

Procedures for Integrated Regional Planning.

I: The Background to Decentralisation

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THE growing international interest in local self-government has received considerable attention. A 1969 resolution of the Council of Europe [1, 53] has called for the inclusion of the right to local self-government in the constitution of states. Many European countries have already recognised this right formally [2, 328] and others are considering methods for the devolution of power to areas with a defined national or regional consciousness. Discussions in the United Kingdom on greater autonomy for Scotland, Wales, etc. are a case in point. It would seem that much of the stimulus for this development arises from the increasing awareness of the many problems associated with access and service which are concomitant in the ever increasing role in planning and economic development universally being played by the State. Access is said to be good whenever an individual feels he can participate in public affairs through his ability to contact and influence elected representatives and officials. Service implies not only the economic discharge of public functions but also the alignment of these functions as closely as possible with public needs and decisions. Good government requires that both these fundamental values of a political community be given due recognition. However, this poses a difficulty in that the criterion of service will often favour large authorities while access and the alignment of functions require much smaller units [2, 329]. The problem then becomes one of determining the optimum form of government which will frequently be found to be multi-tier in structure.

The debate on local government in Ireland

In Ireland this debate has been pursued with considerable vigour in recent years. In early 1969 the Minister of Local Government responded to a complaint by Dr. Harty, the recently appointed Bishop of Killaloe, about the difficulties experienced by voluntary bodies in dealing with State and local authorities by stating his intention to enhance the status of voluntary bodies *vis-à-vis* the official local machinery [3, 318]. The result was the first examination of the role of local government since founding of the State, i.e., the White Paper on Local Government Reorganisation [4] which appeared in February 1971. This was designed to provide a basis for discussion before final decisions were made and constructive comments were invited. The considerable number of submissions made tended to be overshadowed by a very thorough report—the Chubb Report [1]—prepared by a group of experts under the chairmanship of Professor Chubb and on the initiative of the Institute for Public Administration. The IPA Director, Mr T. J. Barrington, had previously outlined a comprehensive scheme of decentralised administration at several levels for the public services generally in an addendum to the Report of the Public Services Organisation Review Group—better known as the Devlin Report [5]. The Chubb Report—*More Local Government—a programme for development* was followed by a seminar of Local Government Reorganisation convened by the IPA at Galway towards the end of 1971. [See 2, 3 and 8.]

Submissions were made by the various county councils and by several voluntary organisations. In the latter case Muintir na Tire produced a blueprint for community development [6] while the Irish Council of Churches/Roman Catholic Joint Group has established a group to investigate the churches' response to underdevelopment in rural Ireland. The composition of the group reveals an emphasis on the West. Another group with a similar emphasis was formed as the Western Alliance at the Galway conference on western development in late 1972. The early enthusiasm of the Alliance which brought voluntary and official agencies "together in a common determination to establish a regional identity of development" [7, 54] appears to have failed to sustain its initial impetus. A prominent Westerner has contrasted this inaction with the vigorous development of local initiative and community spirit throughout the counties Galway, Mayo and Sligo. However, it seems likely that the complex political issues involved in co-ordinating the activities of the multiplicity of State and semi-State agencies operating in an area with those of locally elected representatives and voluntary bodies were probably under-estimated by the founders of the Alliance and may therefore account for the delay.

These problems of co-ordination were very much in the forefront of the minds of those who produced the Chubb Report. The report welcomed the White Paper as "the first official acknowledgement in the history of our State of the fact that a system of local self-government is one of the essential elements of democracy. Under such a system, local affairs can be settled by the local citizens themselves, or their representatives, local services can be locally controlled and local communities

can participate in the process and responsibility of government" [1, 8; 4, 9; 3, 320]. The presence of a complete and satisfying philosophy of local government in an official document backed with the full authority of the Government was received with approval, particularly these sentiments in the White Paper which said that "Local Government is more than just local administration. Local authorities have a considerable degree of independence and freedom of choice in the discharge of their functions and in determining the level and pattern of their expenditure" [4, 10], or again, "It must therefore be an equally important objective to foster responsible and live local government, to create conditions in which there is maximum scope for local discretion and initiative, to encourage to the fullest possible extent involvement and participation in local affairs, to make membership of a local authority interesting and attractive; in short to ensure that the local government system fulfils the democratic purpose it is designed to serve."

Faced with such a statement of philosophy, the Chubb Report (which a reviewer described as a thoughtful and interesting document reflecting a sympathy with the frustration of ordinary citizens attempting to come to grips with a complex administrative system), made a number of proposals as to the principles under which local government re-organisation should occur. These included a multi-tier system which would associate nominees of voluntary bodies with elected members at one level of authority and which would ensure local autonomy so that partnership between local authorities and central departments became more of a reality. The Report stressed the need to widen the scope of local government progressively "to cover as wide a range as possible of public services with a view to

- (i) de-centralisation of government,
- (ii) facilitating access to government by the people for information and redress of grievances,
- (iii) citizen participation and,
- (iv) enhancing the capability and performance of local government itself as a force for economic, social, environmental and cultural development" [1, 3].

