can therefore undertake amend or scrap any function or program it pleases, but the provinces are not sovereign and their functions and powers are so clearly demarcated that the exercise of any discretion by the province is severely limited.
- b. It would be difficult to institute the system because the province has a single integrated bookkeeping system kept by the finance branch. Therefore the system could not be introduced department by department, but would have to be done in one fell swoop, which would disrupt the whole financial organization.
- c. The province would not be able to use the treasury's computer program because their bookkeeping system is in principle

different. A new program would have to be developed which would take a team of programmers about two years to bring into operation, (provided they had a new and bigger computer).

- d. The object of a program budget is to make savings and apply scarce resources better. The province has only four activities of such a scale that meaningful savings could be made (excluding general administration), namely education, works, hospital services and roads. These are discussed in that order:-

(i) Education

The memo states that if education is programmed in the same way as bantu education (examples of this are given in an annexure), the programs could be arranged as below:-

1. Administration
2. Teacher training
3. Pre-primary teaching
4. Primary teaching
5. Secondary teaching
6. Handicapped children
7. Youth affairs
8. Extra-curricular activity
9. Supporting services

The memo holds that since the province must by law provide education up to standard ten none of these programs could be deleted except perhaps 3, 7 and 8, and these are really so integral to the remainder that it would be folly to remove them. Finally it asserts that the existing budgeting system already provides information in its sub-heads which give the costs of these programs with reasonable accuracy. This point is stressed.

(ii) Works

A program on these principles for the works department would be very simple:-

1. Administration
2. Erection of buildings

3. Personnel (including salaries)

4. Materials

5. Supplies (including travel)

The main remark that arises from the above is that budget related to them, all those sub-heads and sub-items of the budget, and it would be easy to subdivide the salaries and allocate them to the program if necessary. The programs mentioned are so basic to the function of the department that they could not be amended or omitted, and the relative priorities of individual projects are under continuous review by client departments - a process that would continue irrespective of the budgeting system.

(iii) Hospital services

The main remark is that the present budget for the above is a continuation of the budget by a number of the individual budgets of the hospital, such as for such services as nursing, pathology, etc. The main remark is that the hospital and other supplies are a substantial part of the total cost of the hospital (the association).

(iv) Staff

It is for the staff that the budget is simple.

- 1. Salaries
- 2. Expenses
- 3. Expenses
- 4. Expenses

The budget for the staff is a simple one, and it is the only one of the above that is not a continuation of the budget by a number of the individual budgets of the hospital.

The budget for the staff is a simple one, and it is the only one of the above that is not a continuation of the budget by a number of the individual budgets of the hospital. The budget for the staff is a simple one, and it is the only one of the above that is not a continuation of the budget by a number of the individual budgets of the hospital.

The budget for the staff is a simple one, and it is the only one of the above that is not a continuation of the budget by a number of the individual budgets of the hospital.

memo concludes that it would not pay the province to switch to a program budget, but that the present system could be refined in an evolutionary manner.

With regard to cost-benefit analysis the memo asserts that this is not a magic trick to create savings but - perhaps under other names - a normal part of healthy administration, and is in fact undertaken for every project.

The other important facet of P.P.B.S. is multi-year programming, and here the memo points out that projections are in fact made for the budget year and the following year, and they have attempted five year projections. Unfortunately the results of this have been disappointing because such a large percentage (83%) of the income is out of provincial control and subject to fluctuations arising from the general economy and ad hoc adjustments by the minister which cannot be anticipated. This makes prediction too undependable to be of much use. This point is heavily stressed. The memo ends with a recommendation to reject program budgeting, but to try to improve the present budget to the stage where it will yield the same kind of information.

It would be unfair to point at the contradiction inherent in the recommendation and treat the memo merely as an example of negative bureaucratic obstructionism. Such objections as that the functions of the provinces are closely prescribed, and that they cannot predict their own income are quite valid. It is also clear (and this came out strongly in the interview with the Provincial accountant), that they are justifiably proud of their present budget format, which they feel provides all the information anyone could want. But in spite of this there are certainly financial questions which are not answered in the provincial context. These relate to the distribution of available funds between the prescribed functions.

