Ends and Means in Planning*

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The word "planning" is given a bewildering variety of meanings. To some it means socialism. To others the layout and design of cities. To still others regional development schemes like TVA (Tennessee Valley Authority), measures to control the business cycle, or "scientific management" in industry. It would be easy to over emphasize what these activities have in common; their differences are certainly more striking than their similarities. Nevertheless, it may be that there is a method of making decisions which is to some extent common to all these fields and to others as well and that the logical structure of this method can usefully be elaborated as a theory of planning.

Such an attempt leads at once to the action frame of reference, the means-ends schema, and the usual model of rational choice. An actor (who may be a person or an organization) is considered as being oriented towards the attainment of ends. Planning is the process by which he selects a course of action (a set of means) for the attainment of his ends. It is "good" planning if these means are likely to attain the ends or maximize the chances of their attainment. It is by the process of rational choice that the best adaptation of means to ends is likely to be achieved.

In this article we propose first to develop sufficiently these common conceptions to provide a simple theory of planning, one which is essentially a definition. It will be descriptive in conception and will deal with how planning would have to be done in order to achieve the fullest attainment of the ends sought, not how it actually is done (this latter would be a theory of the sociology of planning). We shall then discuss the argument that the procedures of organizations do not in fact even roughly approximate those described in the theoretical model; this argument will be illustrated with brief reference to a particular case which the author and a colleague have described elsewhere.[1] We shall then consider the question of why it is that organizations do so little planning and rational decision-making.

I

The concept of rational choice has been expounded with great rigour and subtlety.[2] Here a much simplified approach will suffice; a rational decision is one made in the following manner: (a) the decision-maker lists all the opportunities for action open to him; (h) he identifies all the con sequences which would follow from the adoption of each of the possible actions; and (c) he selects the action which would he followed by the preferred set of consequences. According to this definition, no choice can ever be perfectly rational, for there are usually a very great - perhaps an infinite - number of

[1] The conceptual scheme and much of the ensuing argument is set forth more elaborately in Martin Meyerson and E. C. Banfield, *Politics, Planning, and the Public Interest*, (Glencoe, Ill.: The Free Press, 1955.

[2] For example, Sidney Schoeffler, *The Failures of Economics*, Cambridge, Mass. Harvard University Press, 1955, Appendix 1

possible actions open to the actor and the consequences of any one of them would ramify ad infinitum. No decision-maker could have the knowledge (or the time!) to evaluate even a small fraction of the actions open to him. It is possible, however, to he more or less systematic in the canvass of alternatives and probable consequences, so that the conception is not an entirely useless one. For practical purposes, a rational decision is one in which alternatives and consequences are considered as fully as the decision-maker, given the time and other resources available to him, can afford to consider them.

A plan (unless we depart very far from customary usage) is a decision with regard to a course of action. A course of action is a sequence of acts which are mutually related as means and are therefore viewed as a unit; it is the unit which is the plan. Planning, then, as defined here, is to be distinguished from what we may call "opportunistic decision-making", which is choosing (rationally or not) actions that are not mutually related as a single means. The rational selection of a course of action, i.e. the making of a rational plan, involves essentially the same procedure as any rational choice: every possible course of action must be listed, all the consequences which would follow from each course must he identified, and that course selected the consequences of which are preferred.

The process by which a plan is rationally made may conveniently he described under four main headings:

1. *Analysis of the situation*. The planner must lay down in prospect every possible course of action which would lead to the attainment of the ends sought. His task is to imagine how the actor may get from where he is to where he wants to be, but his imagination must work within certain conditions which are fixed by the situation, especially by the resources at his disposal (not merely possessions, of course, but legal and other authority, information, time, executive skill, and so on) and by the obstacles in his way. His opportunity area consists of the courses of action "really" open to him, i.e. those which he is not precluded from taking by some limiting condition. It may be, of course, that he has no opportunity area at all - that there is absolutely no way by which the ends sought may be achieved - or that the opportunity area is a very restricted one.

2. *End reduction and elaboration*. An end is an image of a future state of affairs towards which action is oriented. The formulation of the end may be extremely vague and diffuse. If so it may have to be reduced to specific or "operational" terms before it can serve as a criterion of choice in the concrete circumstances. The formulation of the end may be elliptical; in this case the planner must clearly explain the meaning in full. An end may be thought of as having both active and contextual elements. The active elements are those features of the future situation which are actively sought; the contextual are those which, while not actively sought, nevertheless cannot be sacrificed without loss. (The man who burned down his house in order to get the rats out of the cellar ignored a contextual end in his effort to achieve an active one.) The planner's task is to identify and clarify the contextual as well as the active components of the ends. If they are not fully consistent, he must also "order" them, i.e. he must discover the relative value to be attached to each under the various concrete circum stances envisaged in the courses of action or, as an economist would say, prepare an "indifference map".