While making these proposals the authors of the Report did not blind themselves to the real situation. Barrington could not be more direct when he wrote "it is fair to say that we do not have in Ireland 'a system of local self-government': we have the unsystematic local administration of a dwindling number of services. It is not a system, it is not local and it is not self-government" [8, 299]. He was referring to the process by which health and home assistance had been transferred to the Health Boards and the maintenance of major roads had been transferred to the Department of Local Government. These views were expressed before the total or partial abolition of rates—the only major source of local revenues independent of the central government—had become a major political issue. What Barrington

wished to see was local authorities with at least as much power of independent action as the semi-State bodies, and local authorities which would integrate many of the activities of the multiplicity of State and semi-State agencies where these could be discharged efficiently on a small scale. The case for regionalisation of general hospital services may be overwhelming but the reverse would hold for the very large number of personal services aimed at improving the general level of health in the community which a central administrator might be inclined to regionalise for the sake of tidiness. Failure to recognise the distinction could increase the sense of alienation which Hart [9] has already shown to be disturbingly large [8, 307].

Barrington argues his case convincingly on five bases.¹ However, his colleague at the IPA, Desmond Roche, has argued that despite the excellent statement of philosophy the realities of the government actions and proposals point in the direction of greater centralisation and growing irrelevance for the local authorities confined to increasingly administering a small group of environmental services [3, 320]. The proposals to abolish town commissioners and the smaller urban authorities and to have the 29 per cent of the State's population in Dublin under a single jurisdiction [4, xi] may be desirable for administrative convenience but is seen to be contrary to the growing popular desire to share in the political management of local government. The McKinsey report on *Strengthening the Local Government Service*, which is an extension of the White Paper and concerned mainly with staff efficiency, also reports in favour of larger units and amalgamation [10, 21].

In January 1973 the IPA Journal—*Léargas*—reported [11, 5] that following the recommendation of the Devlin report the concept of the executive agency had been taken beyond the purely experimental stage by the setting up of fourth Aireacht for the Department of Local Government. As a preliminary measure a task force from the Departments of the Public Service and of Local Government had been appointed to review the structure of the latter department, bearing in mind the principles set out in the Devlin Report and the possibilities of devolving further functions on to the local authorities. It was to define the role, powers, functions and effectiveness of the various local authorities and agencies of the department. *Léargas* speculated that the re-organisation of the department would have to "be related—if only indirectly—to the multiplicity of regional divisions and the underlap and overlap of the geographical units of the various public sector organisations catering for local requirements".

The current search for an improved structure for local government will require a re-definition of its relationship to central government and an examination of the functions it can fruitfully discharge. In this context an examination of the scope for economic planning at the sub-national level is opportune. In this paper it is hoped to demonstrate that considerable devolution of powers relating to economic planning could prove beneficial.

1. These are presented with great lucidity in [8, 309–313].

The case for only limited regional planning

At the outset it may be said that not all economists would agree. Speaking a few years ago at the Leeds meeting of the British Association for the Advancement of Science, Professor Sargent of the University of Warwick was critical of the British experiments with Regional Councils and with Regional Boards. He recognised that "from the fact that the Regional Councils have been given no power and the Regional Boards little staff, it would perhaps be over-cynical to infer that they were intended to do nothing" [12, 181]. He set out to define "an appropriate sphere in which their activities (could) usefully be developed towards the feasible—and ultimately the optimal—solution of important problems". Sargent argues cogently that this sphere should be a rather limited one. However, a re-appraisal of his arguments suggests had he adverted to some of the advances in planning procedures in the last decade he might have concluded in favour of considerable devolution of power.

In making his case Sargent identified three distinct aspects of regional economic planning. "The first of these is the idea that something needs to be done about the regional imbalance of employment opportunities, both in the static sense of the persistence of above-average rates of unemployment in certain regions and in the dynamic sense of a relatively slow growth in the number of jobs available in certain regions. The second idea is that national economic planning has a regional analogue which demands for it a regional substructure. The third idea is that town and country or 'physical' planning needs to be endowed with a regional dimension and an economic framework" [12, 181].

The general lack of understanding (or rather of information) on the relationship between productivity and employment, to which Sargent referred initially, argues neither for or against decentralisation. His main substantive point was that measures for dealing with the regional imbalance in unemployment had to be decided supra-regionally and planned inter-regionally. In the absence of supra-regional decision-making intense competition would develop between regions for the limited amount of "footloose" industry available. Skilful regional promotion in the better-off areas could hinder national policy *vis-à-vis* the undeveloped areas. These corrective measures must also be planned inter-regionally to an increasing extent as the dimensions of regional inter-relatedness become more clearly understood. An assessment of the multiplier effects on employment of alternative sites for a new industry will become increasingly important as development area policy becomes more sophisticated.² What is required is a location policy which optimises the total pattern of new employment opportunities through considering not only primary but also the secondary inter-

2. In an analogous vein recognition of the need for a critical assessment of the linkages between new grant-aided industry and established Irish industries has led to greater selectivity in the policies pursued by the Industrial Development Authority. This was recognised in the *Survey of grant-aided industry* [13] commissioned by the IDA and incorporated in the Industrial Development Bill 1969. See also P. N. O'Farrell [14].

regional feedback effects but subject to an enhanced weight being attached to the needs of the areas of high unemployment [12, 184]. While recognising the force of these points it is not necessary to argue, as Sargent does, for greater centralisation. What is needed is a means of central co-ordination which recognises the potential conflict of interest but which nevertheless permits the local planners to continue to take initiatives in a manner which ensures that the local planners take into account the external economies and diseconomies associated with their actions. In this way the ill effects of centralisation are mitigated and the desire for participation in economic development at local level is not thwarted.

