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Bureaucrats, Budgets and the Growth of the State: Reconstructing an Instrumental Model

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This article forms part of a longer-term project dealing with the impact of public choice theories in political science.[1] The focus here is on economic models of bureaucracy, which despite their increasing theoretical significance and influence on practical politics have heretofore been little analysed, except by their exponents. I have argued elsewhere[2] that amongst existing public choice accounts there are two seminal works, Antony Downs's pluralist treatment in *Inside Bureaucracy* and William Niskanen's new right thesis in *Bureaucracy and Representative Government.*[3] The central innovation of economic approaches is their stress on rational officials' attachment to budget maximization strategies. In Downs's case this is a finite maximand limited by bureaucrats' conservatism and other motivations. But in Niskanen's case budget maximization is an open-ended process, constrained only by external limits on agencies' abilities to push up their budgets. None the less, despite their disparate approaches and conclusions, both these books share four failings common to almost all other public choice work in the field:

(1) They operate with vague and ill-defined definitions of bureaucrats' utility functions.
(2) They assume that all bureaucracies are hierarchical line agencies.

* Department of Government, London School of Economics and Political Science. Hugh Ward, Spencer Zifcak, Brendan O'Leary, George Jones and other LSE colleagues, and members of the LSE Graduate Seminar on Public Policy in 1982–4, helped me to clarify these ideas. As a paper, this article was given in a more extended form to Politics staff seminars at the Universities of Bristol, Warwick, Glasgow and Edinburgh, and to the Public Sector Budgeting Conference at the University of Manchester, 18 May 1984. I would like to thank numerous individual commentators from all these sessions whose suggestions I have gratefully embodied here.

[1] See Patrick Dunleavy and Hugh Ward, 'Exogenous Voter Preferences and Parties with State Power: Some Internal Problems of Economic Theories of Party Competition', *British Journal of Political Science*, XI (1981), 350–80.

[2] P. Dunleavy, 'Bureaucrats, Budgets and the Growth of the State: Part I, Existing Public Choice Approaches', unpublished paper, available from the author at LSE.

[3] A. Downs, *Inside Bureaucracy* (New York: Little, Brown, 1967); W. Niskanen, *Bureaucracy and Representative Government* (New York: Aldine-Atherton, 1973). Other less important work in the genre includes: L. von Mises, *Bureaucracy* (New Haven: Yale University Press, 1944); G. Tullock, *The Politics of Bureaucracy* (Washington, D.C.: Public Affairs Press, 1965); J. Buchanan *et al.*, *The Economics of Politics* (London: Institute for Economic Affairs, 1978); A. Breton, *The Economic Theory of Representative Government* (Chicago: Aldine, 1974), Chap. 9; J. Migue and G. Berlanger, 'Towards a General Theory of Managerial Discretion', *Public Choice*, XVII (1974), 27–43; T. E. Borcherding, ed., *Budgets and Bureaucrats* (Durham, North Carolina: Duke University Press, 1977).

(3) They have no valid way of accounting for variations in bureaucratic motivations within a public-choice methodology.
(4) They treat systems of bureaus as if they behaved in the same way as single bureaus.

Starting from the core assumptions of public choice models, this article outlines an alternative analysis of bureaucratic behaviour, one in which budget maximization is a more remote or unlikely influence upon agency policies. The framework for this reconstruction includes the following assumptions (which I believe capture the essentials of an economic approach to the subject). Agency policies are set by bureaucrats interacting with their sponsor body. Apart from general information from citizens about bureau behaviour, the sponsor largely depends upon government agencies for information about the costs and value of producing in given ranges of output. Bureaus negotiate an annual budget with their sponsor for a whole block of output. Bureaucrats are essentially instrumental, maximizing their personal utilities when making official decisions. By this I mean that they are concerned exclusively with the satisfaction of self-regarding, relatively hard-edged preferences. A bureau's aggregate policy behaviour is set by some combination of individual decisions made by its officials, although the result of this process may be an outcome desired by no bureau member. Within broad limits, officials' influence on bureau policy is always extensively rank structured, with those near the top of bureaus being most influential.

This article develops six main propositions in opposition to existing public-choice models:

(1) Collective action problems exist within bureaucracies and have an important influence upon overall bureau behaviour.
(2) Bureaucrats' utilities are normally associated with only a part of the overall budget under an agency's control.
(3) There are sharp differences between different kinds of agencies in the extent to which officials' welfare is positively associated with budget increments.
(4) Bureaucrats in policy positions will only maximize budgets up to an internal optimal level, defined by the intersection of curves showing their discounted marginal utility pay-offs from budget increments and the marginal costs they incur in advocating further expenditure.
(5) Utility-maximizing bureaucrats are empirically more likely to be orientated towards the intrinsic character of their work tasks than to pecuniary or near-pecuniary considerations. Their strategies for improving work-related utilities hence focus not on budget maximization but on reshaping their bureaus to bring them into a closer conformity with an ideal form.
(6) If bureaucrats maximize budgets then state growth should have produced a progressive expansion of large line bureaucracies – in fact, a rare pattern in liberal democracies. But if bureaucrats pursue bureau-shaping strategies, this would create a much more fragmented state, dominated

by elite central departments without line responsibilities. A great deal of state growth fits this pattern.

1. COLLECTIVE ACTION PROBLEMS

One of the more critical hidden assumptions of existing public choice theories of bureaucracy is that government agencies are extremely hierarchical bodies. In Niskanen's case the assumption is that agencies with a separate identifiable budget are run *completely* by their top official, who is in his terms the only 'bureaucrat'. Everyone else is reduced to the status of 'employee'.[4] Little wonder then that Niskanen's account predicts over-supply behaviour, for in many ways budget maximization produces benefits which are private goods for the hegemonic top official. As soon as we relax this assumption to look at situations closer to actual bureaucracies, it is clear that officials may confront difficulties in organizing to achieve common objectives. In British central government, for example, departments may have up to eighty staff at Assistant Secretary level or above, which would be generally acknowledged as an influential policy-making rank.[5] We clearly need to move away from extreme hierarchic assumptions about how agencies are run. We should also recognize a point given little emphasis in existing accounts, namely that officials pursuing their own interests confront a wide range of options, among which a (collective) strategy of budget maximization is only one.

To take these points in reverse order, budget-maximization in an agency were no one official has complete hegemony increasingly takes on the character of a collective rather than an individual good. It lies at the 'public good' end of a spectrum of utility maximizing strategies which is shown in Figure 1.

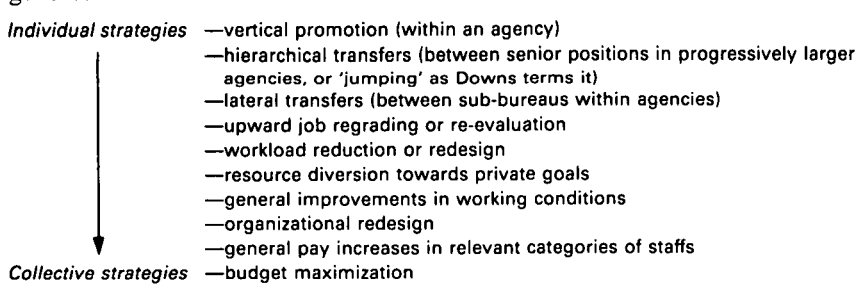

Fig. 1. The spectrum of utility-maximizing strategies

[4] Niskanen, *Bureaucracy and Representative Government*, p. 22. In his more popular exposition, *Bureaucracy: Servant or Master?* (London: Institute for Economic Affairs, 1973), Niskanen admits (p. 11) that he sometimes uses the term in this specialized sense, and sometimes just to mean 'civil servant'. Readers must presumably guess which is which, for the distinction is buried thereafter.

[5] M. Lee, 'Whitehall and Retrenchment', in C. Hood and M. Wright, eds, *Big Government in Hard Times* (London: Martin Robertson, 1981), p. 41, shows that in 1980 there were over 800 people in the top three ranks, spread across forty-seven departments. For more detailed figures, see A. Dunsire and C. Hood, *Bureaumetrics* (Farnborough, Hants: Gower, 1980).

Individual utility-maximizing strategies are obviously the most direct ways in which a given bureaucrat can increase her own welfare, because the effort expended in pursuit of them will (if successful) generate a pay-off which does not need to be shared with others. By contrast, the hallmark of collective strategies is that the connection between the achievement of a given public-goods outcome and the individual bureaucrat's welfare becomes more remote. In particular, a given budget increase for an agency will have rather indeterminate implications for most of its staff and officials, even within policy-making ranks. Consequently we should expect bureaucrats to put their efforts primarily into individual utility-maximizing strategies, implying that their energies will only be displaced into the pursuit of collective goods as other options are foreclosed or become fully exploited. It is commonly argued in occupational sociology, for example, that manual workers put more emphasis on collective forms of pay bargaining than non-manual staffs do because for them individual strategies of promotion, career advancement, or renegotiation of their personal terms of work with employers offer relatively little prospect of significantly improving their situation.[6] Similarly we might expect that within a government agency the opportunities for individual welfare maximization will be fewest in the bottom ranks of bureaucrats. Hence collective strategies for improving officials' welfare may be resorted to more readily. But in the policy-making ranks at the top of bureaus, the scope for exploiting individual strategies will be much greater and the propensity to resort to collective strategies correspondingly reduced.