3. *The design of courses of action*. Courses of action may have a more or a less general character. At the most general level, a developing course of action implies a

description of the "key" actions to be taken or the commitments to be made. These constitute the premises upon which any less general course of action is based, e.g. at the "programme" or "operations" levels. In other words, decisions of a less general character represent choices from among those alternatives which are not precluded by the more general decisions already taken. A developing course of action may be chosen arbitrarily or capriciously and a programmed course of action based upon it may then be selected with elaborate consideration of alternatives and consequences: in such a case there is "functional rationality" but "substantive irrationality".

4. The comparative evaluation of consequences. If the plan is to be rational, all consequences—not merely those intended by the planner—must be taken into account. To a large extent, then, good planning is a search for unintended consequences which might follow from the attainment of the active or contextual ends. The planner cannot pick and choose among the consequences of a given course of action: he must take them all, the unwanted along with the wanted, as a set. Their evaluation therefore must be in terms of the net value attached to each set. If all values could be expressed in terms of a common numerical index (e.g. prices) this would raise no great difficulties. In practice, however, the planner must somehow strike a balance between essentially unlike intangibles. He must decide, for example, whether X amount of damage to a beautiful view is justified by Y amount of increase in driving safety.

II

So far the discussion has been intended to make reasonably clear what is meant by 'rational planning'. If we now take this definition as a yardstick and apply it to organizational behaviour in the real world we are struck at once by two facts: there is very little planning, and there is even less rationality.

In general organizations engage in opportunistic decision-making rather than in planning: rather than laying out a course of action which will lead all the way to the attainment of their ends, they extemporize, meeting each crisis as it arises. In the United States even the largest industries do not look forward more than five or ten years. In government, the American planning horizon is usually even less distant. Moreover, such plans as are made are not the outcome of a careful consideration of alternative courses of action and their probable consequences. As a rule the most important decisions - those constituting the developing course of action - are the result of accident rather than design; they are the unintended outcome of a social process rather than the conscious product of deliberation and calculation. If there is an element of rationality it is 'functional' rather than 'substantive'.

A few years ago the writer and a colleague set out to describe how decisions were made by a large and progressive public body, the Chicago Housing Authority.[3] We knew that the housing agency was one of the best administered in the United States (my colleague, a professor of planning on leave from a university, was in fact its director of planning), and we therefore assumed that if we observed closely enough we could see how a large organization lays out alternative courses of action, evaluates their probable consequences, and so arrives at what is, in the circumstances, a rational decision. We did not expect to find that the model described above was being followed consciously or in detail, of course, but we did suppose that the course followed would roughly approximate it.

[3] Martin Meyerson and E. C. Banfield, op. cit.

What we found was entirely different from what we anticipated. The authority might conceivably have sought to attain its end by one of various courses of action. (It might, for example, have given rental subsidies to enable people with low incomes to buy or rent housing in the market. Or it might have built small housing projects for eventual sale. Or again, following the example of the United Kingdom, it might have built new towns in the hinterland beyond the metropolis.) No major alternative to what it was doing was considered. The developing course of action - to build large slum-clearance projects - was treated as fixed, this course of action had been arrived at cumulatively, so to speak, from a number of unrelated sources: Congress had made certain decisions, the Illinois legislature certain others, the City Council certain others, and so on. Unless the housing authority was to embark upon the unpromising task of persuading all these bodies to change their minds, the development 'plan' had to be taken as settled - settled on the basis of decisions made without regard to each other.

'The process by which a housing programme for Chicago was formulated', my colleague and I wrote, 'resembled somewhat the parlour game in which each player adds a word to a sentence which is passed around the circle of players: the player acts as if the words that are handed to him express some intention (i.e. as if the sentence that comes to him were planned) and he does his part to sustain the illusion.'

The idea of planning, or of rational decision-making, assumes a clear and consistent set of ends. The housing authority, we found, had nothing of the kind. The law expressed the objectives of housing policy in terms so general as to be virtually meaningless and the five unpaid commissioners who exercised supervision over the 'general policy' of the organization never asked themselves exactly what they were trying to accomplish. Had they done so they would doubtless have been perplexed, for the law said nothing about where, or in what manner, they were to discover which ends, or whose ends, the agency was to serve.

The agency had an end-system of a kind, but its ends were, for the most part, vague, implicit and fragmentary. Each of the commissioners - the Catholic, the Jew, the Negro, the businessman, the labour leader - had his own idea of them, or of some of them, and the professional staff had still another idea. There were a good many contradictions among such ends as were generally agreed upon. Some of these contradictions went deep into fundamental questions. For example, the authority wanted to build as much housing as possible for people with low incomes; but it also wanted to avoid furthering the spread of racial segregation. These two objectives were in conflict and there was no way of telling which should be sub-ordinated or to what extent.