Sargent concedes that local planning agencies might be justified as the agents of regional self-help. "The Councils in particular, with their membership drawn from articulate local interests, could turn out to supply what is needed in the areas of high unemployment in the shape of active nuclei for regional initiative, harnessing private to public energy and enterprise in the solution of the regions' problems" [12, 184]. If so he would accept their establishment in the problem regions. A nationwide set of Councils in his view would suffer from the defects he alluded to in his previous point. It is tempting to point to the Irish county development teams as the embodiment of his concept in that they are confined to specified counties. However, it must be recognised that these do not draw their membership from articulate local interests but are rather a means of co-ordinating some of the activities of State and semi-State agencies in a given county and are comprised exclusively of officials. Currently their role is somewhat unclear *vis-à-vis* the regional development associations which cover the entire country, have a board with a majority of elected members but whose powers seem rather limited.

Sargent's second possible role for regional planning is as a sub-structure or analogue of national planning. Examination of this role requires a clear concept of what national planning involves. Sargent suggested several interpretations. "At its least exciting national planning is an attempt to match aggregate resources with aggregate demand, subject to the restraint imposed by the balance of payments. Given a certain rate of growth of the national product, certain implications of this can be worked out such as the investment which it necessitates, the imports which it will require, and the exports which are needed to pay for them. This yields residual figures for the growth of the resources available for public and private consumption, to which the government must adjust the demand for them through its power to control its own expenditure and through taxation, the expenditure of private individuals" [12, 185].

Sargent rejects this concept of regional planning partly because of the difficulties posed by the dearth of data but mainly because of the impossibility of selecting reasonable limits for the regional balance of payments or of influencing, at the regional level, the feasible rate of regional growth in consumption.

At a higher level of intensity, planning spells out the implications of demand management by indicating output "targets" for individual industries. Given that the set of target is a credible one, such information serves a useful function in alerting industry generally to developments in the economy which might other-

wise have been unforeseen and unplanned for at the micro level. Sargent discounts the possibility of analogous planning at the regional level, again because of the problem of regional balances of payments mentioned earlier. He also dismisses a regional analogue of the shift in planning away from targets towards a preference for policies meant to raise the underlying rate of growth by stimulating technical advance, improving the quality of management and the choice of investments and remedying the shortages in the supply of specific skills. Here again these problems, he maintains, are best tackled by supra-regional policies.

Sargent's stress on the problems of regional balances of payments and control of local consumption tends to consider only one aspect of indicative economic planning. It is possible to postulate a different type of national planning—indeed one which is reported to be practised in some countries, such as Hungary [15]. In this context national planning would look after the broad framework—balance of payments and general levels of investment and consumption. The central planning agency would determine the general outlines of national policy to be adopted, including perhaps regional growth rates, and the resources available at national level to promote developments in the economy which bring about the desired pattern of growth. The regional planning agencies would be informed of the resources that would be allocated to them. These would become part of the constraint set under which regional planning would take place. Most of this paper will be concerned with the problems of finding an optimum means of allocating these resources. In this situation the region does not have to have regard to regional levels of balance of payments or consumption. It can devote its energies wholeheartedly to combining the allocated resources with local inputs in a manner which promotes regional growth in some optimal fashion.

Sargent's final role for regional planning—that of physical planning—is the only one he believes could justify the existence of regional planning agencies. In the United Kingdom public authorities possess and are required to exercise, real powers over the use of land. In his view this task needs to be given a substantially enlarged economic dimension or frame of reference and he suggests that the formidable difficulties, which arise from the fact that the local planning authorities are distinct from the regional planning agencies, need to be resolved if this enlarged dimension is to be supplied. Thinking of the congestion of Britain Sargent's proposals are to get physical planning away from a preoccupation with housing towards the general problem of achieving an optimal distribution of population growth over space. This would include a better understanding of the influences on household size of income, rent and other variables; better quantification of the infra-structural requirements of public investment generated by specific patterns of population growth; better knowledge of the influence on the supply of labour of the industrial pattern of a region or of the ease of access to it; and better measures of the costs and benefits of urban conglomeration. Few would quarrel with the conclusion that regional authorities can play a vital role in physical planning. In this paper it is argued that these regional planning agencies have a role which extends considerably beyond physical planning.