It could be objected, however, that in real life budget increments are by no means a diffuse or shared benefit. Instead of dealing with the abstract marginal increment to the bureau's global budget discussed by public choice theory, we should perhaps focus attention upon much more specific or 'tagged' funding increases. But once we move away from a whole-bureau perspective focusing on the overall budget, not only does any model necessarily become much more complex, but it also becomes highly improbable that officials in general will see their interests as advanced by all (tagged) budget increases. Instead they will favour only those which will positively affect their own position. They are quite likely to be indifferent towards, or to oppose, budget increments going to other sections of their own organization. Officials in stagnant or slow-growing sections of an agency could easily face severe welfare losses because of budget increases in more dynamic sections. Not only could they experience 'relative deprivation', but in more concrete terms they are likely to see the balance of influence and prestige within the agency shift towards the growth areas at their expense. Consequently an account of how officials behave with tagged rather than global budget increases needs to be constructed in terms of the emergence of minimum winning coalitions for certain types of budgetary expansion rather than

[6] See, for example, Colin Crouch, *Trade Unions: The Logic of Collective Action* (London: Fontana, 1982), pp. 67–74. Crouch's analysis of trade unions resembles at some points the approach used here.

others. It also requires a developed apparatus for describing the degree of sectionalization in bureaus.[7] For these reasons we shall stick to an analysis of generalized budget increases or decreases while recognizing explicitly that this is a simplifying assumption which should ideally be superseded at a later stage by a more complex account.

The second point which needs to be recognized is that although bureaus are rank-structured environments there is very little likelihood that they are ever completely dominated by one individual or even a small leadership group with cohesive interests. As Downs concisely put it: 'The concept of bureaus as monolithic structures is largely a myth'.[8] Hence the realization of collective benefits for bureau members is likely to require concerted action by a number of officials which may be quite large (especially in hostile or turbulent environmental conditions). To see how the rank-structured nature of bureaucracy changes the collective action problems involved, consider the basic equation which an individual official must confront in deciding whether or not to press for a (generalized) budget increase:

—the net utility derived from a marginal budget increment (i.e. the benefits received after allowing for any costs associated with budgetary growth)
—discounted by the probability that the individual official's advocacy will be decisive in securing the budget increase
—must be greater than
—the costs of advocating the budget increment.[9]

Each of these terms will be influenced by the rank of the official in question, roughly along the lines shown by the charts in Figure 2 where rank is shown along the horizontal dimension in terms of 'top', 'middle' and 'bottom' positions.

The utility pay offs from generalized budgetary increments are likely to be distributed more or less inversely to rank positions. I assume that those at the bottom gain most, while those at the top gain least. In fact, really large benefits may be concentrated on peripheral staffs – those with no job security, people acting as contractual consultants, spin-off staffs or those on part-time contracts. Certainly these are the groups with most to lose from any budget

[7] For interesting comments on the interchangeability of coalition theory and collective goods models, see R. Abrams, *Foundations of Political Analysis* (New York: Columbia University Press, 1980), pp. 329–46.

[8] Downs, *Inside Bureaucracy*, p. 133. Downs continues: 'If bureaus were really monolithic, control over nearly all their activities would be concentrated in the hands of their topmost officials. However, these officials must always delegate some of their powers to subordinates'.

[9] This equation in the same general terms was, of course, specified by A. Downs, *An Economic Theory of Democracy* (New York: Harper and Row, 1957) as the calculus facing citizens deciding whether to vote in a democracy, and applied to the analysis of why people join interest groups by Mancur Olson, Jr. in *The Logic of Collective Action* (Cambridge, Mass: Harvard University Press, 1965). In each case the format is that the net utility gained from action, discounted by the probability of the action influencing the eventual outcome, must exceed the (non-discounted) costs incurred in taking the action.

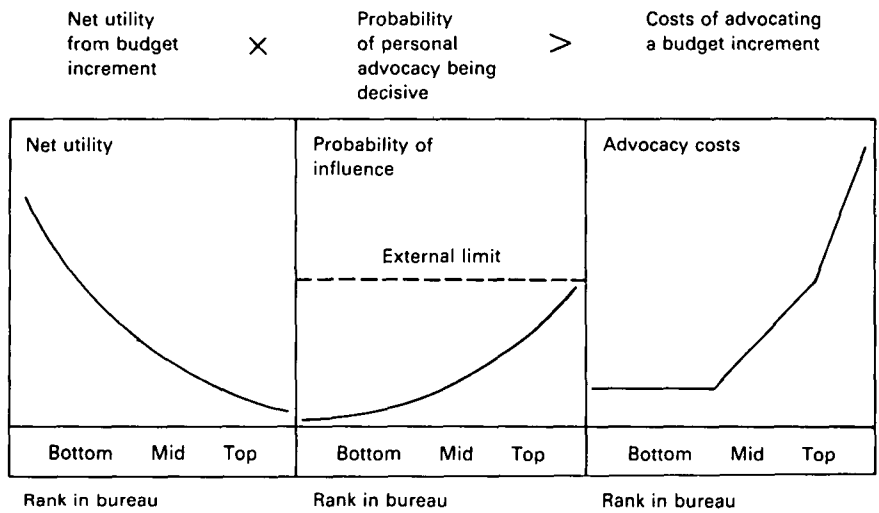

Fig. 2. The distribution of net utilities, influence probabilities and advocacy costs within a hypothetical bureau

reduction. In most bureaucratic organizations, peripheral staffs are a significant (if largely unstudied) component. For example, in the United States where federal government employment is subject to strict manpower limits, estimates suggest that there are between 5 and 25 per cent extra staff employed in this way, who never show up in returns to Congress.[10]

The probability that an individual's advocacy of a budget increment will be decisive obviously increases dramatically with rank. In particular, part-time, hived-off, and lower rank officials may have virtually negligible individual impact upon their agency's policy. But within the policy-making ranks we should expect to see the probability of influence rising sharply with rank position, reaching a threshold of maximum influence which will be environmentally determined. Where the agency confronts a favourable environment the probability of securing its advocated policy may approximate 1. But this is likely to be an exceptional situation, contrary to Niskanen's claim that it is the

[10] See J. Bennet and M. Johnston, *The Political Economy of Federal Government Growth* (College Station, Texas: Center for Education and Research in Free Enterprise, Texas A & M University, 1980), pp. 38–41. The problem with widely varying estimates here is in distinguishing between contracted-in staffs employed by the agency directly, and the much more massive phenomenon of contracted-out services being delivered by employees of firms or other agencies. We are concerned here with contracting in. Of course, contracted-out work often includes substantial staffing implications as part of larger contracts for products or service delivery. But since contracted-out staffs remain directly employed by other bodies, and since they often cannot even be sensibly construed as falling within the public sector, this kind of indirect employment is better analysed using the 'contract agency' classification of bureau situations in the typology developed below.

normal position facing bureaus.[11] Where an agency confronts a hostile or turbulent environment then even the most influential official in setting its internal policies will have a relatively low chance of seeing agency policies approved by its sponsor. If the distribution of influence is as shown here then we can expect changes in environmental hostility or favourability towards the agency to have a major impact upon top bureaucrats' behaviour, by bringing dramatic changes in the way they discount their utility pay-offs from budget increments. But such external changes will have much less effect upon the attitudes of lower staffs, whose probable influence is small even in a favourable environment.[12]

Finally, we should expect the costs of advocating a budget increment to be significantly rank-structured as well. Bottom rank personnel will have few opportunities to influence bureau policy directly. Their contribution may be confined quite largely to supporting their union or other collective organization in making a case for more spending. But in the middle ranks of the organization, the opportunities for actively promoting budgetary expansion are greater and the personal costs of such advocacy begin to rise steeply with rank. For top officials a budgetary increase (over and above normal or technical incremental adjustments for inflation, etc.) typically involves preparing special papers, attending difficult meetings, cultivating external allies and contacts, responding to sponsor criticisms or investigations, and justifying the bureau's case in public. The empirical literature on budget-making strongly suggests that the vast bulk of all budget negotiations and controversy concentrates on marginal increments or decrements to a largely unanalysed 'base budget'.[13] So the advocacy costs associated with departures from the base budget seem likely to be substantial in more senior ranks.

If the distribution of utilities, influence probabilities and advocacy costs is along the lines set out here it is possible to detect a central paradox that is likely to confront bureaucracies. While budget maximization would probably produce overall benefits for bureau members, it is also likely that officials will tend to free ride on advocating higher funding, for different reasons. Those at the bottom of the rank structure stand to gain most from an increased budget, but they discount these gains by the very low probability that their personal advocacy of any increase will be decisive. Hence even though their advocacy costs are small, it is rather unlikely that low ranking officials with permanent or secure jobs will feel it is worth their while to press for increased

[11] R. Goodin, 'Rational Bureaucrats and Rational Politicians in Washington and Whitehall', *Public Administration*, LX (1982), 23–41.

[12] Top bureaucrats are also likely to be much better informed about changes in the external environment than lower ranking officials, so that we should expect to see their reactions adapting much more quickly and accurately to external changes. In contrast, lower officials' behaviour may well perpetuate anachronistic attitudes into a new period, remaining conservative in their behaviour in environments favourable for organizational growth, but also carrying over a previously defined growth orientation into an era of cutback management.

[13] See P. Jackson, *The Political Economy of Bureaucracy* (Oxford: Phillip Allen, 1982), Chap. 5 *passim* for a good review.

spending. Officials at the top of the bureau by contrast have a significant probability of influencing outcomes, but they stand to gain least from budgetary expansion and confront high advocacy costs in exercising their influence. They are particularly unlikely to incur these costs in a hostile or turbulent environment where the overall likelihood of the agency being successful is low or unpredictable.