Most of the considerations which finally governed the selection of sites and of the type of projects were 'political' rather than 'technical'. A site could not be considered for a project unless it was large enough, unless suitable foundations for high-rise construction could be sunk, and so on. But, once these minimal technical conditions were met, for the most part the remaining considerations were of a very different kind: was the site in the ward of an alderman who would support the project or oppose it?

III

Unfortunately there does not exist a body of case studies which permits of the comparisons that would be interesting—comparisons, say, between large organizations and small, public and private, single-purpose and multi-purpose,

American and other. Despite this lack, some general observations are possible. While the Chicago Housing Authority may be a rather extreme case, there are compelling reasons which militate against planning and rationality on the part of all organizations.

1. Organizations do not lay out courses of action, because the future is highly uncertain. There are very few matters about which reliable predictions can be made for more than five years ahead. City planners, for example, can know very little about certain key variables with which they must deal: how many children, for example, will require schools or play grounds ten years hence? Recent experience has shown how little even demographic predictions can be trusted. The Chicago Housing Authority could not possibly have anticipated before the war the problems it would have to face after it. Some people, knowing that they cannot anticipate the future but feeling that they ought to try, resolve the conflict by making plans and storing them away where they will be forgotten.

Not only do the conditions within which the planner works change rapidly, but so also do the ends for which he is planning. A public housing programme which is begun for slum clearance may, before the buildings are occupied, be primarily an instrument for the reform of race relations. It need hardly be said that the means most appropriate to one end are not likely to be most appropriate to the other.

When an organization is engaged in a game of strategy with an opponent the element of change is likely to be of special importance. The opponent tries to force change upon the organization; the organization's actions must then be a series of counter-measures. In the nature of the case these cannot be planned. To a considerable extent all organizations—and not especially those engaged in 'competitive' activities—are constantly responding to change which others are endeavouring to impose upon them.

2. When it is possible to decide upon a course of action well in advance it is likely to be imprudent to do so, or at least to do so publicly (as, of course, a public agency ordinarily must). For to advertise in advance the actions that are to be taken is to invite opposition to them and to give the opposition a great advantage. This is a principle which many city planners have learned to their cost.

3. Organizations, especially public ones, do not consider fundamental alternatives because usually there are circumstances which preclude them, at least in the short run, from doing anything very different from what they are already doing. Some of these circumstances may be the result of choices which the organization has already made; others may be externally imposed. The housing authority, for example, could not cease building its own housing projects and begin giving cash subsidies to private builders: public opinion favoured projects rather than subsidies and the agency had recruited and trained a staff which was project minded and not subsidy minded. The organization's commitments, and often other obstacles as well, may be liquidated over time and a new course of action initiated. But the liquidation is expensive: it may be cheaper to retain for a while an obsolescent course of action than to incur the costs of instituting a new one. If the organization could see far enough into the future it might liquidate its commitments gradually, thus making an economical transition to a new course of action. As a rule, however, it cannot anticipate very clearly or surely what it will want to do a few years hence. Moreover, if it acknowledges its doubt about the wisdom of what it is presently doing it risks giving aid and comfort to its enemies and damaging its own morale.

4. Organizations have a decided preference for present rather than future effects. One might think that public organizations, at least, would be more willing than are persons to postpone satisfactions—that, in the language of economics, they would discount the future less heavily. They do not seem to, however, and this is another reason why they do not plan ahead.

5. The reason they discount the future so heavily is, perhaps, that they must continually be preoccupied with the present necessity of maintaining what Barnard has called the "economy of incentives". That is to say, the heads of the organization are constantly under the necessity of devising a scheme of incentives by means of which they can elicit the contributions of activity required to keep it going. Any scheme of incentives is inherently unstable. It must he continually rebuilt according to the needs of the moment. "Indeed, it is so delicate and complex", says Barnard, "that rarely if ever, is the scheme of incentives determinable in advance of application."[4].

6. The end of organizational maintenance—of keeping the organization going for the sake of keeping it going—is usually more important than any substantive end. The salmon perishes in order to give birth to its young. Organizations, however, are not like salmon; they much prefer sterility to death. Given the supremacy of the end of organizational maintenance, opportunistic decision-making rather than planning is called for. Indeed, from the standpoint of maintenance the organization may do well to make as few long-term commitments as possible. Advantage may lie in flexibility.

7. The end-system of an organization is rarely, if ever, a clear and coherent picture of a desirable future toward which action is to be directed. Usually it is a set of vague platitudes and pious cant, the function of which is to justify the existence of the organization in the eyes of its members and of outsiders. The stated ends are propaganda, not criteria to guide action. What John Dewey said in *Human Nature and Conduct* of a person applies as well to an organization: it does not shoot in order to hit a target; it sets up a target in order to facilitate the act of shooting.