The case for decentralisation—some theoretical considerations

The case for decentralisation can be justified on both pragmatic and theoretical grounds. The pragmatic justification derives from the heuristic evolution of economic practice over the last two centuries. On one side the reaction of classical economists to the restrictive practices and State monopolies of mercantilism led to a desire for greater freedom. As is well known the imagery of the invisible hand was used to suggest that welfare can be maximised if private enterprise is freed from all but the most minimal State controls. The extreme case from decentralisation was contained in the neoclassical concept of perfect competition, which fused the classical concepts of competition and of the market. The concepts assume consumers know their own preferences and producers the available technology and face a market on which all prices are given. Without reference to anyone they adjust their purchases and production decisions to optimise their resource allocations. These actions produce a Pareto optimum. The efficient operation of the system requires the absence of any frictions which would prevent prices reflecting accurately the quantities of resources available and the technological possibilities of their use in meeting the demand for products deriving from the tastes of consumers. Prices, therefore, are the key to equilibrium and a complex summary of a vast amount of information about the economy. They permit efficient decentralisation provided they are not interfered with by State activities, monopolies and other interventions in the market.

The criterion of Pareto optimality, however, came to be regarded as no more than a weak criterion of efficiency. Many economists would prefer criteria which relate to equity in distribution or social stability. Thus, at the other end of the theoretical spectrum from the decentralised model of the price system, was developed the concept of the rigidly collectivist economy in which all the relevant data on technology and preferences are transmitted to a central agency which then allocates resources to, let us assume, bring about a situation characterised by stability or social justice. Such a system operating without a price system clearly would have enormous requirements in terms of the transmission of information if this optimum situation is to be approximated [16].

However, the models we have been discussing are extreme abstraction without counterparts in the real world. In market economies indivisibilities, externalities and public goods provide many economic situations in which a price system will not be satisfactory to guarantee the efficient or decentralised allocation of resources. In all these cases a new optimum requires some form of intervention in the market which of its nature implies some degree of centralisation of information and decision-making. This centralisation may take many forms ranging from direct public ownership and control (e.g. nationalised industries or police), the strict regulation of large indivisibilities (such as transport), subsidised marketing and advisory work (agriculture and small industries) to the provision of tariffs, special services (training programmes) and subsidies (or taxes) to the otherwise uncontrolled sector.

The consequences of these interventions is to violate the conditions for Pareto optimality in a general equilibrium system. Where this occurs it is no longer appropriate to use the analysis developed for perfect competition as has been shown in the General Theory of the Second Best developed by Lipsey and Lancaster [17] as an extension of work by Meade [18]. This theory states that where any one condition for Pareto optimality is violated, the other conditions, although still obtainable, are, in general, no longer desirable. It is important to note that even in a simple general equilibrium system where there is only one Paretian optimum there will be a multiplicity of second best optimum positions. An "important negative corollary is that there is no way to judge *a priori* as between various situations in which some of the Paretian optimum conditions are fulfilled while others are not. Specifically, it is NOT true that a situation in which more, but not all, of the optimum conditions are fulfilled is necessarily, or even likely to be, superior to a situation in which fewer are fulfilled" [17, 11].

General economic systems comprise several layers of optimisation, which increase in generality and culminate in the maximisation of a welfare function subject to transformation function. It seems likely on *a priori* grounds that where the conditions for a Pareto optimum are broken at one level, the second best optimum will require that the conditions be broken at other levels also. One consequence is to make difficult the selection of an appropriate policy for an ailing economy which contains both a sector that is rigidly controlled by the central authority and another virtually uncontrolled. More control of the free sector may be as appropriate to desired ends as a relaxation of the degree of control exercised in the public sector. Thus East Europeans³ may legitimately press for more decentralised market type structures in their collectivist economies while others⁴ in free enterprise societies have frequently claimed that the externalities attached to large investment decisions are, in some sense, too great to be left to the decentralised market process. What this means is that the current state of economics provides no economic criteria for assessing the relative performance of different economic systems whether they be international comparisons or comparisons⁵ over time. The choice of any system is the outcome of the history and values of the society and must be assessed by more than economic standards. What is clear is that the proverbial small country of international trade theory would be unwise to imitate uncritically a system appropriate to a relatively closed economy. Such a realisation may lie behind the departure of some East European countries from strict adherence to the Soviet prototype since a high degree of centralisation may be incompatible with an open economy. Equally, a poor underdeveloped free

3. For example, Ota Sik in Dubcek's Czechoslovakia has argued that the centralised system suited the simple planning of "extensive" economic development but that decentralisation was needed for the complex interactions of intensive development [19].

4. E.g., Galbraith in the US, and the French in Europe.

5. Marschak's study of Yugoslav performance under centralisation and decentralisation was inconclusive though interestingly enough the Yugoslavs expressed a strong preference for decentralisation [16].

enterprise economy with relatively few natural resources may require more centralisation than would seem appropriate in a relatively closed economy, such as the United States.

