Working Paper 16

THE FORMAL CHALLENGE TO THE BUREAU-SHAPING MODEL
Dr Fabio Franchino

Department of Political Science
School of Public Policy
UCL

The support of UCL Friends Programme is gratefully acknowledged.

School of Public Policy
University College London
The Rubin Building
29/30 Tavistock Square
London WC1H 9QU, UK
Tel 020 7679 4999, Fax 020 7679 4969
Email spp@ucl.ac.uk
www.ucl.ac.uk/spp/

Date: February 2006
The Formal Challenge to the Bureau-Shaping Model*

Fabio Franchino
Department of Political Science
University College London

Abstract: After reviewing the two main traditions of modelling political-bureaucratic relations, this article sets out the formal challenge facing the bureau-shaping model. It argues that bureau-shaping strategies are predominantly choices about bureaucratic structure and, since ‘structure and process’ determine policy, they are choices about policies. Hence, the bureau-shaping model should directly engage with the policy preference modelling tradition and set out explicitly assumptions about strategic environment, distribution of information and moves of the game. Instead, where we should expect budget maximising behaviour, the theory should confront directly post-Niskanenian models which qualify substantially bureaucratic power. Such an exercise should help establishing expectations about bureaucratic influence in a more precise and easily testable manner.

Introduction

Patrick Dunleavy’s (1985, 1991) bureau-shaping model has received over the years considerable attention. It has been regarded as a theoretical advancement of the study of bureaucratic behaviour and a robust framework to explain the changes in the public sector in Britain and elsewhere. But its assumptions and the validity of its empirical predictions have also being challenged. Here, I set out what I consider the theoretical challenge to the bureau-shaping model.

First, I analyse the existing formal works on bureaucracy with regard to three features: the assumptions about bureaucratic preferences, the strategic environment where the bureaucracy operates and the propositions or expectations that they put forward (see the summaries in Tables 1

*I would like to thank Patrick Dunleavy, Oliver James and the participants to the Public Administration Committee Seminar on ‘Bureau-shaping Models of the Public Sector: Theory and Evidence’, May 2004, London School of Economics and Political Science.
and 2). Although it is quite clear that different modelling traditions originate from problems about the empirical validity of the claims that these works purport, I will not assess such validity. Next, I will evaluate the bureau-shaping model and assess the formal challenge that this model has to confront.

**The Niskanenian tradition**

In my view, there are three distinguishing features of Niskanen’s (1971) theory. First, whilst he recognises that a bureaucrat may have different objectives, unlike Downs (1967), he contends that these objectives are all ‘a positive monotonic function of the total budget of the bureau during the bureaucrat’s tenure in office’ (Niskanen, 1971: 38). Second, the strategic environment consists of a legislature that has a demand for the bureau’s output. This demand is common knowledge and is a negative function of the size of the budget that is necessary to produce a given output. The bureau has private knowledge of the cost function of the output. Third, the game is played out with a bureau making a take-it-or-leave-it offer to the legislature. The default conditions (i.e. the result of the game if the legislature rejects the bureau’s offer) is zero output and budget. Not surprisingly, since the deck is stacked so heavily in favour of the bureaucracy, the outcome of the game is, from the legislature’s perspective, excessive budget and output.

Post-Niskanen works relax some of the assumptions of the original model. Miller and Moe (1983) make two key changes. First, they consider the possibility that also the legislature’s demand function is private knowledge. Second, the bureau does not have the power to make a take-it-or-leave-it offer to the legislature. More plausibly, it only announces the cost function and the legislature sets the budget and output as a result of this signal. The result from this weaker and more realistic characterisation of bureaucratic powers is lower excess budget or even no excess budget when the legislator’s demand is private knowledge. The bureau reveals the true cost function in the latter circumstance. Bendor, Taylor and Van Gaalen (1985, 1987a) consider the possibility of a monitoring system set up by the legislature to reveal the true unit cost of the output. The function of the monitoring system is to consider fully the risk propensity of the bureau because, in Miller and Moe (1983), the bureaucrat is indifferent to risk. In the more generalised model (Bendor, et al., 1987a), expectations about bureaucratic bias vary sharply as a function of