Of course, much will depend on the cardinal values which we might be able to ascribe to the different components given in the equation above. By itself the analysis given here does not demonstrate that a collective action problem will *necessarily* confront budget maximizing bureaucrats.[14] But if we flesh out this account with some intuitively realistic values or examples, it seems likely that collective action problems will be the norm rather than the exception – especially when we consider that rational bureaucrats will only become involved in collective (rather than individual) attempts to improve their welfare as a last resort.

2. BUDGET MAXIMIZATION

Pushing up the budget as a possible goal of utility-seeking bureaucrats is a more complicated concept than economic models have so far acknowledged. I noted above that attention is focused on generalized budgetary expansion rather than tagged increases. But there are still important distinctions which need to be made within this general focus between different kinds of budget.[15] We may distinguish at least three possible meanings of 'budget'.

(1) An agency's *programme budget* (PB) consists of all the expenditure over which it exercises supervision or control, even if large parts of this total are passed on to other public sector agencies for final implementation. For example, the programme budget of the Department of Health and Social Security (DHSS) in Britain consists of all public expenditure on health care, personal social services and social security – even though health care funds are passed on to NHS authorities and personal social services funds go to local authorities rather than being spent by DHSS staff.

(2) An agency's *bureau budget* (BB) consists of those parts of its programme budget for which it is completely or solely responsible to the sponsor body. Thus the BB is the funding which goes into programmes directly controlled by the bureau's own decisions. This implies that so long as the funding stays inside the public sector, policy is being implemented by the bureau's own staff, without the involvement of separate or subordinate

[14] I would like to thank Jeremy Waldron of Edinburgh University for helping to clarify the issues involved here.

[15] Both Downs and Niskanen shift between these meanings without apparently perceiving their different implications. Niskanen in particular explains agency behaviour quite largely in terms where 'budget' equals 'bureau budget'. But in his vaguer accounts of how budget maximization creates state growth, 'budget' normally equals 'programme budget'.

agencies. For example, the bureau budget of the DHSS covers its major direct function, the social security system, plus the administrative costs involved in its supervising the health care and personal social service systems.

(3) An agency's *core budget* (CB) consists of those parts of its bureau budget which are spent on maintaining its own operations, rather than going outside the agency as contracts to private firms, or as services or transfer payments to citizens, clients or external groups who are the beneficiaries of the agency's activities. For example, the DHSS core budget includes only those revenue costs which are spent on its own staff, their accommodation and their day-to-day activities. It includes the money spent on administering the social security system. But it excludes the money which is actually transferred by this system to pensioners, people on supplementary benefits, or those receiving other state aid.

A diagrammatic classification of the most frequently occurring elements in public expenditure is shown in Figure 3. The classification suggested is reasonably straightforward. Capital spending is included in the bureau budget but not the core budget since contracts for this are assumed to go to private construction firms or other contractors. But contracts for revenue items associated with the basic administration of the bureau (for example, rents paid to private landlords or purchasing of office equipment) are included in the core budget.

The point of making these distinctions between types of budget is to bring out the variable extent to which the personal utilities of bureau members are likely to be involved in the expansion of different elements of the overall budget. Table 1 shows a rough and ready list of the reasons why budget maximization has been seen by public choice writers as improving bureaucrats' welfare. Codifying some of the comments made in section 1 about the salience of different utility considerations for top, middle and low rank bureaucrats, an interesting picture emerges.[16] The most general and the most basic utility gains from increasing budgets are all associated with the core budget. And these are also the utility gains which have most importance for bottom and middle ranking officials. By contrast the more general and diffuse utility gains from budgetary expansion, and those with most importance for top ranking officials, are primarily linked to the bureau budget. In this group of pay-offs only facilitating non-conflictual management of the bureau can be regarded as associated primarily with the core budget. And only an agency's

[16] For the sake of argument I have assumed in constructing Table 1 that all these net utility aspects show gains with budget increases. In practice, it seems unlikely that this will be the case. For example, budgetary expansion may keep the peace inside agencies but simultaneously increase bureau inertia. Similarly, increasing bureau budgets may allow more agency patronage over contractors; but enhanced pressure for outputs may also increase an agency's dependence on external firms. P. Dunleavy, *The Politics of Mass Housing in Britain, 1945–75* (Oxford: Clarendon Press, 1981) documents exactly this kind of power-dependency switchback between public housing agencies and construction corporations in Britain's post-war housing policy.

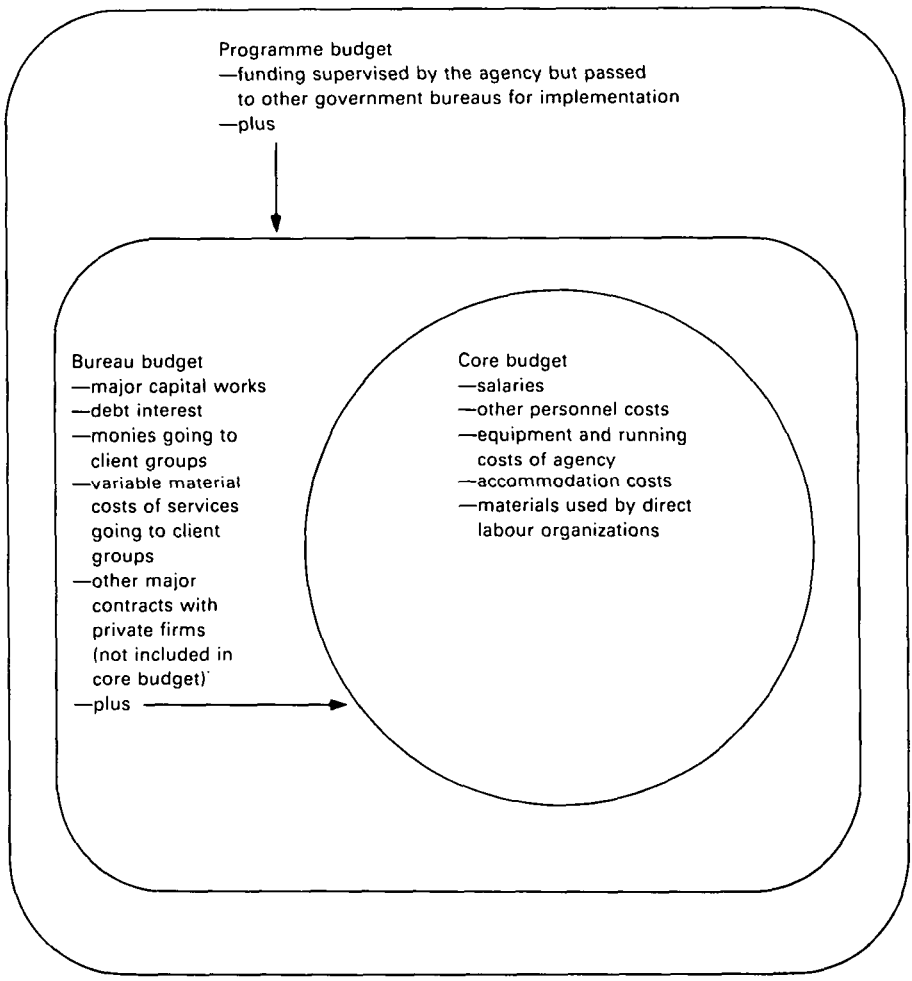

Fig. 3. Components of programme, bureau and core budgets

patronage power is positively and directly associated with the expansion of the programme budget. An enlarged programme budget will be useful also in allowing top management to build up slack resources to respond to crises or unexpected calls for action. But since the programme budget may have to be largely allocated to other agencies, top officials gain maximum flexibility from retaining slack under their own direct control, in the bureau budget.

Turning to the obverse side of the utility gains from budgetary expansion, namely, the costs associated with advocating increased funding, it is apparent that there is an important asymmetry.[17] While the benefits of budgetary expansion are associated mainly with the core budget or the bureau

[17] Advocacy costs of promoting budget maximization (on the right-hand side of bureaucrats' choice equation) need to be clearly distinguished from potential disutilities of budgetary expansion (which are incorporated into the net utility calculation on the left-hand side of the equation).

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TABLE 1 *Welfare Gains for Bureaucrats from Budget Maximization*

Type of welfare gain	Associated budget	Salience for ranks Bottom	Middle	Top
Improving job security	Core budget	++	+	o
Expanding career prospects	Core	+	++	o
Increased demand for skills and labour	Core	+	++	o
Triggering upward regrading	Core	o	++	+
Reducing conflict in bureau management	Core budget	o	+	++
Boosting bureau prestige	Bureau budget	o	+	++
Improved relations with clients or contractors	Bureau budget	o	+	++
'Slack' creation to cope in crises	Bureau/programme budgets	o	+	++
Increased patronage powers	Programme budget	o	o	++

Key: high salience ++; medium salience +; low salience o.

budget, the costs of advocacy (in terms of time spent, effort and resources required, increased visibility to the sponsor and the public, and level of external criticism received) are all likely to be closely associated with the programme budget. If education costs in local education authorities rise sharply, the burden of defending their record in Cabinet and Parliament falls quite largely on the Department of Education and Science, especially in the annual round of negotiations justifying public expenditure increases. And within a given level of environmental hostility, a rise in an agency's programme budget for which it was not responsible has the effect of squeezing out its chances of pushing through increases in its own core budget or bureau budget. Similarly it is on programme budget performance that sponsoring bodies and citizens in general base their judgements about the overall funding levels appropriate in particular policy areas. It is little use to the DES that its own operations are efficiently run if the legislature judges what level of funding to put into education, and into the DES's own core budget or bureau budget, by reference to how well schools are doing their job. Hence there is a key asymmetry in the equation given in Figure 2, namely that net utility gains attach primarily to core budgets or bureau budgets, while advocacy costs are always attached to the programme budget of an agency.