If the Theory of the Second Best is accepted as valid, new theoretical bases must be evolved for the solution of economic problems. Currently several different possibilities have been mooted as promising areas to explore. One method would be to ascertain how the presence of one constraint in an otherwise perfect market alters the conditions necessary to achieve an optimum. The other is to accept a multiplicity of constraints and seek to determine the effects of changing any one of them. Yet a third approach has been proposed by Martin Shubik [20] which would be based on simulation or game theory adopted to generate an optimum output for the given conditions. In his view instead of seeking Pareto optimality the approach can be made specify a solution to reflect "different meanings of efficiency, decentralisation, individual strategic power, the countervailing power of groups, fair division or just distribution and social stability" [20, 425], and is explicit about the assumptions concerning possible normative criteria for distribution. This latter approach is relevant to much of the discussion later in this paper.

What this means is that it is difficult to justify any degree of centralisation or decentralisation on *a priori* economic grounds given the current development of economic theory. It has also come to be recognised that the basic problems of planning are not very different whatever the socio-economic system. In both market and collectivist economies large scale investments are equally likely to require Government support and underwriting (if not initiative). The major difference between the systems, the ownership of the means of production, is seen to have consequences from the institutional structure of economic power and for the distribution of economic rewards. It has fewer implications for the location of decision making in the planning process though it will influence the degree to which the planning agency can and wishes to obtain relevant data and also the instruments available for the implementation of planning desiderata.

Recognition of this situation and the absence of strong theoretical bases providing economic criteria has led to considerable interest in international studies of planning experiences in all countries. Part of this interest is concerned with examining the degree of decentralisation or diffusion of decision making and the extent and nature of participation in the planning process because it is appreciated that the appropriate balance between the centre, the regions (for some studies sectors and firms would be more appropriate subnational units but the problems are similar) and the localities in information gathering, analysis and decision making still remains to be settled whether the basis for planning is prescriptive, as in most socialist countries, or indicative as in most market economies. These studies have shown that planning pragmatists have evolved similar procedures for decentralisation in contexts as different as multifirm corporations in the United States [22 and 23], the French Commissariat du Plan [21, 197], and the Hungarian Academy of Sciences [15]. A considerable part of this paper will be concerned with these procedures.

Organisational Theory and decentralisation

In recent decades behavioural theories of the firm have been developed to complement the classical economic analysis. Of particular relevance to the discussion in this paper are the insights of organisation theory into the relationships between planning, decentralisation and the stage of growth at which the firm finds it. The basic functions of management in any organisation are planning, organising, communicating and control. These are interrelated and cannot be performed in isolation. Effective integration of these functions into a system where they are subservient to the general objectives of the system plays a major role in ensuring the capacity for survival of the organisation. The work of integration must start with a definition of five major aspects of the system [25, 384].

1. The whole system objectives which are defined in terms of present capabilities and future prospects.
2. The environment—the forces outside the control of the system but influencing its behaviour.
3. The resources of the system—the means available to achieve the objectives of the system. Of these the greatest problems are associated with human resources since they alone react to the influences brought to bear on them.
4. The components—the organisation of the resources based on a rational breakdown of the tasks, projects or missions which the system must perform.
5. The management of the system which generates the objectives and plans for the system, sets the goals for the components, allocates resources and ensures that operations are carried out in accordance with the objectives of the system.

In some organisations the management functions are carried out by one person. In others many of these functions are technical services reporting to top management just like any other service. Where planning is divorced from management it is only likely to be effective if it is recognised as possessing three aspects—as a process of social interaction between planners and decision makers, as a measurement process and as a testing procedure.⁶

Rasmusen [24] has analysed six stages in the growth of a firm with very different implications for planning.

Stage 1: The firm is small. The entrepreneur discharges all functions—plans, directs and controls. He is expert in his field and little formal analysis occurs. Staff are simply there to help him achieve his ideas.

6. For a more detailed discussion see Ross [25, 387 et seq.].

Stage 2: The entrepreneur cannot get around to everything. The environment is stable. He appoints assistants with specific responsibility for routine operations. These are not party to his plans so they confine themselves to their own areas of responsibility and execute the initiatives from the entrepreneur who remains the most competent member of the organisation. Formal planning does not occur though middle managers plan their own areas and provide documentation by which the entrepreneur can measure their achievements.

Stage 3: Increasing specialisation in middle management means that they set up their operational objectives which are closely linked to their area of responsibility, and tend to be suboptimal, being both narrower and more specific than the entrepreneur's objectives. Middle managers in search of job security will try to monopolise their function in the organisation so that conflicts of interest arise between the manager and the entrepreneur or between managers. The entrepreneur remains the most important decision maker but is increasingly involved in settling conflicts between managers. The organisation has grown so large that a formal information system, based on written orders and reports, is necessary to satisfy the entrepreneur that his decisions have been discharged faithfully.

Comments on these stages: There is clearly a centralised leadership with the entrepreneur providing the initiatives because he alone possesses the experience and broad picture of the situation. He regards the organisation as his own and the staff as his helpers. His opportunistic attitude means he does not formulate objectives but also means that his assistants greatly lack any sense of permanence and worth. As a result they tend to be reserved and seldom take initiatives. If they do these are closely related to their area of operations and based on the assumption of stable conditions in other areas of the organisation. The entrepreneur finds his assistants tend to magnify the significance and complications of what, to him, are small problems.