---

1 Note that that bias implies both over and under statement of unit cost of output.
how the monitoring system is designed. If it is exogenous and the bureau is risk averse,\(^2\) bias is likely to increase with increased demand uncertainty, tougher budget cuts and better monitoring. However, if the monitoring system is endogenous, namely the legislature’s demand uncertainty, budgetary and monitoring choices are function of the anticipated behaviour of the bureau, results are sharply different. The legislature increases demand uncertainty only when the bureau requests a big budget and bias decreases (i.e. risk-averse and honest bureaucrats are rewarded). Moreover, tougher budget cuts and better monitoring always reduce bias, regardless of the bureau’s risk propensity. Finally, Banks (1989) addresses a commitment problem in Bendor, Taylor and Van Gaalen’s (1987a) model. These authors assume that the legislature can impose, after observing the bureau’s bias, a penalty budget even if, ex post, it would be against its interest. Moreover, Banks (1989) assumes that the true cost can take one of a continuum of values, instead than only two values as in Bendor, Taylor and Van Gaalen (1987a). In Banks (1989), the bureau requests a budget and the legislature accepts, rejects or, at a cost, monitors the agency. In one variant, the legislature makes a counterproposal that can be either accepted or rejected by the bureau. His model produces the monitoring strategies that are sequentially in equilibrium. A counterintuitive result is that, at low monitoring costs, bias is lower if the legislature does not have the option of a counterproposal. Banks’ model however keeps assumptions such the risk neutrality of actors, demand inelasticity and common knowledge of the legislature’s demand.

As neatly summarised by Bendor (1990), these models are based on a two-actor environment and budget maximisation. I will now move on to models including more actors and assuming that the bureaucrats hold policy preferences.

**The policy preference tradition**

The work of Bendor, Taylor and Van Gaalen (1987b) represents the transition from the Niskanenian assumption of budget maximising bureaucrats to agencies having specific programmatic or policy preferences. They model a political superior requesting a bureaucrat to prepare proposals to address a specific issue. The bureaucrat allocates resources to search for two policy alternatives which are then presented to the politician. The politician then either accepts one of the two proposals or asks other agencies to search for new alternatives (and pays a delay cost). Three models are introduced using different types of bureaucrats carrying out the search. In the first

---

\(^2\) Agencies producing large, lumpy projects where the demand is likely to be elastic, bureaucrats are likely to be more risk averse.
one, bureaucrats have only policy preferences. Unbiassed search is only likely if there is strong outside competition (i.e. the politician can rely on other agencies to produce valuable outside options) and the politician is patient and willing to pay a delay cost. If the bureaucrat wants only to maximise the bureaucrat or his utility is a combination of budget and policy preferences, the politician can design an incentive scheme (i.e. a budget schedule) to ensure that the bureaucrat carries out an unbiased search. Somewhat ironically, from a Niskanenian perspective, a budget maximising bureaucrat is likely to serve the politician’s interest better than one with only policy preferences.

After Bendor, Taylor and Van Gaalen (1987b), models in this tradition have assumed that the bureaucrats have only policy preferences. These preferences are characterised by an ideal point in a policy space and at the core of many of these models is the explanation of what determine agency discretion. In McCubbins (1985), a legislature, composed of \( n \) member with their ideal policies, sets the regulatory scope and the procedural requirements for an agency, composed of \( b \) bureaucrats with their ideal policies. Both the scope and the procedural requirements should expand as a result of greater uncertainty and conflict between legislators, but substantive discretion should decrease. McCubbins, Noll and Weingast (1989) use spatial analysis to show that an agency can implement a policy closer to its ideal policy by exploiting conflict among legislators and their inability to overrule agency’s decision with new legislation. Calvert, McCubbins and Weingast (1989) show that since, at least in the US, the chief bureaucrat is appointed by the executive and the legislature, agency discretion occurs only if there is uncertainty about agency's preferences or actions (the typical adverse selection and moral hazard problems in principal-agency theory). Finally, Epstein and O’Halloran (1994) introduce a model where the legislator’s choice variable is precisely agency