Why, for instance, does the roads department have access to the revolving loan fund while the education and hospitals departments are restricted to the capital vote for their development funds? By what criterion is it decided that a rand should be spent on a metre of road rather than a classroom or a hospital bed? It may be true that the

funds are assigned by a central government, but they are assigned en bloc, and it is not prescribed how they shall be allocated.

It is a feature of line-item budgeting and the mentality that goes with it that previous expenditure is accepted as a base and this base is changed only by small percentages, - a process known as incremental budgeting.³ The contention of advocates of this incremental method is that pressures brought to bear by interested parties maintain a balance in the expenditure pattern which is more realistic than attempts at cost/benefit analysis, and reflect the preferences of the electorate through a kind of market mechanism. Even if this were true it would depend on the actual presence of these pressure groups in the lobbies of the Provincial Administration. This is outside the scope of this study, but if such pressure groups exist they are not obviously manifest. It is more likely that the evaluation of major functions in relation to one another has escaped any attention.

The staff of the finance department are not classed as professional. The top posts are administrative. There is extensive in-house training and testing, and there is no doubt that the department functions efficiently. However it is arguable - as in the Organization and Work Study Section - that officials who have been trained in a particular context lack the broad perspective which a professional training would give them, concentrate on procedures rather than principles, and suffer from a kind of complacency which discourages innovation.

If the provincial budget in fact gives practically all the information that a program budget would give, why would it be so difficult to extract and present it? If cost/benefit analysis is already done on projects, and such parameters as cost per hospital bed are known, why cannot analysis be taken further? For instance there is a connection between road improvement and accident rates, and accident rates and cost of treatment, and therefore between road costs and hospital costs. Such interrelationships, if they can be exposed, ought to be factors in budgeting. In short, although the provinces suffer from financial constraints, these constraints are no reason for rejecting P.P.B.S. completely while at the same time contending that to all intents and

purpose of the...
The final point of the... is simply
this: even though some... have to be introduced, the
line-item budget must still be retained for regular purposes, the
program budget whatever it is called, must be a different one most
from the annual appropriation budget and is additional to it.

Therefore the argument that the whole professional accounting system
would be broken up or order is given to financial or local authorities
all over the world have adopted the system without result resulting.
The British experience shows that P.P.E.S. is not normally a pre-
requisite to... but rather a... of...
short version of the... and... activities
of... the same...

For reasons... of... of...
of... the...
budget... the...
Cape... the...

no problem... of...
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It may... of...
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Education turned out to be the deciding authority; at present (1981) the nursing profession is following suit, the Minister of Health, Welfare and Pensions has been drawn into the dispute and will no doubt have to solve it himself.

These instances reveal the province's lack of control over the functions they are supposed to be autonomously exercising.

In the case of 'establishment' employees, they are directly controlled by the Commission, using the provincial system as an extension of their own service. According to the White Paper on Rationalization of 1980 the office of the Commission has been re-organised and has approved a "system development programme in which can be included all the development projects it considers necessary".⁴ This is exactly the kind of manpower planning exercise that ought to be carried out at provincial level. But if the provincial system is to survive, this exercise must be carried out by the province itself, not by the superior authority which will automatically attempt to maintain and even enlarge its policy space. Such an exercise depends on the availability of suitably qualified staff. As the Commission says, "active steps are being taken to reinforce the staff of the office, but this is a medium and long term process".⁵

Even if the province wished to engage specialist staff and undertake such an exercise, they could not of their own accord do so, because all the establishment posts are controlled by the Commission. Hence the Province is hamstrung in a vital control parameter. If one considers that any local municipality is considered competent to appoint its own staff and determine its own conditions of employment, it seems ridiculous to deny the same competence to the next higher tier of government. The co-ordination of such matters as job classification, pay scales and retirement benefits throughout the government service is quite feasible without direct intervention from the central authority.

In this case too the problem has two aspects - a structural one and a professional one, and neither can be solved without the other. A proper manpower planning function must have authority to succeed, it cannot be given authority unless it is professionally qualified to perform the function.