As the organisation grows the information system becomes increasingly important to the entrepreneur as a means of surveying the activities of the organisation. The middle managers will appreciate this and withhold or distort information going into the information system to obtain some freedom of manoeuvre. Since the entrepreneur has no other channel of information the risks involved are slight.

In planning there is an increasing use of partial models by departments seeking to plan their own objectives under *ceteris paribus* assumptions for the rest of the organisation. These tactical models (scheduling, routing, inventory control) are well specified. The objectives are clear and the objective is usually one of cost minimisation.

Stage 4: From this point onwards groups or departments are to be found in the organisation which have higher qualifications and experience than the entrepreneur. This aggravates their conflict of interest with the entrepreneur who cannot understand their work and feels that the necessary delegation of authority is a surrender of control over his own organisation. He finds he is asked for resources to tackle problems the significance of which he does not appreciate. He

begins to seek advice for new initiatives from his specialist subordinates while maintaining his right to take initiatives. In the process he collects information from different groups without giving them any inkling of what he intends to do with it. His "opponents" find they can use the information system to achieve local goals without being stopped while his closest collaborators find they can no longer hold their position of influence and power by being efficient in administering and executing orders. They are now expected to produce realistic and creative proposals.

The gradual development of the organisations idea base causes a radical change in the planning procedure. If he wishes the organisation to survive the entrepreneur is compelled to evaluate the proposals of his staff on the same basis as his own. This means he must clarify and formalise the objectives to be pursued in the future. It also means he must introduce a measure of democracy if he is to get more people to put forward proposals.

Stage 5: At this stage there is no longer a central decision maker responsible for all initiatives. The entrepreneur will now have a group of managers whose professionalism will differ from his emotional commitment to what the organisation stands for. This top management group will seek to integrate and co-ordinate the diverse activities of the organisation and be more preoccupied with forward planning than controlling current operations.

This development is due to the communications problems which characterise all large organisations. Lack of opportunities to get information means that lower levels in the firm find it difficult to understand top managements decisions and are therefore loath to change their attitudes until they are forced to do so. This inertia in the system will prevent top management from adopting an opportunist attitude to the changing possibilities in the environment. Instead they will monitor the information on opportunities in the environment to update their forward plans and seek to elicit from the staff proposals for future activities which specify both the advantages and resource requirements. From these proposals top management selects the most promising combination. This means that the proposer has no guarantee that his proposal will be accepted. This could result in staff deciding that it is not worthwhile making proposals because they will not be taken seriously and their efforts will be wasted. Another possibility often used in official planning, is to put forward proposals such that top management has nothing to choose between.

At this stage the specialisation of activities calls for a standard terminology to facilitate information exchange and this usually is of an economic nature since it poses fewer problems of potential distortion in transmission.

Stage 6: At this stage the departments are quasi-independent organisations held together by economic bonds and a common leadership. At this stage top management has a mainly financing function. In financing ideas it is immaterial whether these come from within the organisation or from outside so top management begins to examine possibilities of controlling or buying up other firms. Independent departments may be launched as new independent organisations.

Comments on these three stages: The firm is gradually involving more people in determining its activities to obtain more of those kinds of ideas on which the firm is becoming increasingly dependent for its existence. At the same time the bonds which link activities and men together tend to grow weaker as individual groups diverge more and more from each other.

The information process becomes ever more complicated. On one hand information systems are introduced for speedy and effective transmission, storage and retrieval of an increasing volume of data. On the other hand changes in the environment diminish over time the relevance of the decision making process. Adapting the information system is both difficult and time consuming since the organisation cannot reorganise itself unless there are special goals it wishes to pursue. At the same time as the information system is being made more efficient its purpose is undergoing a change from being mainly an instrument for assessment and control to a two-way communication system. This change is essential to provide potential project proposers with both an insight into the process of project selection and an appreciation of the common restrictions on the organisation which will enable them to improve the relevance and realism of their proposals.

Since top management is leaving a situation characterised by a single possible course of action for one where there are many combinations of alternatives total models will be increasingly favoured. With their help the general framework will be determined from which the operating programmes for plan execution can be derived.

Decentralisation

In the above schematic presentation of the growth of an organisation it was apparent that there comes an upper limit to the capacity of any individual to make decisions. This limit can be extended by introducing management information systems and by automated data processing but only at a considerable cost. Ultimately some powers to make decisions in accordance with the organisation's objectives must be delegated if the enterprise is not to suffer.