The implications of this imbalance for individual bureaucrats' behaviour will clearly depend crucially on the extent to which programme, bureau and core budgets are differentiated from each other in particular agencies.

3. VARIATIONS IN BUREAUCRATIC BEHAVIOUR PATTERNS

Agencies behave in different ways not because officials have different types of personality (as Downs argued), but because the structure of utility gains and

advocacy costs associated with budgetary expansion varies systematically with different kinds of agency. We can distinguish the following sorts of agencies:

Control agencies (CLAs) allocate budgets to and supervise the activities of other public sector organizations while having few or no major responsibilities for implementation or service delivery of their own. The Department of Education and Science is a fairly pure example of this type.
Regulatory agencies (RAs) control or supervise the operations of other agencies, private sector firms, or the general public in some respect, using licensing systems, reporting controls, performance standards or some other system of regulation. RAs do not directly produce material outputs but rather police other firms' and agencies' production activities. RA 'outputs' are thus rather intangible 'goods' involving the non-commission of offences and the non-occurrence of unacceptable outcomes. The Alkali Inspectorate is a fair example of this type. RAs also often use subsidies in their efforts to control or direct private sector activities into a preferred pattern of development.
Transfer agencies (TAs) administer general transfer payments or subsidies to individuals or to client interest groups. The social security system and the Ministry of Agriculture farm support functions are both examples of this sort of agency.
Contracts agencies (CTAs) primarily allocate work on a contract basis to private sector firms or to commercially-run public sector agencies such as public corporations. Contract agencies' own activity is largely confined to conducting research and development into projects, drawing up specifications, inviting tenders and supervising contracts, with the actual production of physical outputs carried out by the contractors. Defence procurement is a good example of a CTA function.
Delivery agencies (DAs) directly undertake the production of goods and services and their delivery to citizens. Hence implementation is carried out directly by DA employees – no doubt often working in complex networks of sub-bureaus, but with a clear line of authority or responsibility from top bureau officials to those at the grass roots. Local authority schools provision in the United Kingdom is a good example of a DA set-up.

This typology is not exhaustive, since it makes no mention of taxing agencies or those supplying commercial services.[18] But the types distinguished here are very common and cover the bulk of public service organizations in most liberal democracies. The usefulness of the typology rests in large part on its close connection with the distinctions made in Section 2 between programme, bureau and core budgets. Four criteria seem especially useful in distinguishing these agency types from each other:

[18] Taxing agencies might be regarded as a sub-type of regulatory agencies, but they are distinctive in raising revenues as a result of their activities, making it difficult to apply simple demand/cost analysis to them. Mixed agency types with a commercial role similarly involve complex modelling, although Niskanen drops a few hints about them.

—the overall scale or size of an agency's programme budget, which obviously needs to be defined relative to the spatial scale of its operations and the scale of rival or parallel agencies;
—the importance of its bureau budget in the overall programme budget (the BB/PB ratio);
—the importance of the agency's core budget in its programme budget (the CB/PB ratio); and
—the importance of the agency's core budget in its bureau budget (the CB/BB ratio).

If we also graph the growth of the bureau budget and of the core budget in cash terms against the growth of the programme budget in cash terms for these agency types, we obtain the plots and table entries shown in Figure 4.

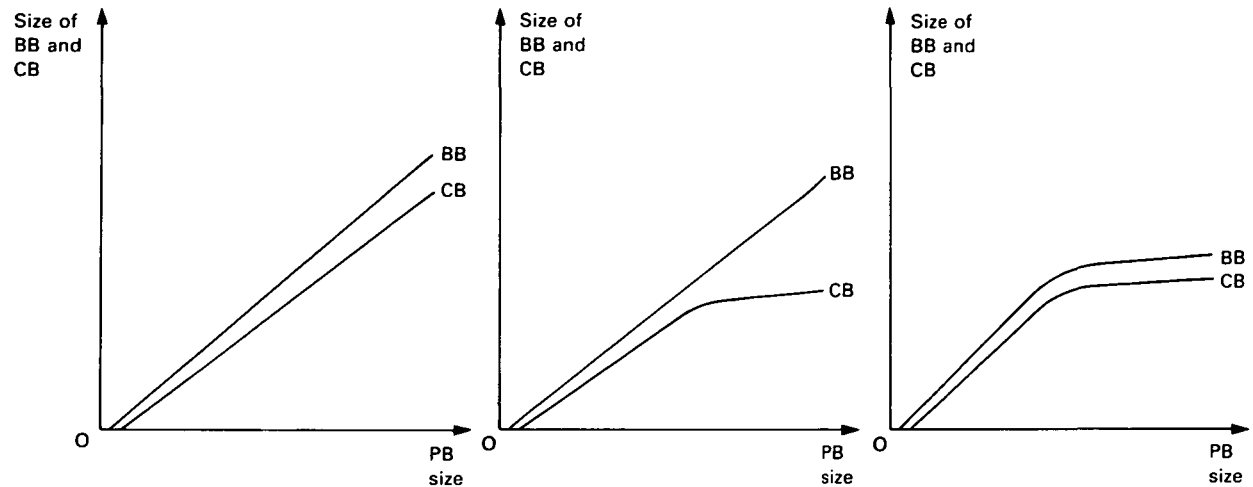
The impact of these differences in PB/BB/CB relationships between types of agencies can also be considered using the diagrams from Section 1 above.

Net utility gains from marginal programme budget increases show the greatest variation across agencies. The lowest curve is probably that for transfer agencies, since if the PB increase has no impact on the CB, it is hard to see how even low rank bureaucrats derive much benefit from it. For example, if pensions go up in cash terms the DHSS simply increases the figures printed by computers on millions of giro cheques. Even if the programme and bureau budget increase very substantially, there is no apparent reason why the DHSS core budget cannot remain unchanged. Control agencies similarly have low and flattish net utility curves across ranks since the bulk of any PB increase will go to other agencies. Contract agencies' curves are higher since a fairly fixed but low proportion of a PB increase is spent on core administration costs.[19] Delivery and regulatory agencies have the highest net utility curves, turning up most sharply at the bottom rank position – since an increased PB translates directly into an increased CB, with little leakage outside the agency, and with maximum benefits for rank-and-file employees in terms of improved job security, better career prospects and increased demand for their services.

Probabilities of influence show less change, certainly for the more hierarchical agencies (DAs, RAs, CTAs and TAs). But control agencies may have much lower curves because they are more dependent on other public agencies in securing a given PB increase. And they may have flatter curves because middle ranking officials can have more influence over control agency policy than in larger line bureaucracies.

Advocacy costs of a PB increase steeply amongst top officials in all agencies, but again control agencies may be distinguished by higher advocacy costs amongst middle ranking officials because of their greater opportunities for influence.

[19] In British local government, for example, administration cost ratios of 15–25 per cent of the programme budget are regularly applied where council staffs do agency work for other bodies (such as police or water authorities).



	Delivery agencies	*Regulatory agencies*	*Contract agencies and Transfer agencies*	*Control agencies*
Size of programme budget	High	Low	High	High
Bureau budget as a share of programme budget	High	High	High	Low
Core budget as a share of programme budget	High	High	Low	Low
Core budget as a share of bureau budget	High	High	Low	High

Fig. 4. The inter-relationship of programme, bureau and core budgets in five types of agencies

So far we have skated around an important definitional question, namely, what is to count as an 'agency' for the purposes of separating organizations into agency types. Clearly for the purposes of analysis we will normally need to decompose supposedly unified organizations into components consisting of different agency types. The categorization set out here is one which applies to agency *roles* rather than to whole institutions. Agency roles cannot be defined in organizational terms but only by reference to analytically delineated policy fields. Divisions within organizations between different component roles will be most common in national government organizations or other agencies which control complex administrative systems. For example, the DHSS has three agency roles: as a control agency for the personal social services supervising local authorities who deliver services on the ground; as a control agency for the National Health Service, where the delivery agencies are ultimately District Health Authorities, whose funding is routed via an additional tier of Regional Health Authorities which exercise more detailed control functions; and as a transfer agency directly administering delivery of pensions and other benefits. Similarly the Defence Department in Britain has DA, CLA and CTA roles.[20]

The final dimension of variations in bureaucratic behaviour concerns changes over time. So far we have assumed that the pattern of BB/PB relationships is fairly constant once an initial bureau-consolidating phase of growth has taken place. But for DAs, CTAs (and possibly also RAs and TAs), the *growth of the bureau* may run into severe constraints after a time. For example, there are severe size constraints on the growth of central government agencies imposed by:

—the funnelling of management into political-administrative bottlenecks, such as the minister–permanent secretary relationship in the United Kingdom;[21]

—the spreading of top management and political attention over too wide an area, too thinly;[22]

—the accumulation of inertia in very large departments.