6.4.2.3. Organization

The question of authorising posts is really in the sphere of organization and work study. Here again the function of specialist in organizational theory has been 'captured' by the Commission for Administration. Where the provinces may not have had the specialised staff in the past to undertake such work, the central government was obliged to do it. But the function of organization, self-organization, to put it more strongly, is obviously so vital to any institution that it cannot be regarded as independent without it. The fact that the provinces have been unable to free themselves from the central government in this respect is therefore extremely significant.

It is true that the iron hand is in a velvet glove - the Commission does not ride roughshod over provincial officials in matters of promotion and transfer, for instance, and the recommendations of the provincial directors carry great weight. Nevertheless, the control is there, and the effect is that a responsibility which should rest with the province has been lost, and its authority thereby subtly undermined.

No concern in the private sector would tolerate such a situation, because the ability to 'hire and fire' is an essential constituent of its authority, as is its ability to adapt its structure to its own circumstances. There seems to be no good reason why the province could not look after itself in this field as well as any municipality or state enterprise.

But just as in the case of the personnel function the Province could only effect a structural reform if it at the same time professionalises the function. Thus we are once again led to a consideration of the professionalisation of the public service, a matter which will be discussed in the final chapter.

6.5. The Executive Committee

If the Province is to act as a true meta-system vis à vis its own departments, it is vital that it should do its own organizational planning, its own manpower planning, and its own financial planning. The structural requirements for this are quite plainly that these three functions should be upgraded into a management system with

functional authority to determine provincial affairs. The implication is that the management system envisaged should not be by-passed within the administrative structure, and here we encounter the delicate question of political control.

This is the same problem, in another context, that has been encountered - but not completely solved - in the British municipal reforms referred to in chapter four. In these cases committees of elected councillors act as heads of municipal departments, thus by-passing the town clerk. In the Province, the elected M.E.C.s have portfolios, and play an operational role in the departments under their charge, thus by-passing the Provincial Secretary. (According to Cloete this was not the original intention).⁶ In the United States the preferred solutions to this problem are the 'council manager' or 'Mayor Administrator' systems, where the Administration is run by a professional chief, and the elected councillors give up their operational function, retaining only their legislative function.

If such a solution were to be proposed for the Province it would imply that the M.E.C.s would have to be deprived of their portfolios. They would not be restricted to a legislative function, however. They would be very well placed to act as a 'development directorate' on Beer's level four. In other words, they would have to undertake the corporate planning function. Provided they had suitable professional assistance, this seems to be a function that they could very well undertake successfully. As Argenti has pointed out, the best people to ask to do corporate planning are the existing management team who already know what the business is all about. In addition, one of the main subjects of corporate planning is relations with the environment, trends and demands, and in a public service context a politician would seem to be the ideal choice. In this case the Provincial Secretary and his team would become the 'operations directorate' and the whole system would fall into place.

However such a solution would be somewhat drastic and depriving the M.E.C.s of their 'portfolios' would upset political patterns which have become established over the years. One can see why British corporations have in the main refused it. They normally aver that if they were to deprive their elected members of their operative

functions and responsibilities the latter would lose interest in local government, and an important political 'training school' would disappear. The counter-argument is that the elected bodies are far too large and cumbersome and that committees are drawn into considering trivia while leaving important policy matters to go by default. (Parkinson has illustrated this process in a satire which comes uncomfortably close to reality).⁷

The American experience shows that the preferred solution is really a matter of national political style. In the South African context, it seems unlikely that the politicians would give up executive functions easily. In the author's experience even lowly political organs such as school boards take a keen interest on everything that goes on in their sphere, and insist on being consulted in every detail. The claims of a theoretical management system (which in the event may or may not come off), would not weigh very heavily with them.

Thus the solution is most likely a compromise of some kind whereby the political echelon is articulated in some way in order to allow for a corporate planning function without giving up executive powers, while arranging to put the administrative head in a stronger position.

This whole problem, however, may well be overtaken by events. The White Paper of 1980 says, in connection with investigations being carried out into the functional relationships between the Public Service and semi-state institutions, "the same applies to the relationship between the central and provincial tiers of government, although it goes without saying that such an investigation will be carried out with due regard to constitutional developments that may take place."⁸

Thus present circumstances may not last much longer, and the whole picture may change in the next few years. If wholesale reforms take place, it may be possible to make radical departures from current practise and re-organise the second tier on rational lines.