The first type of decentralisation as the system grows will deal with tactical decisions and be introduced increasingly as the organisation moves away from the first stage of growth. Tactical decentralisation occurs when the decision maker decomposes his objectives into a set of subgoals which he then sets as parameters or targets for a subordinate and allocates to him the resources necessary to achieve this subgoal. In making the allocation the decision maker will make his own appraisal of future prospects for the firm and the relationship between these and the department's current productive capacity. Provided he achieves his target the subordinate is exempt from any responsibility as he is in no position to influence the level of the target or the size of the resource allocation. This means the responsibility for a bad goal can be avoided but it also means there is no opportunity for independent initiatives. As the organisation grows there will be a multi-tier structure of tactical decentralisation.

Just as tactical decentralisation is introduced to deal with the bottlenecks caused by the transition from stage one to stage two a second bottleneck occurs at the fifth and sixth stages when top management can no longer process the information at its disposal and draw up unaided guide lines which are sufficiently good to provide a basis for the continued existence of the organisation. Typically a large organisation operating in a wide range of fields in a rapidly changing environment could find itself in such a position. Alternatively it might occur when a large organisation finds itself under pressure from its various departments to provide them with facilities for expansion but is unable to evaluate the consequences of the proposed expansions for the system as a whole. The answer to the difficulty is again decentralisation but of a different order since at this stage the departments contribute to a reappraisal of the ongoing strategy of the organisation through their proposals for new activities. This strategic decentralisation is no longer a question of resources being allocated and objectives handed down without the department being able to influence these parameters of its own planning but an active attempt to determine both to the advantage of the department [25, 380].

Strategic decentralisation involves trading between the top management and the project leaders in which the former offer to allocate company resources to the projects which promise to put them to the best use in furthering the interests of the organisation as a whole. The set of proposals selected will then form the strategy to be pursued in the future. If good proposals are to be submitted the sectors must know the criteria which top management will use in making the selection; otherwise proposals will only consider sectoral interests. The entire exercise is designed to elicit the active co-operation of sectors in drawing up one or several proposals which not only exploit the special technological potential of the individual sectors and appeal to its personnel but also constitute a set of proposals, which by furthering the common objectives, provide top management with a better basis for developing its strategy.

The limited supply of resources at the disposal of top management will usually mean that a selection must be made from among the proposals submitted. The primary criterion for selection will be the relevance of the proposal for further strategy. The past performance of the sector only plays the minor role of providing an estimate of the confidence top management can place in the competence and realism of the sector making the proposal. The chances of a project being accepted depend ultimately on the relative scarcity of common resources and the attractiveness of competing projects. This means that at the outset no sector is in a position to gauge its chances of success.

It is therefore important to forestall any decision to opt out of the procedure through a fear that the rejection of a proposal will reflect on the qualification of the proposer since such a decision would impoverish the entire selection procedure. This is less likely to happen when the sectors have had some experience with the process and realise that selection or rejection will only occur after an extended trading during which the sectors will form a better picture of the quantity of central resources available and obtain some impression of the opportunities and

resource requirements of other sectors. In the process they will have an opportunity to modify these proposals. Indeed it is most likely they will have to do so since the proposals submitted will only rarely exhaust exactly the resources available and achieve a balance between the sector. In the normal case top management will provide the sectors with further information to guide them in making these adjustments so that the results are optimal for the organisation as a whole. If at this co-ordination stage the information exchanged between the decision levels is limited to a few key figures it will serve both to limit the possibilities of a loss of prestige when a project is rejected and also prevent discussions being sidetracked away from the significant issues by details which it would have been more appropriate to have left in the sector.

To reiterate, the primary purpose of the exercise is to elicit a sufficient number of good alternatives to satisfy the ongoing requirements of the organisation. The selection procedure to be used when these are forthcoming is of secondary importance. Experience has shown that the more actively top management participates in the co-ordinating phase while the proposals are still being formulated the less of a problem the final selection becomes since the co-ordination is designed to secure an ongoing modification of the proposals towards the common objectives.

This brief survey of some aspects of organisational theory serves a few purposes. First it provides a basis for the pragmatic justification of decentralisation. If the analysis is applied to society as a whole, it will be recognised that modern economies have evolved very considerably in the last three centuries. Today few leaders of a state are in a position to say, like the old-fashioned entrepreneur, *L'etat c'est moi!* Society seems to be in a transition between the fifth and sixth stages and the task of studies like the Devlin report seems to be to create structures which will facilitate the transition. As we have seen the sixth stage is characterised by the launching of semi-independent organisations, by the merging of organisations and by the gradual weakening of the awareness of a common bond. There are certainly parallels for all these phenomena in the modern state.

What is not clear to the author is whether the hiving off of central functions is more satisfactory when the decentralisation takes the form of local autonomy rather than that of nationwide semistate bodies. Organisational theory above does not appear to provide the answer which may perhaps be found in political theory. At the pragmatic level it is possible to examine the structure of decentralised planning and form an impression of its efficiency. For example in the next section Hungarian experience will be discussed. Here again the decentralisation takes the form of industrial sectors and firms. Since Sargents case may be interpreted as not being against decentralisation as such but rather against using a geographic criterion for the delegation of responsibility beyond that of physical planning a study of decentralised structures will not resolve the issue. It will, however, add a new dimension to the possibilities of decentralised regional planning.