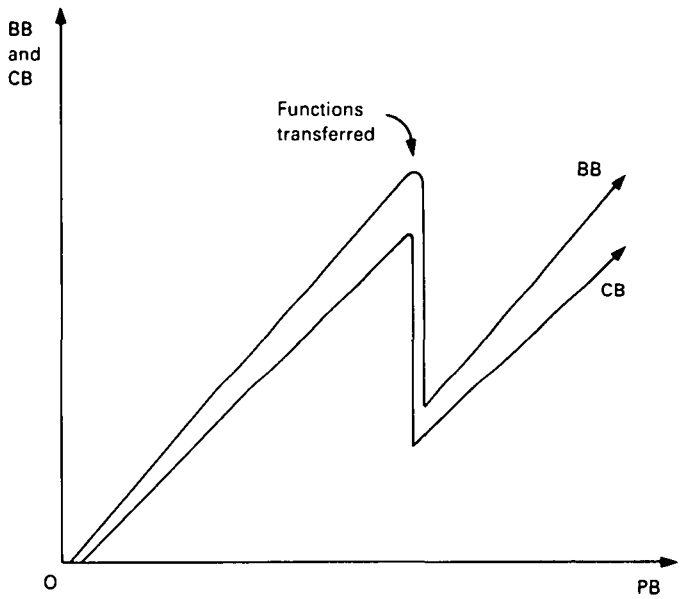
So it is perfectly feasible that the expansion of the bureau coming up against such constraints could trigger a period in which the bureau loses some of its existing functions to other (rival) departments or to quasi-government agencies set up to hive-off less salient functions. Either threat could produce a zig-zag growth curve for the bureau budget graphed against the programme budget, perhaps after a period of declining BB rate of growth (see Figure 5a).

[20] For a more detailed discussion see Dunsire and Hood, *Bureaumetrics*. Dunsire and Hood's painstaking empirical work was clearly restricted in value by their decision to focus on an institutional category ('the department'), rather than to develop statistics organized around more theoretically constituted variables.

[21] On which see Peter Kellner and Crowther-Hunt, *The Civil Servants* (London: Macdonald, 1980), pp. 174–238.

[22] A factor alleged to underlie the (partial) failure of giant departments in Whitehall. See C. Pollitt, *Manipulating the Machine* (London: Allen & Unwin, 1983).

(a) *Zig-zag bureau and core budget curves when functions are lost or hived off*



(b) *Re-expansion of the bureau budget following cutbacks in the programme budget: the recentralization curve*

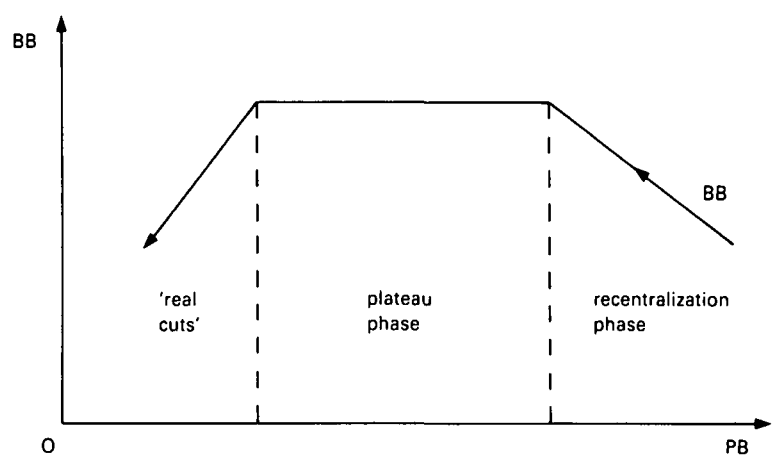


Fig. 5. 'Zig-zag' and recentralizing bureau budget curves

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This sort of curve implies that there will be periods in the agency's evolution when rational officials will not advocate increases in the programme budget, because to do so could produce a quantum reduction in the bureau budget to which their utilities are more closely linked.

The BB/PB relationship also raises problems when we come to consider *declining budgets* in control agencies or contract agencies. In both cases dwindling programme budgets can be associated with a period of rising bureau budgets as the control agency recentralizes powers or functions from subordinate agencies, or as the contract agency brings back in-house functions it has previously sent out to outside professionals (Figure 5b).[23] (Even line agencies which use outside consultants or part-time staff may show this pattern.) After a while, the recentralization phase could be succeeded by cutbacks striking home within the central department itself. But there may well be extensive periods when officials in CLAs or CTAs welcome cutbacks in the programme budget as a means of increasing or stabilizing their bureau budgets, to which their utilities are linked.

4. BUREAUCRATS' OPTIMAL BUDGET LEVELS

Part of the appeal of public-choice models of bureaucracy has clearly been the apparent correspondence between their account of budget-maximizing officials and 'common-sense' experiences of how bureaucracies operate. The bureaucratic empire-builder is not an off-beat theoretical construct, but seems to be an important and pervasive 'everyday' image of government officials as well. To define an alternative bureaucratic welfare maximand therefore entails uncovering a more plausible set of official objectives, one which can explain empirical phenomena with more precision or over a wider range of situations than the budget-maximization hypothesis. I argue in this section that even if bureaucrats are budget-maximizers, they are none the less always constrained by an internal benefit/cost calculation. Hence in contrast to Niskanen's picture of an open-ended budget maximizer constrained only by sponsor funding restrictions, bureaucrats pursue an optimal programme budget level with a finite limit. Section 5 sets out an alternative conception of what bureaucrats want (the 'bureau-shaping' model), and relates it to

[23] Dunleavy, *The Politics of Mass Housing in Britain* shows, for example, that in 1966–67, at the height of the public housing boom, local authority architects designed just half of the dwellings involved, private architects 30 per cent, and contractors' architects 20 per cent. By 1973, when the public housing programme was half the size, local authority architects' share increased to 75 per cent. In addition, the work tasks which public architects did on housing changed dramatically. In one authority (Birmingham) they were doing *solely* contract drafting and supervision (plus landscaping) in the late 1960s, whereas by the mid-1970s the council architects had regained control of designing most of their department's housing. This kind of effect will exist wherever public agency staffing does not expand fully to accommodate workloads in 'boom' periods, so that the character of their work tasks tends to stretch to accommodate the variation. This phenomenon implies that staff utilities at middle or lower levels may rise quite sharply in periods of limited budgetary reductions when workloads are reinternalized.

anecdotal evidence about their preferences. And Section 6 argues that the budget-maximizing model cannot account for the institutional form of modern state growth which the bureau-shaping model can easily explain.

We can make more explicit some of the earlier hints about the conditions under which budget maximization may or may not be a significant influence upon individual bureaucratic behaviour by looking at mappings of the discounted net utilities of a programme budget increment against the costs of advocating such an increment. These graphs need to be drawn for a particular rank of bureaucrat and a particular type of agency. But in practice we can distinguish three basic types of plot (Figure 6).

Discounted marginal utility curves are influenced mainly by:

(i) *probability of influence*: hence top bureaucrats' curves are quite far away from the origin while bottom bureaucrats' curves are much closer in and shallower; and
(ii) *the CB/PB and BB/PB ratios*: hence top bureaucrats in delivery, contract and regulatory agencies have fairly elastic slopes, but those in control and transfer agencies have steeply declining curves.

Marginal advocacy cost curves are influenced mainly by:

(i) *the size of the existing PB*, set against the sorts of functions which the agency is carrying out, since with constant functions successive budgetary increments become progressively more costly to obtain;
(ii) *external hostility* to an agency getting a PB increment: at the point where an agency is unlikely to get a further increase however hard it pushes, the cost curve (for top bureaucrats especially) becomes vertical;
(iii) *changes in external hostility*: if it increases or decreases then the cost curve shifts up to the right or down to the left respectively; and
(iv) *rank*: cost curves are higher and rise more steeply further up the rank hierarchy.

Budget maximization in these graphs implies that the bureaucrat will advocate expansion in the agency's activities if the actual PB of the bureau is to the left of her equilibrium PB position, but will do nothing if it is to the right of that position, switching attention instead to other individual or collective strategies for improving her welfare. (Note that the alternative to budget maximization is inaction, not advocacy of budgetary reductions.)

Because of the varying shapes of the discounted marginal utility and marginal cost curves, the same sort of changes in the external environment will have different impacts upon bureaucratic behaviour. For top bureaucrats in delivery, contract or regulatory agencies a shift of cost curves to the left will probably trigger large decreases in the equilibrium level of PB for that official, since increased external hostility produces sharp adjustments of the cost curve back along a utility curve that slopes fairly gently. But in control or transfer agencies at the same rank a large-scale adjustment in the marginal advocacy cost curve may not affect bureaucratic behaviour much because the DMU