Another factor is the shortage of suitably trained staff. As the Commission remarks in regard to its own staff, this is a medium and long term program. The present problem cannot be solved simply by re-drawing the organization charts. Our difficulty is that such long term problems are exactly the field of corporate planning, but

that the province does not have the power to generate such a function.

6.6. Summary

First of all in this chapter the line departments were considered in the light of the requirements of corporate planning, and it was found that although they function effectively, they are handicapped in respect of their power to innovate, their power to respond to demand, and their power to finance themselves.

These comments also apply to the province as a whole, but at this level a more important feature is the disruptive effect which the intrusion of central government departments has on the coherence of the provincial system.

This is exacerbated by the 'cabinet' system which operates by bypassing the Provincial Secretary and the central service units, thereby inhibiting the management functions of the latter.

The functions of finance, personnel, and organization were then examined in some depth and it was found that they do not operate as viable independent units in the case of organization and personnel, and that in the case of finance the province has refused to innovate and provide the means of a planning capability. Therefore no planning is done in any of these fields, and as a consequence corporate planning is out of the question.

The Executive Committee was then considered, and the possibility was proposed that by amending its function from an executive to a planning one, many of the organizational problems of the Province would be solved. It seemed unlikely that this would be politically acceptable however.

Since the whole array of governmental institutions is under review, the situation may well be overtaken by events, and the whole second tier of government may be re-organised, in which case a rational planned approach would make the most of the opportunity.

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3. C.E. Lindblom, The Science of Muddling Through, in Golembiewski, Gibson and Cornog, Eds., Public Administration, Chicago: Rand McNally, 2nd Ed., 1972, p. 311.
4. Republic of South Africa, White Paper on the Rationalisation of the Public Service and Related Institutions, in SAIPA, Journal of Public Administration, Vol. 15, No. 2, Pretoria, 1980, p. 61.
5. White Paper, p. 61.
6. J.J.N. Cloete, Sentrale, Provinsiale en Munisipale Instellings in Suid Afrika, 4th Ed., Pretoria: van Schaik, 1973.
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8. White Paper, p. 59.

CHAPTER VII

ENVIRONMENTAL AND PROFESSIONAL FACTORS

7.1. Introduction

This is a short chapter which first deals in principle with considerations of intergovernmental relations, without going into specifics which would be outside the scope of the thesis. The last section picks up the thread of professionalization which has been touched on in many sections of the previous chapters. Only the profession of Public Administration is considered pertinent in the context of the main theme, which is corporate planning.

7.2. Intergovernmental Relations

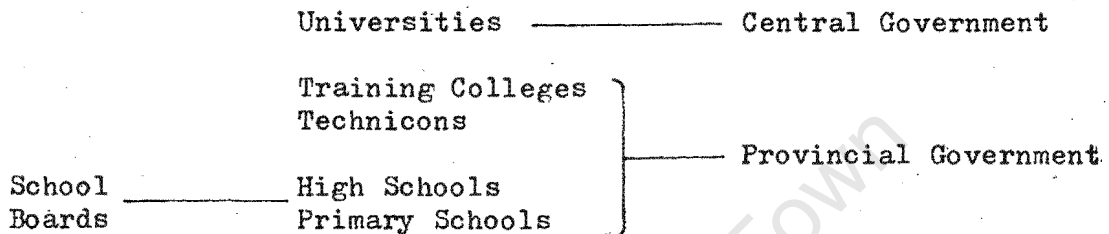
It has been argued that the cluster of activities which the constitution devolves to the provinces are of such a nature that they exert a centrifugal effect on the unity of the Provincial Administration, because they have no inherent coherence, either territorial or functional.

However, this observation arises out of comparisons with corporate bodies in the private sector, whose sub-units do usually exhibit some functional coherence. It is only fair to ask whether such a comparison is valid, because the nature of government services may preclude any coherent interrelationships at any level. There does not seem to be much common ground between say, defense and water affairs, or transport and welfare. Certain functions however, may form rational clusters, and it has been the objective of the rationalisation process to bring these together.