8. It follows that serious reflection on the ends of the organization, and especially any attempt to state ends in precise and realistic terms, is likely to be destructive to the organization. To unify and to stir the spirit they must be stated in vague and high-sounding terms. When they are reduced to their real content they lose their magic and, worse, they become controversial. Had it attempted to formulate a set of ends relating to racial policy the Chicago Housing Authority would certainly have destroyed itself at once.

9. It follows also that organizations do not as a rule attempt to maximize the attainment of their ends or (to say the same thing in different words) to use resources efficiently. If the ultimate end is the maintenance of the organization, how indeed is "maximization" possible? The organization may endeavour to store up the largest possible quantity of reserves of a kind which may be used for its maintenance at a later time (e.g. to accumulate "good will", or the wherewithal to procure it, in advance of need). In this case there is a quantity—utility—which is being maximized. But if substantive ends are regarded, Herbert A. Simon is right in saying that organizations "satisfice" (i.e. look for a course of action that is satisfactory or good enough) rather

[4] Chester I. Barnard, *The Function of the Executive*, Cambridge, Mass.: Harvard University Press, 1938, p. 158.

than maximise. [5]

10. Laying out courses of action, clarifying ends, and evaluating alternatives are costly procedures which take time and money and cannot he carried out without the active participation of the chief executives. How ever great may be the resulting gain to the organization, full attention to the present crisis—assuming the supreme importance of organizational maintenance—is likely to result in far greater gain. Paradoxical as it may seem, if all costs are taken into account it may be rational to devote very little attention to alternatives and their consequences.[6]

11. Rationality, as defined above, is less likely to he found in public than in private organizations. One reason for this is that the public agency's ends often reflect compromise among essentially incompatible interests. This is not an accidental or occasional feature of public organization in a democracy. Where conflict exists and every conflicting element has to be given its due, it is almost inevitable that there be an end-system which 'rides madly off in all directions'.

12. Whether or not conflict is built into the end-system, the end-systems of public organizations are vastly more complex than those of private ones. Contextual ends, in particular, are far more numerous. A private builder, for example, does not concern himself with the effect of high-rise construction on birth rates and family life, but a public one must. The more complex the end-system of the organization, the harder to devise courses of action, the more consequences must he evaluated, and the greater the likelihood that some ends will he sacrificed in the endeavour to attain others. That rationality, in the sense of the definition, becomes more difficult to achieve is of course not an argument against public enterprise: perhaps private enterprise does not take enough ends into consideration.

IV

The reader may by now have come to the conclusion that since organizations are so little given to the rational adaptation of means to ends nothing is to be gained from constructing such a model of planning as that set forth above.

Certainly this would be the case if one's interest were mainly sociological. For the study of how organizations actually behave an altogether different conceptual scheme would probably be most rewarding.

But if the interest is normative—if it is in describing how organizations would have to act in order to be in some sense more effective or efficient— it is hard to see how reference to such a model can be avoided or, indeed, why its lack of realism should be considered a defect. And students of administration are, after all, chiefly interested in describing organization only so that they may improve it. Their problem, then, is to

[5] See the discussion of this in the preface to the second edition of *Administrative Behaviour*, New York: Macmillan, 1957, pp. xxv-xxv and the references given there to Simon's more technical writings. Simon says (p. xxiv) that human beings "satisfice" because "the do not have the wit to maximize". This does not seem to be quite the right way of putting it. If the trouble is merely that they lack wit to make the necessary calculations, then they are trying to maximize and failing or, in another view of the matter, succeeding given their limitations. The point being made here, at any rate, is not that organizations lack wit but that they lack will to maximize; in other words, it is the nature of their end-system rather than their ability to compute which is here in question.

[6] See Sidney Schoeffler, op. cit.

find a theoretical model which, without being so far removed from reality as to be a mere plaything, is yet far enough removed to suggest how organizations may be made to function better.

It would he a contribution to the development of a suitable theory if there were a body of detailed case studies, all of them built on a common conceptual scheme so as to allow of significant analytical comparisons. It would be particularly helpful to have a full account of the workings of an organization which is so placed as to be able to encourage the fullest development of planning and rational choice: one, let us say, with a few clearly defined purposes, free of political and other conflict, blessed with a large opportunity area, and headed by persons who make a realistic attempt to be rational. How fully and clearly would such an organization explain and define its ends? How often and how elaborately would it consider alternative courses of action at the various levels of generality? How exhaustively would it inquire into probable consequences, the unintended as well as the intended? Would it perhaps carry planning and rationality beyond the point where marginal cost equals marginal return? And would it 'maximize' or, to use Herbert Simon's term, would it 'satisfice'?