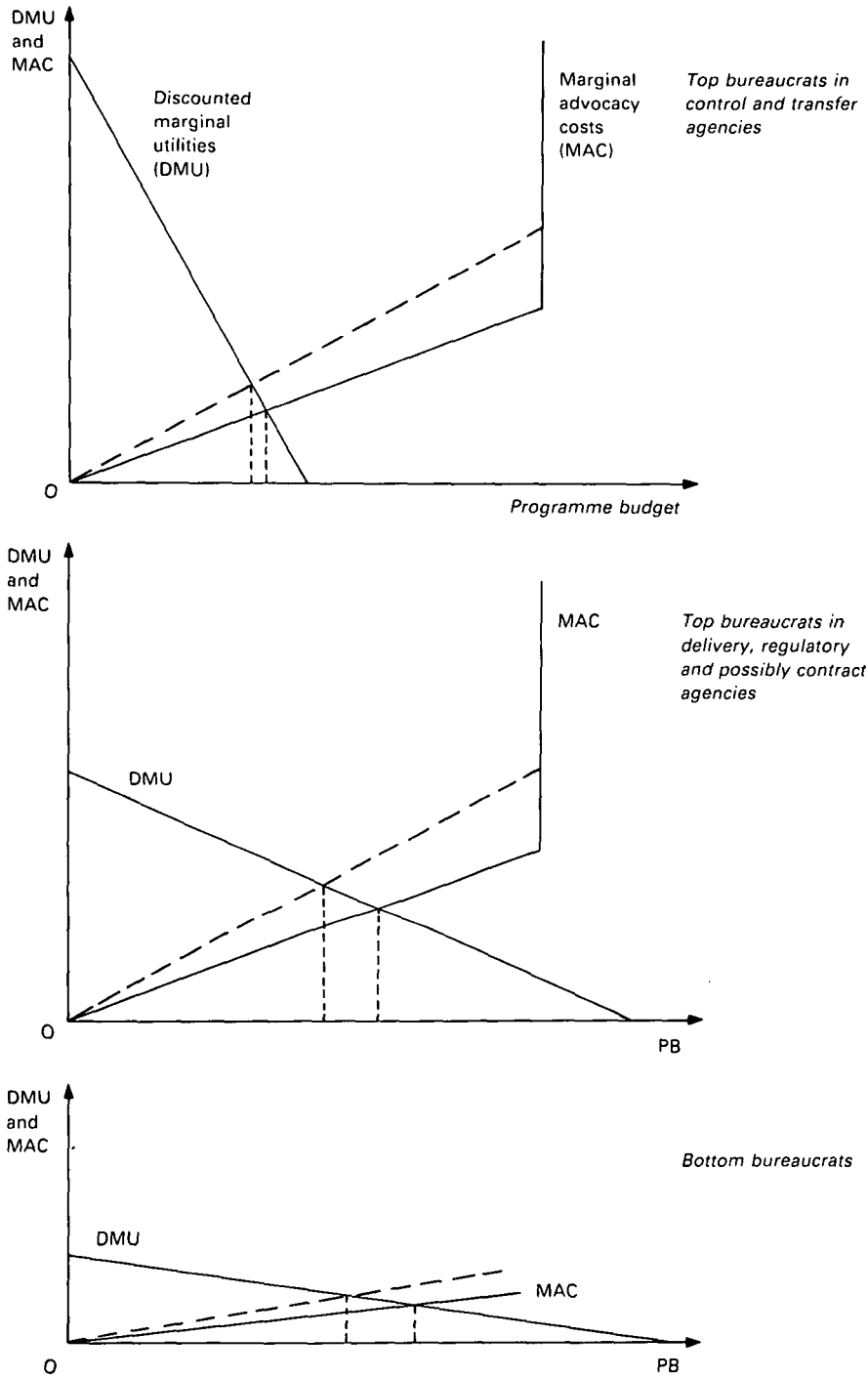

Fig. 6. The choice problem for bureaucrats in deciding whether to advocate budgetary increases

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curve is so inelastic. For bottom bureaucrats, the same external shifts which manifest themselves as marked changes in the top bureaucrats' cost curves will produce only small increases in the shallow slope of cost curves. But since their discounted utility curves typically are also shallow, even a small shift may produce a sharp fall in their equilibrium PB level.

The internal determinants of the equilibrium PB point funnel through changes in the discounted net marginal utility curve. In particular, top bureaucrats may be in a position powerfully to increase the utility they derive from a given level of PB by internally reorganizing their agency. For example, if personnel ceilings are being enforced then the automation or computerization of clerical tasks can free manpower quotas to be redeployed at policy-making levels (for instance, by hiring more policy analysts).[24] Most accounts in the public-choice literature suggest that officials will simply push the DMU curve progressively further outwards from the origin, creating a succession of PB equilibrium points which follow the marginal cost curve outwards in the sequence shown in Figure 7*a* (*A*, *B*, *C*, etc.). Only if the expansion of the DMU curve is so great or the marginal cost curve is so restrictive that the equilibrium points lie along the vertical section of the marginal cost curve will there be any stasis in the level of PB which bureaucrats seek.

But it is actually rather unlikely that major internal reorganizations will simply inflate the DMU curve along its existing shape. Far more commonly we could expect the DMU curve to *change* shape, in particular to swing in a clockwise direction so as to maximize the benefits which senior bureaucrats derive from lower levels of the programme budget, while reducing their dependence on high levels of PB in order to improve their welfare (Figure 7*b*). Especially by hiving off responsibility for implementing public policies to other agencies or private sector bodies, top bureaucrats could improve their own welfare (for example, by shedding troublesome direct managerial responsibilities and gaining increased staff and time resources for intellectually more attractive tasks such as planning and guidance). Assume that exactly this kind of change underlies the shifts from DMU_1 to DMU_2 shown here. If the marginal cost curve cuts these utility curves in their lower reaches as shown then the equilibrium budget level declines from *A* to *B*. Only if the marginal cost curve cuts the DMU curves in their upper reaches (i.e. if the external constraints on budgetary expansion are particularly restrictive) will the equilibrium programme budget position push steadily outwards. As in the

[24] Bennett and Johnson, *The Political Economy of Federal Government Growth*, pp. 30–7 demonstrate that the proportion of American federal employees in the bottom four of eighteen General Schedule grades declined from 40 per cent in 1959 to 21 per cent in 1978, while the proportion in the top five ranks grew from 6·5 per cent to 14 per cent in the same period. They compare this with the relatively static total of federal employees (up from 2·24 million in 1959 to 2·48 million twenty years later, and down as a proportion of the labour force from 3·2 to 2·4 per cent over the period), concluding that: 'a massive shift in General Schedule grades has occurred towards policy-making and program administration levels' (p. 38).

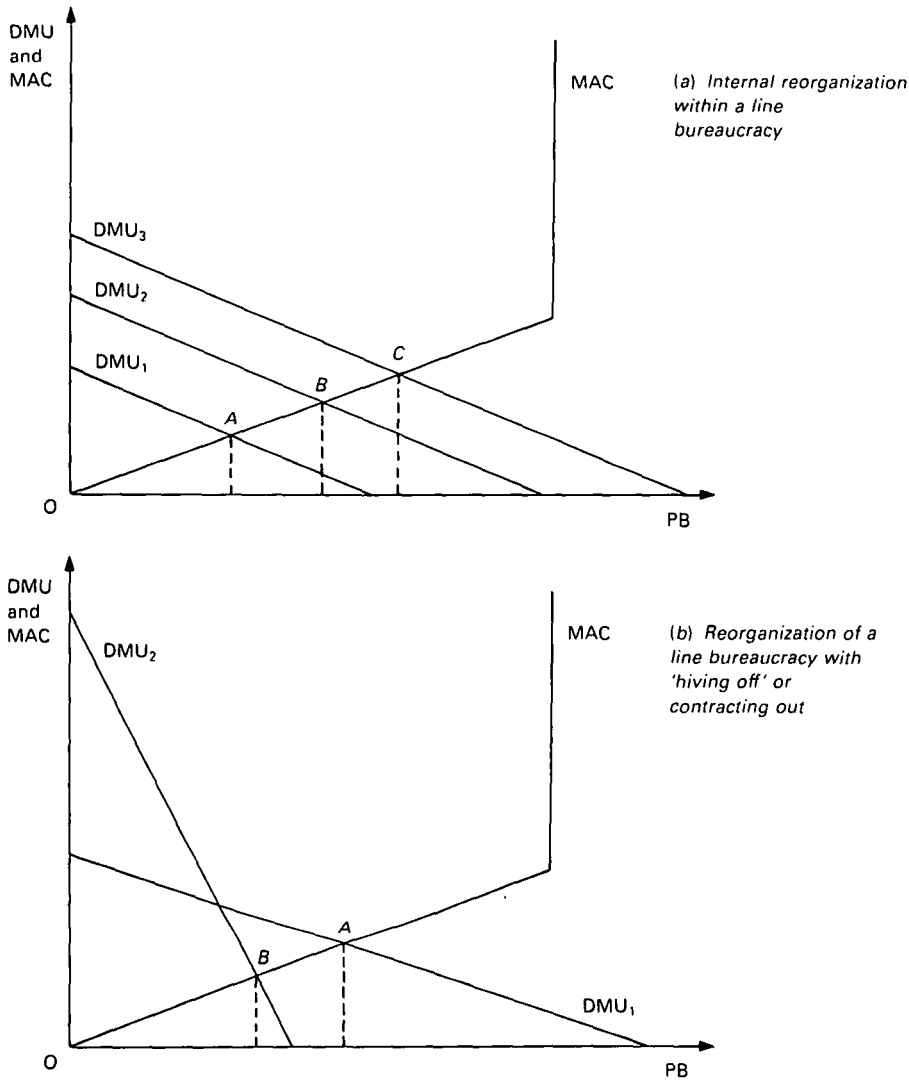

Fig. 7. The impact of bureau reorganizations on top bureaucrats' optimal budget equilibria

earlier example, if the DMU and marginal advocacy cost curves intersect in the vertical section of the MAC curve the equilibrium PB position will again be static.

A particularly interesting variant of the phenomenon of shifting DMU curves occurs where a delivery agency has been progressively transformed into a control agency. This sort of change will shift the DMU radically clockwise at the same time changing its shape from an elastic to an inelastic curve. *Ceteris paribus*, therefore, the optimum programme budget level for

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top bureaucrats in the new control agency will be lower than that advocated while they still had direct line responsibilities. It should be clear that a prerequisite for an internal reorganization of this kind is that the area under the DMU curve but above the MAC curve should be greater with a control agency arrangement than under delivery agency arrangements – as is clearly the case here.

5. THE BUREAU-SHAPING OBJECTIVE

Welfare-maximizing officials in policy-making ranks should emphasize collective strategies different from budget-maximization for three motivational reasons. First, there is a general presumption in the existing public-choice literature, most organization theory, and in Sections 1 and 2 above, that senior managers put less stress than lower ranking bureau members on the pecuniary or near-pecuniary components of their utility function. Instead there is a progressive shift of emphasis towards non-pecuniary utilities with increasing rank – a primary concern with status, prestige, patronage and influence, rather than with income, job security, or perks.