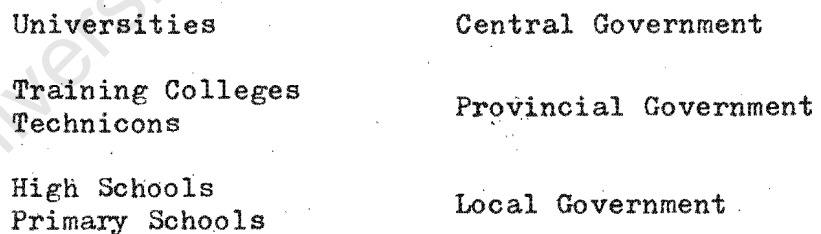
In the same way, while certain functions may be nation wide, others may lend themselves to territorial or regional devolution. The present situation has a historical origin, and in view of the changes and increases in the demand for government services, and the likelihood of a new constitutional dispensation, the whole spectrum of national and local services is due to be taken under review. This is an exercise in corporate planning on a national scale which is outside the scope of this paper.

However, in the light of the conclusions already reached perhaps certain

principles could be elucidated. Given the array of government services over the whole nation, their departmentalisation in terms of purpose, area, process and clientèle, the right question to ask is surely 'at what point or points should political controls be inserted into the system, and how?' For instance we have a national education system which falls into a natural hierarchy of universities, training colleges and technicons, high schools and primary schools. In this country at present the system is controlled as below:-



There does not seem to be much logic in this arrangement. One feels that the Hierarchy of educational institutions should be matched by a hierarchy of political institutions whose constituencies more or less match the pools from which the students are drawn, so that control lies with the people who are most intimately concerned. Then one might suggest:-



If the whole conspectus of government functions were carefully analysed in this way, a completely different set of functions might be seen to be more appropriately devolved to the provinces than is the case at present, particularly in matters of physical planning which have an obvious territorial connotation.

The first principle that should be observed is that each level in the hierarchy should be the meta-system for the level below it. It should not be a meta-system in some respects and not in others as is the case at present. There should be no by-passes of authority, although there must be feedback by-passes in the political system.

The next principle is concerned with goals. Firstly there must be a normative hierarchy of goals, sub-goals, and sub-sub-goals related to the hierarchical level of the corporate structure, and secondly these must be so arranged that each level has as much legislative autonomy as possible over the goals at that level. Further, the vertical division of functions must be so arranged that the set of functions at any level apply to the constituency at that level, because it is the interests of the constituency as a whole which make it possible to balance or trade off the allocation of resources.

Lastly the revenue system should be so designed that the tax base at any level is the same as the constituency at that level, and that constituency and no other should control its fiscal affairs. If this principle is violated the political organ will be emasculated and become a rubber stamp.

It goes without saying that all these arrangements, if they could be realised, would still fail unless the administrative system at each level had the structure and competence to be effective. With regard to the structure it has been shown that models can be developed which order administrative structures in a rational manner. Indeed these models are sufficiently advanced that one could say the structure could be ordered in a correct manner, according to principles drawn from advanced organization theory.

With regard to competence, this depends heavily on the personal competence of the officials concerned, and this brings us finally to the question of professionalisation.

7.3. Professionalisation in Public Administration

We have seen in chapter five that in virtually all the line departments of the province there are professionals who carry on the activities of policy-making, planning, and decision-making in their specific fields. Furthermore the actual operational effectiveness of the present provincial system leans heavily on their expertise. When we move into the fields of finance, personnel, and organization - that is into the administrative sphere, we find that administrative generalists with some special training control all these functions as well as administration per se, which is the co-ordination of all

of them.

Corporate planning requires financial planning, manpower planning, and organization planning on an expert basis. Thus the whole question of the potential of corporate planning is related to professionalism in these three fields, and in Public Administration as a whole.

Note that this is not the place to consider professionalism generally in the public service as a whole. The problems that crop up with professional experts such as doctors or engineers in the public service deserve a separate study, which is not pertinent here except in a contingent way. However the profession of Public Administration as such is indeed pertinent and it is considered worthwhile to make a few points in this regard, to establish that such a profession is valid and operationally justified.

Professionalism arises when a field of specialised knowledge and expertise passes some threshold of complexity and as approximated by specialists in the field we form a professional body to protect their vested interests and to set the holding standards of admission and conduct, and to have a legal monopoly of practise in the field.