This study of decentralised structures concentrates on an examination of several models of the information exchange procedure which have been reported in the

literature. The discussion of organisational growth serves a second purpose in providing a description of the real world which is to be reflected in these models. This means that the model must be evaluated for their ability to overcome communication problems and difficulties relating to prestige and conflicts of interest.

In essence what is required is that a systems approach be adopted in which "the organisation is viewed as an adaptive goal-seeking social system with many mutually dependent interest groups integrated into a loose federation which develops mechanisms for avoiding uncertainty, engages in problemistic search, learns by experience and seeks satisfying rather than optimal decisions. The organisation is seen as composed of individuals, informal groups, a formal organisational structure and function sub-systems, all of which must be harmonised into a "steady state" which permits a continuous adjustment of the elements of the system to meet the demands made on the system by the changes in the environment" [25, 378].

As mentioned earlier these models will be discussed in detail in the next part of this paper. This part concludes with a brief description of a planning system which has been widely discussed in recent years and which has many of the characteristics of decentralised planning—the planning, programming and budgeting system.

PPBS

This system, which aims at improved communication through restructuring of large organisations, met its first major test with moderate success⁷ when it was applied to the US Department of Defence in the early sixties. The impetus for this development occurred when operations researchers who had been engaged in improving the design and use of military system joined forces with economists who had developed the parallel and merging discipline of cost-benefit analysis. International interest was further heightened when in 1965 President Lyndon Johnson issued an Executive Order calling on all departments of the Federal Government to adopt and adapt the Pentagon's PPBS techniques in their planning and budget. Since then it has been introduced into official administrations all over the world. An account of the Irish experience is contained in [27].

When official administration was on a much smaller scale than in the last few decades it was usually possible for the decision-maker who approved expenditures to have an intimate knowledge of how the resources allocated would be used to achieve the goals of the organisation. At this stage the practice of presenting the decision-maker with a set of costs divided between expenditure accounts in a budget. The growth of Government expenditure, resulting in an increasing complexity in these accounts, soon put the task of supervision beyond the capabilities of any decision-maker. As a result departments could pursue their own objectives irrespective of their value to the nation and without fear of interference. The rivalry between the three branches of the US military is a classic

7. This assessment by C. J. Hitch the economist mainly responsible for its introduction conflicts with his other view that it has paid some high dividends, see Hitch in Ross [26].

example of this. The method used was to present budget proposals which left the decision-maker without any significant room to make a real choice. He could, of course, adjust one or more accounts in the budget but the results were haphazard, partly because the central decision-makers had no clear picture of the relationship between resources and objectives, and partly because the department had considerable power during the inevitable pruning stage to delete those activities which did least to further its own objectives.

PPBS shifted the emphasis from specifying inputs to specifying objectives to be pursued in a programme (i.e. a set of activities aimed at a precise mission).⁸ The system aims at encouraging the proposer to put forward several alternative programmes each incorporating a cost and effectiveness evaluation and a description of the secondary effects forecast. This ensures the policymaker has adequate information for evaluating and selecting the projects most advantageous to the organisation and a real opportunity for choice which he will use to make a decision in principle on selecting the optimal programme. PPBS does not specify how the selection should be made.

PPBS has attracted the attention of administrators because of its evident success in areas where the problems proved tractable: easy to structure, with definable and acceptable criteria of performance and with empirical data available which are sufficiently reliable and adequate for computation and solution. It has also appealed to them because of its emphasis on structuring the informing process and its distribution of the roles among the different decision-makers in the organisation. Since its declared purpose is to increase the direct influence of the central policymaker it has been resisted by those formerly independent middle managers who are threatened by a corresponding diminution of power on its introduction. The power struggle between the new and old power groups have tended to be decided in favour of the latter since they have the capacity to control the information the policymakers get and use this opportunity to steer them in their selection of programmes. Already several methods to achieve this purpose has been reported in the literature. For these reasons it has been a frequent experience that it is difficult to reach a situation in which the policymaker can exercise his choice. In these circumstances the main contribution of PPBS has been to establish a data base and a bookkeeping system which facilitates the costing of proposal. Certainly this seems to be the Irish experience [27].

A final word about the selection of projects. As mentioned earlier PPBS does not propose any method of selection. Several possibilities might be envisaged.

First: the range of proposals before the policymaker might be quite narrow given the resources at his command and he has no difficulty in identifying those with the characteristics which contribute most effectively to the furtherance of his aims.

Second: he defines his criteria after he has had an opportunity to review the choices open to him.

8. See Ross [25, 385].

Third: the range is wide and selection requires a systematic procedure to ensure his choice is in accordance with his objectives. He chooses a manual heuristic approach in which he is guided by his intuition and experience. This approach is heuristic in the sense that it does not guarantee an optimal result and appeals to those policymakers who wish to maintain a significant initiative in the decision-making process.

Fourth: the range is wide and a mathematical programming approach is adopted. This means that the decision problem must be amenable to an optimising procedure which usually implies that the problem must be simplified to some extent. These last two methods will be discussed in greater detail in the next part of this paper.

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