Secondly, the distinctive characteristics of public service employment place severe limits on the extent to which the pecuniary utilities of officials can be increased by such collective strategies as budget-maximization or the use of managerial discretion to divert resources to improving their personal welfare. Typically government officials' salaries are constrained within restrictive and standardized upper salary ceilings, lacking any counterpart to the very large and individualized 'prizes' paid out as salaries to key executives in private corporations. For example, the increase in responsibility from a single secondary school headteacher, to Director of Education in a county council (with many such schools), to Permanent Secretary at the DES (with a brief covering all schools and many other functions besides) boosts public-service salaries in Britain by only a few thousand pounds. In addition, it is common to find stringent controls on perks in the public sector, with relatively few company cars or fringe benefits, strict rules against officials having additional employment or business activities, standardized provision of accommodation and equipment, scarce support staff rationed out by standardized formulae, and personnel often administered centrally to minimize the creation of slack by individual managers. Compared with their counterparts in private companies, senior government officials are likely to find that budget-maximization is a remarkably frustrating activity in terms of direct near-pecuniary utility pay-offs.[25] Similarly blanket limits on staff numbers, centralized audit systems, and life-time career paths to senior positions, are all common features of public service employment systems which tend to reduce officials' ability to pursue their individual interests in pecuniary terms. All these traits are built

[25] See J. Gretton and A. Harrison, *How Much are Public Servants Worth*? (Oxford: Blackwell, 1982).

TABLE 2 *Positive and Negative Values Ascribable to Bureaucrats*

Positively valued	Negatively valued
'Staff' functions	*'Line' functions*
Individually innovative work	Routine work
Longer time horizons	Short time horizons
Broad scope of concerns	Narrow scope of concerns
Developmental rhythm	Repetitive rhythm
High level of managerial discretion	Low level of managerial discretion
Low level of public visibility	High level of grass-roots public visibility
Collegial atmosphere	*Corporate atmosphere*
Small-sized work unit	Large-sized work units
Restricted hierarchy and predominance of elite personnel	Extended hierarchy and predominance of non-elite personnel
Co-operative work patterns	Work patterns characterized by coercion and resistance
Congenial personal relations	Conflictual personal relations
Central location	*Peripheral location*
Proximate to the political power centres	Remote from political contacts
Metropolitan (capital city) location	Provincial location
Conferring high status social contacts	Remote from high status contacts

into public organizations with the aim of achieving exactly the kind of effects which they tend to produce. They are deliberate rather than accidental features, designed to displace senior officials' energies and efforts into work and policy-related aspects of their careers rather than into feathering personal nests. While senior officials' pay and conditions are normally maintained at levels sufficient to preserve their pre-existing position in the occupational class structure, they are also calculated to sift out from promotion people anxious to maximize pecuniary utilities.

Thirdly, it follows from the points above that a realistic individual-level model of why people enter career paths leading to senior positions in public agencies (or of why people temporarily transfer into such positions from the private sector in American-style systems) is likely to emphasize non-pecuniary elements in their utilities, especially aspects of their welfare which are related to the intrinsic characteristics of the work involved. Without trying to posit some other-regarding or ideological commitment by officials to their bureau or its 'mission' – i.e. without breaching the utility-maximizing instrumentalism which is the core of an economic approach – we can none the less acknowledge ample scope for the non-pecuniary elements of their utilities to be influential. In particular, Table 2 shows a list of pro- and anti-values which could plausibly be ascribed to self-regarding bureaucrats pursuing their own welfare. Clearly there is a pecuniary parameter in such officials' concerns

– a level of income and of near-money benefits which they will seek to achieve as a condition of the pursuit of other utilities. But this may be a constraint which is surmounted relatively easily and thereafter not very influential positively or negatively in structuring individual behaviour. It is certainly not an element of their utilities which officials seek to *maximize*. There are likely to be sharp differences in the perceived welfare of officials who share comparable salaries but are located in different positions on the dimensions included in Table 2 – between, say, similarly paid officials in the Cabinet Office and the DHSS central benefits office in Newcastle. These perceived differences translate directly into variable prestige, public recognition and influence. This model not only offers an instrumental explanation of why people enter public sector employment at policy-rank level, but also offers a plausible account of how officials typically pursue their careers. The key strategies individuals adopt in pursuit of objectives suggested by Table 2 are individual ones, searching for career paths which leave them favourably placed to reach an appropriate rank in a suitable sort of agency. Their success at this individual level will be far and away the most important influence upon their overall welfare (just as the success of people whose utilities are pecuniary is determined primarily by their individual strategies rather than the pursuit of collective goods such as budget maximization).

But if bureaucrats can maximize their welfare within a pecuniary constraint primarily by pursuing at an individual level the pro-values set out here, is there any *collective goods strategy* which they can pursue towards the same sort of objectives? How would this analogous strategy operate and what whole-bureau goals can be derived in line with it? In particular, how could such a strategy be as continuously present as budget-maximization, where the annual budgetary cycle can permit individual efforts to be fairly consistently deployed in boosting the budget? I suggest that rational officials in decision-making ranks characteristically adopt a *bureau-shaping strategy* designed to bring their bureau into a progressively closer approximation to 'staff' (rather than 'line') functions, a collegial atmosphere and a central location. They maximize this objective within a continuous bureau budget constraint but one which varies with the character and size of the agency. At each stage of this process officials seek to achieve a satisfactory level of budget, but this level in turn is set by their previous success in enhancing the bureau's conformity with the pro-values set out above. One of the most important consequences of successful bureau-shaping activities is a reduction in the size of the budget constraint over time – that is, the progressive unlinking of top officials' utilities from dependence on a high absolute level of programme or bureau budget – as the successful bureau takes on more of the small, central, elite character which crystallizes bureaucrats' pro-values.

There are four key means of pursuing bureau-shaping strategies:

(i) *Major internal reorganizations* of the bureau, essentially those which increase its degree of conformity with an elite policy-making ideal. Thus

new acquisitions of functions will be concentrated at the policy-making level, while existing routine functions will be 'hived-off' to quasi-governmental agencies, 'hived-in' to separately designated departmental agencies or accountable management units, or contracted-out to private firms. In general where existing functions inconsistent with the bureau's ideal image cannot be coped with in one of these ways, they will be shunted into well-defined enclaves which need to be involved as little as possible with senior management. Often geographical separation is a key means of achieving this result.

(ii) *Redefinition of relationships with external 'partners'* (such as subordinate public agencies, contractors, regulatees or client interest groups) can be important whether or not it is associated with an internal reorganization of the bureau. Agencies centrally involved with external organizations continuously seek to adjust their relationship with them so as to cut down on routine workloads but to maximize their agency's policy control. Hence they promote hands-off, auto-pilot controls for run-of-the-mill matters but increased discretionary involvement in policy-relevant issues. A shift towards a more corporatist style of relationship is frequently associated with this kind of change.[26] The bureau also tries to minimize its dependence upon external organizations, as the inter-organizational literature argues.[27] A high-density managerial or control workload can be a liability for a bureau if external or subordinate organizations refuse to co-operate. Eliminating such a potent source of inconvenience and stress, and replacing such arrangements with a more robust and insulating control apparatus is usually a priority. Bureaus also seek to extend the scope of their patronage of external bodies, but only where this can be achieved in line with their preferred image.

(iii) *Competition with other bureaus* at the same level of government can be associated with both the preceding mechanisms. Bureaus always defend the *scope* of responsibilities involved in the existing programme budget, although they may be only weakly committed to defending given programme budget *levels*. Bureaus are by no means simple-minded imperialists. They compete with their rivals for programme tasks and policy areas which fit in with their ideal bureau form (especially those tasks with a high proportion of policy-ranking staff, which command useful resources and confer prestige or influence, and which tend to increase the average level of managerial discretion within the bureau). But bureaus may want to export troublesome and costly low-grade tasks to rivals, especially where doing so carries no major implications for a reduced programme budget.

(iv) *Transformation of internal work practices* can bring major benefits to officials in policy-making ranks by increasing the interest of their work

[26] A. Cawson, *Corporatism and Social Welfare* (London: Heinemann, 1982) applies this idea to the social policy field in the United Kingdom.

[27] K. Hant and F. W. Scharpf, eds, *Interorganizational Policy-making* (London: Sage, 1978).

tasks, lengthening the time horizons used in decision making, and extending their discretionary ability to control policy. A shift towards more sophisticated management and policy analysis systems insulates the agency from criticism by rival bureaus, external partners or the sponsor body. It also tends to shift the balance of bureau personnel towards more high-level, skilled or professional staffs, improving existing bureau members' status and work content, as well as their career advancement prospects. Given the restrictive manpower ceilings applied in many public service personnel systems, a pre-condition for such changes may be the contracting out, reduction, computerization or automation of routine work tasks so that the staffing allocations involved can be redeployed in ways which confer more fruitful pay-offs for senior officials.[28] Bureau policy staffs also tend to promote more accountable management for routine enclave areas or lower-level staffs, but emphasize collegial decision making and diffused responsibility among policy-rank officials.[29]

It should be clear from this account that there is no *a priori* reason to think that bureau-shaping activities are less prevalent than budget maximization, or that the scope for individual officials to contribute to bureau-shaping strategies is any less than their ability to push up budgets. Like budget maximization, the pursuit of a bureau-shaping strategy requires collective action, especially by top (and perhaps, also, middle) ranking officials. But bureau-shaping has a much more important and visible connection with these officials' welfare than does generalized budgetary expansion *per se*.