---

3 Hammond, Hill and Miller (1986) have first introduced this idea, which has been subsequently applied to many different institutional settings (Hammond and Knott, 1996, Steunenberg, 1996, Tsebelis, 2002, Tsebelis and Garrett, 2001). McCubbins, Noll and Weingast proceed on showing how the legislature uses administrative procedures to limit this agency drift.

4 On a similar issue, Banks and Weingast (1992) show that agencies are likely to be created in areas where bureaucrats’ informational advantage is minimal compared to their political value and where organised interest groups can monitor agency’s actions by providing independent sources of information. All these factors should lead to lower gains for the bureaucrats. This model builds on Banks (1989) and assumes budget maximisation.
discretion, intended as a segment of a one-dimensional policy space. A main result is that discretion increases with uncertainty and decreases with increased conflict between legislature and agent.\(^5\)


It is also worth mentioning the first applications of a delegation model to a parliamentary setting. Huber and Lupia (2001) evaluate how cabinet instability affects bureaucratic behaviour. They delineate the circumstances when cabinet instability has no effect on bureaucratic actions, when instability affects actions taken by the minister and the agent, but not policy outcomes, and when it also affects policy outcomes. Huber and Shipan (2002) generalise Epstein and O’Halloran’s model by applying it to both a presidential and a parliamentary setting. An important innovation is that they relax the assumption of bureaucratic compliance. The bureaucrat can choose to disregard the law and incur sanctions.

Finally, Bendor and Meirowitz (2004) represent probably the culmination of almost twenty years of study in this tradition. They develop three models with increasingly restrictive assumptions and with several extensions. The most general one relaxes the assumption of unidimensionality of policies and outcomes and of additive and uniformly distributed random shocks to policy. I will not summarise this work here, but one of the most important conclusion is that few results of the delegation literature relies on the assumption of risk aversion. Risk preferences do not affect the choice to delegate, the choice of the agent and the impact of increased conflict on the principal’s utility.\(^6\) Conversely, other results (e.g. that discretion increases with policy uncertainty) hinge on the crucial technological assumption that uncertainty is fixed relative to policies (i.e. the additive random shock).

---

\(^5\) Their work has been extended in Epstein and O’Halloran (1999a, 1999b). Volden (2002) generalises their model by considering the impact of the status quo, the delegation to an agency independent from the executive and the ability to expand and restrict discretion. Franchino (2000, 2005) presents applications to the European Union. Huber and McCarty (2004) analyse a model of delegation where bureaucratic capacity is low.

\(^6\) This does not mean however that risk preferences do not matter. It simply means that risk aversion is not a necessary condition for delegation.
The formal challenge to the bureau-shaping model

The bureau-shaping model sits somewhat uncomfortably between the two main traditions of modelling bureaucratic-political relations. Its main charge was against the Niskanenian assumption of budget maximisation while no attention has been paid to the policy preference tradition (simply because these works were contemporaneous to Dunleavy’s model). Yet, at the most fundamental level, each and every single work that I have cited in this short review (including the bureau-shaping model) aims to explain a simple matter: the circumstances under which bureaucrats affect policy outcomes. These outcomes are variously conceived as budget and output, a specific policy (resulting from different degrees of bureaucratic discretion) or an organisational structure, depending on the underlying bureaucratic objectives.