This has happened in the fields of medicine, education and engineering which correspond to the three main professional objectives of providing hospitals, schools and roads. It has also happened in other fields which affect the province directly or indirectly such as law and architecture.

Public Administration is at an early stage in this development. It is interesting that an early stage of the process has been revealed as a professional monopoly with its knowledge of Public Administration as a profession and its responsibility for the development of the profession are involved, and it has not as yet been taken. Along the dimension of background theory we are to do with planning, planning and decision-making. The study of which gives the administrator the mental flexibility to deal with the various aspects of the functional dimension as well. In addition the study of Finance, personnel, and organizational management is necessary to provide the administrator with the knowledge

of the matter of these fields to be able to collaborate meaningfully with experts in any of them. There is a fourth field which is of prime importance in the public sector, and that is of course knowledge of the specific environment of the public service - the state as a political entity. Just as the manager in the private sector must understand his market, so must the Administrator understand his political milieu.

It is characteristic of professional bodies that they bind themselves by an ethic, and Public Administration is no exception, the ethic in this case being that of public service. Thus the profession of Public Administration conforms to the requirements of any other profession in that it is motivated by an ethic, provides a theoretical background in behavioural science, and has a fourfold empirical content in political science, organization theory, personnel management and state finance.

The next step in the professionalization of the public service would be to build up a cadre of trained officials, and gain sufficient influence to ensure that the top posts in the public service are restricted to those with the necessary qualifications - namely membership of the professional body which in fact already exists.

Although this ideal is still far in the future, it must be relentlessly pursued, because no country can afford to have officials occupying important posts who have merely been precipitated there by the seniority system which has maintained itself by simple bureaucratic inertia. Such people cope with the daily routine and are no doubt intelligent and expert in handling their current job situation. The professional is needed, as has been shown in this study, to transcend the current job situation and look at the public service as a whole.

There are signs that the movement to professionalism is gaining momentum in the central government. The conclusion of this paper is that it is vital to extend it to the provinces as well.

7.4. Summary

In this chapter the intergovernmental distribution of functions was found to be unsatisfactory at present, but it is felt that reform is imminent, and should take place according to three principles -

hierarchical regularity, normative appropriateness, and fiscal responsibility.

The professionalization of the public service was found to be a feasible long term ideal which needs to be realised at every level of government.

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Conclusions and final summary

First of all it must be emphasised that the effectiveness of the provincial line departments is not in question, and they provide services of a high quality. They do not practise corporate planning as defined in this study, but either this technique is in any case inappropriate, or it is of lesser importance at departmental level.

At Provincial level however, it would be appropriate, but a set of interrelated constraints is operating to inhibit corporate planning.

- A. At departmental level the principal departments are related in their major functions to central government departments which exercise overriding control at the expense of provincial authority.
- B. Because their constituencies are discrete, they compete for funds and services, thus weakening the unity of the institution.
- C. This is exacerbated by the 'cabinet' system of allocating portfolios to the executive and allowing them administrative functions. The Provincial Secretary is thereby by-passed.
- D. At provincial level the main control parameters are structurally badly placed, weakly staffed, fragmented, and subject to minute central government regulation. They are therefore ineffective as management tools.
- E. The province does not set its own goals and its control of its resources of money and manpower is weakened by central government intrusion.
- F. It has lost the initiative and could not command the resources to re-organise itself. It is therefore not strictly speaking an independent holon, but an unintegrated collectivity.

If it were thought desirable to have an effective territorially based second tier of government, the province could be saved in the long term by a re-organization which took the following factors into account.

1. The 'cabinet' system should be relinquished, and elected officials confined to legislation and corporate planning. These would both be extensive functions.
2. Central government corporate planning should yield a more appropriate set of functions for a second tier, and allow the latter more legislative flexibility.
3. The tax base and the political constituency and the scale of functions should all be integrated.
4. The control parameters of finance, organization, and personnel should be structurally properly placed, and independent of central government interference.
5. All Administrative posts above a certain level should be professionalised over the long term.
6. There should be no formal or informal by-passes from the central government to lower levels of the provincial hierarchy.

This set of factors is not in any sort of priority - they hang together, and have systematic interconnections.

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