The bureau-shaping model seems to fit closely with a large but disorganized stockpile of anecdotal data about how bureaucrats see themselves and about what they say they are trying to achieve. A strategy of maximizing a bureau's conformity to an ideal, high status organizational pattern, within a budget constraint contingent on the existing bureau configuration, certainly seems consistent with phenomena remarked upon by a wide range of approaches to administrative behaviour. Bureau-shaping activity appears to be every bit as commonplace and as frequently pointed out as are tendencies to budget maximization.

6. THE FORM OF STATE GROWTH

The main empirical evidence for this conception of bureaucratic motivations is the characteristic pattern of modern state growth. On the Niskanen model

[28] For example, in the United States federal government overall establishment numbers were frozen from 1977 to 1980; in the United Kingdom civil service manpower was first frozen in 1979, and then programmed to decrease by 7 per cent over three years (thanks primarily to the shedding of low-level line functions and to limited privatization). See G. K. Fry, 'The Development of the Thatcher Government's "Grand Strategy" for the Civil Service', *Public Administration*, LXII (1984), 322–36.

[29] Kellner and Crowther-Hunt, *The Civil Servants*, Chap. 12.

we should be able to take this pattern as indicative of government officials' 'revealed preferences'. Yet there is a basic contradiction between the over-supply hypothesis and the way in which governmental growth has taken place. If bureaucrats maximize their budgets, we should expect to see state growth taking the form of the accretion of high budget functions by large line agencies. In particular we should have witnessed an expansion of already existing large agencies, or certainly no diminution in their scale of activities or overall importance. And lastly, we should be confident in predicting a continuing centralization of functions and personnel within national government agencies, rather than at subordinate levels of the state.[30] None of these logical extrapolations from Niskanen's model can be sustained. Instead the evidence for each of them is markedly unfavourable. State growth has overwhelmingly been achieved by setting up decentralized networks of many smaller agencies.[31] Existing large line agencies have tended to lose functions or to be broken-up into their components. And new governmental growth has overwhelmingly been concentrated outside central (or federal) government, in sub-national governments, local authorities, spatially decentralized systems of quasi-governmental agencies, or in single-function agencies at the national level. Within central government agencies themselves there has been a marked shift towards non-executant status for the departments which remain. Civil service numbers have remained static or declined, while central departments' functions have concentrated on higher level managerial tasks.[32] Most individual central agencies have become smaller or stayed the same size, and almost all have lost 'line' functions and progressively assumed more of an exclusively elite character. All of these trends are exactly what the account of bureaucratic motivation given here would predict.

There are really only two options open to devotees of budget-maximization models in explaining these tendencies. Either they must argue that budget-maximizing officials have been most strikingly ineffective in influencing the *institutional form* of state expansion, while continuing to argue that they have been crucially important in influencing the *extent* of state expansion. Or they must conclude that senior officials' transparent lack of influence on the form of state expansion also reflects their supernumerary role in determining the extent of expansion. Neither conclusion seems particularly palatable, the first

[30] The criticism made here against the budget-maximizing thesis also applies with particular force to the aggregate-level explanation put forward by G. Tullock, 'Dynamic Hypotheses on Bureaucracy', *Public Choice*, XVII (1974), 128–32.

[31] For discussions of this 'Balkanization of the policy process' see P. Self, *Administrative Theories and Politics* (London: Allen & Unwin, 1977), p. 279; P. Dunleavy, 'The Limits to Local Government', in M. Boddy and C. Fudge, eds, *Local Socialism*? (London: Macmillan, 1984), and 'Quasi-Governmental Sector Professionalism', in A. Barker, ed., *Quangos in Britain* (London: Macmillan, 1982).

[32] C. Hood, 'Keeping the Centre Small: Explanations of Agency Type', *Political Studies*, XXVI (1978), 30–46; P. Dunleavy and R. Rhodes, 'Beyond Whitehall', in H. Drucker, P. Dunleavy, A. Gamble and G. Peele, eds, *Developments in British Politics* (London: Macmillan, 1983), pp. 104–13; Bennet and Johnson, *The Political Economy of Federal Government Growth, passim.*

because it seems logically inconsistent except under rather odd conditions, the second because it is implausible to suppose that large bureaucratic agencies have played so uninfluential a role in the growth of the state. The simplest and most direct way out of the conundrum is to drop the assumption that bureaucrats maximize budgets in favour of the view that they maximize the fit between their bureau and an optimal form of bureau design, within a contingently determined bureau budget constraint. Hence officials pursue a bureau shaping strategy rather than a policy of continuous budgetary expansion. The bureau shaping model views the form of state growth as a key reflection of officials' instrumental preferences, not as some puzzling anomaly falling outside the scope of effective theoretical explanation.

CONCLUSIONS AND DISCUSSION

Public choice models of bureaucracy which predict open-ended budget maximization are badly flawed internally. Bureaucrats typically do not embark on collective action modes of improving their welfare unless they have exhausted individual welfare-boosting strategies. If they do choose to try and increase budgets, rational officials typically confront familiar collective-action problems. In particular, although lower ranking bureaucrats have most to gain from budgetary expansion, they will know that the attainment of increments is almost completely insensitive to their individual advocacy, so that even though their advocacy costs are small, campaigning for budgetary expansion is unlikely to advance their individual utility. Higher ranking officials are aware that the attainment of budgetary growth will be much more sensitive to their personal contribution, but typically they have much less to gain from increments and will confront substantial advocacy costs in seeking to push through increases in the agency's base budget.

Budget maximization is anyway an ambiguous concept, since utility pay-offs are primarily associated with growth in the agency's core or bureau budgets, while advocacy costs are associated with the programme budget. There are additionally quite major differences between agency types in the extent to which officials associate their welfare with the growth of the programme budget. In delivery agencies (the classic line bureaucracies dwelt on in public choice models) the connection is close and positive. But in control agencies it is typically remote and variable.

Top bureaucrats' motivations can be modelled in terms of discounted marginal utilities and marginal advocacy costs, whose interaction identifies an optimal budget position which is an equilibrium point. Changes in the ways in which agencies are organized may shift this equilibrium point outwards over time – if the change involves simply reorganizing the way in which an agency carries out a fixed role. Or they may cause it to become smaller – if the change involves reshaping the agency into a different role, especially hiving off line functions to create a central control agency. This last example is especially relevant because it has been a predominant trend in the development of liberal democratic systems of public administration.

Finally, if we consider the characteristics of public service employment systems, it seems likely that the welfare of higher ranking bureaucrats is closely bound up with the intrinsic characteristics of their work. Rational bureaucrats would therefore concentrate on developing 'bureau-shaping' strategies designed primarily to bring their agency into line with an ideal configuration conferring high status and agreeable work tasks, within a budgetary constraint contingent on the existing and potential shape of the agency's activities. This hypothesis closely fits the tendency for state growth to create a deconcentrated network of multiple agencies with a non-executant central core, rather than the expansion of national line bureaucracies along the pattern predicted by the budget-maximization thesis.

Neither the pattern of argument nor the conclusions reached here should be read as an endorsement of the appropriateness of a public-choice approach for the analysis of political and administrative phenomena such as bureaucracy. This article is partly a pragmatic, *ad hominen* argument exploring the mileage that might be gained from reconstructing a public-choice model before discarding it, rather than seeking to rehabilitate it. There are certain heuristic advantages in developing an argument in opposition to the budget-maximizing hypothesis from within the terminology and using some of the analytical apparatus of 'soft' economic models. Chief of these is the closeness of these approaches to a structuralist mode of analysis, despite the avowedly individualistic beliefs of their exponents.[33] In contrast to conventional public administration with its stress on describing actors' behaviour in terms of the motivations and intentions of biographically realistic individuals, economic models offer a partial account of how actors operate as bearers-of-roles-in-organizations. As reconstructed here, a public-choice model can be read as an analysis of the situational logic facing any instrumental actor in a given role, with no necessary connection to the voluntaristic and dispositional style of explanation used by writers such as Downs. Lastly, of course, despite the characteristic ideological baggage of their exponents, public-choice models highlight the prevalence of 'emergent effects' in structures or systems of interaction.[34] Admittedly the level of structural explanation aimed at here is inter-positional and inter-organizational, rather than the macro-level accounts most often associated with radical approaches in the social sciences.[35] But there are good reasons to suppose that bureaucratic phe-

[33] Jackson, *The Political Economy of Bureaucracy*, p. 87, notes: 'In the neo-classical system agents are treated as if they are mindless automata who respond in a fully programmed fashion to external stimuli such as price and quantity signals'. For comparison, see J. Piaget, *Structuralism* (London: Routledge and Kegan Paul, 1962), which remains the best general introduction to the approach.

[34] R. Boudon, 'Undesired Consequences and Types of Systems of Interdependence', in P. Blau and R. Merton, eds, *Continuities in Structuralist Inquiry* (London: Sage, 1981). See also R. Boudon, *Effets perves et ordre social* (Paris: Presses Universitaires de France, 1977).

[35] C. Warriner, 'Levels in the Study of Social Structure', defines inter-positional and inter-organizational levels of analysis, while Wolfe V. Heydebrand, 'Marxist Structuralism', discusses radical approaches, both in Blau and Merton, eds, *Continuities in Structuralist Inquiry*.

nomena are not simply reducible to explanation in terms of macro-social forces.[36] The internal organization and operations of the state apparatus instead have a specificity and significance of their own. If we are to develop an applied structuralist framework for analysing the logic of these particular social processes then the avenues indicated here seem worth exploring further.

[36] P. Dunleavy, 'Is There a Radical Approach to Public Administration?', *Public Administration*, LX (1982), 215–33.