However, while the two traditions analysed here have reached a considerable level of sophistication, the modelling features of the bureau-shaping approach are still underdeveloped. As far as objectives are concerned, Dunleavy’s (1985: 320-4, 1991) bureaucrats prefer policy work and, hence, specific types of agencies and they pursue related strategies of internal and external reorganisation. One could then argue that we have a different type of bureaucrat, one who does not care about budget or policy. I disagree. If, following Horn (1995), the bureaucracy is the vehicle through which politicians, in order to enhance their re-election prospects, distribute policy benefits and costs to relevant constituents, reorganisation strategies of bureau-shaping bureaucrats can have two consequences. First, they may improve the efficiency in delivering these costs and benefits. These reorganisations are unproblematic from a political science perspective because any politician would welcome, if not initiate, these reforms. Bureaucratic and political incentives would be perfectly aligned and bureaucratic actions could not be conceived as independently affecting outcomes. Intriguingly, a true measure of bureaucratic power would be a bureaucratic-initiated reform that increases inefficiency in delivery and cannot be changed by politicians.

Second, reorganisations can affect the distribution of costs and benefits across constituents. This is much more interesting and we know, since McCubbins, Noll and Weingast (1987, 1989), that ‘structure and process’ have important distributive consequences and that choices of structure and process reveal underlying policy preferences (the literature on the choice of control mechanisms - police-patrols and fire-alarms - also clearly shows that structure matters). And yet, if the distributive consequences of reorganisations are in line with the distributive (thus, policy) preferences of politicians, bureaucratic actions would nothing but reflect politicians’ longa manu.
In sum, if we take seriously the assertion that different bureaucratic structures produce different policy outcomes with politically relevant distributive consequences, this implies that bureau-shaping bureaucrats have specific policy preferences and the bureau-shaping model should engage directly the literature of the policy preference tradition, and especially the works focusing on the policy implications of different bureaucratic structures.

On the other hand, where Dunleavy (1991) concedes that bureaucrats may have budget maximising objectives (that is, at the early stage of development of delivery agencies), his theory should confront directly the post-Niskanenian models which qualify substantially bureaucratic power.

The bureau-shaping model is also underspecified with regard to the three features in the central columns of Tables 1 and 2. It appears that at the core of the bureau-shaping model is a dyadic relation between a senior civil servant and a minister, though we do not know much about the distribution of information (a central feature to most models on bureaucratic-political relations), the choices available to these actors and the sequence of decisions. James (2003) is the first attempt at formalisation. Similarly to models of consumer choice under a budget constraint of neoclassical economics, James sees a bureaucrat maximising a utility function of budget and policy work time with a diminishing marginal rate of substitution and subject to a politically and exogenously set constraint. The bureaucrat chooses the optimal combination of budget and policy work time as a function of the relative importance that the politician assigns to budget and policy work. However, also James’ model is underspecified with regard to the above mentioned three features. Information is complete and, more importantly, the politician is not fully strategized in his model.

Of course, probably it was not Dunleavy’s original intention to produce a model with such a level of formality (considering also that there were only a handful of formal models at the time of his writing). Nevertheless, Dunleavy (1985: 300, 1991) puts forward specific expectations about the nature of state growth, namely about the types of bureaucratic organisations that are likely to emerge as a result of bureau-shaping strategies. However, if the expected distributive consequences of administrative reorganisations are in line with politicians’ preferences, we cannot make any statement about bureaucratic influence. If they are not, we need to clearly identify the sources and circumstances of bureaucratic power.

In conclusion, the formal challenge to bureau-shaping consists in making the crucial features of Tables 1 and 2 explicit so that expectations about bureaucratic influence are more precisely defined and easily testable.

---

7 Not too unlike the model of Bendor, Taylor and Van Gaalen (1987b).
Table 1. The Niskanenian Tradition: Main features of some budget maximising models

<table>
<thead>
<tr>
<th>Work</th>
<th>Bureaucratic objectives</th>
<th>Other actors and strategic environment</th>
<th>Distribution of information</th>
<th>Moves of the game</th>
<th>Expectations/Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Niskanen (1971)</td>
<td>Maximise total budget of the bureau during the bureaucrat’s tenure in office</td>
<td>The legislature with a demand for bureau’s output. Demand is a negative function of budget size</td>
<td>Legislature’s demand is common knowledge, cost function of output is bureau’s private knowledge</td>
<td>Bureau makes a take-it-or-leave-it offer (closed rule) to the legislature. Default: no budget and output</td>
<td>Excessive budget and output</td>
</tr>
<tr>
<td>Miller and Moe (1983)</td>
<td>As above (actors are risk neutral)</td>
<td>Two alternatives: a) as above, b) also legislature’s demand is private knowledge</td>
<td>Bureau announces cost function, legislature sets budget and output</td>
<td>a) Less excess budget, b) no excess budget</td>
<td></td>
</tr>
<tr>
<td>Bendor, Taylor and Van Gaalen (1985, 1987a)</td>
<td>As above (risk propensity considered)</td>
<td>As above (1985), only alternative b) (1987) Demand uncertainty is endogenised in the last model of 1987 article</td>
<td>As above, plus legislature sets up a monitoring and penalty system to reveal true cost (two types: exogenous and endogenous)</td>
<td>Bias is function of demand uncertainty, risk aversion, penalties, quality of monitoring</td>
<td></td>
</tr>
<tr>
<td>Banks (1989)</td>
<td>As above (actors are risk neutral)</td>
<td>Legislature’s demand is common knowledge, cost function of output is bureau’s private knowledge</td>
<td>Bureau requests budget, legislature accepts, rejects or monitors (can make a counterproposal in one procedure)</td>
<td>Less bias if monitoring cost is low, but, at low cost, more bias in case of a counterproposal</td>
<td></td>
</tr>
</tbody>
</table>
### Table 2. The Policy Preference Tradition: Main features of some policy preference models

<table>
<thead>
<tr>
<th>Work</th>
<th>Bureaucratic objectives</th>
<th>Other actors and strategic environment</th>
<th>Distribution of information</th>
<th>Moves of the game</th>
<th>Expectations/Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bendor, Taylor and Van Gaalen (1987b)</td>
<td>1) policy, 2) budget, 3) policy and budget</td>
<td>A politician maximising political benefits and a bureaucrat Politician designs incentive schemes to have unbiased search</td>
<td>Common knowledge of politician’s acceptance level of proposals and bureaucratic preferences</td>
<td>Politician requests proposals, bureaucrat searches alternatives, politician selects proposal or asks for more search</td>
<td>1) Biased search if poor outside competition and impatient politician, 2-3) Unbiased search is possible with a specific incentive scheme (budget schedule)</td>
</tr>
<tr>
<td>McCubbins (1985)</td>
<td>Policy</td>
<td>One agency with b bureaucrats and a legislature with n members Bureaucrats and legislators with ideal points in a policy space</td>
<td>Bureaucrats have knowledge of only a subset of the policy space</td>
<td>Legislature sets regulatory scope (subset of policy space) and procedural requirement (limits to choices within a subset)</td>
<td>More scope and procedural requirements, but less substantive discretion, in case of increased uncertainty and conflict between legislators</td>
</tr>
<tr>
<td>McCubbins, Noll and Weingast (1987, 1989)</td>
<td>As above</td>
<td>One bureaucrat and three legislators with ideal points</td>
<td>Common knowledge</td>
<td>Legislators set policy, agent implements it</td>
<td>Discretion increases with increased conflict among legislators</td>
</tr>
<tr>
<td>Calvert, McCubbins and Weingast (1989)</td>
<td>As above</td>
<td>One agency, one executive and a legislature with ideal points</td>
<td>a) common knowledge, b) agent’s preferences and actions are private knowledge</td>
<td>Legislature and executive choose agent, agent sets policy, legislature or executive may veto policy</td>
<td>a) no discretion, b) uncertainty about agent’s preferences and actions gives rise to agency discretion</td>
</tr>
<tr>
<td>Epstein and O’Halloran (1994)</td>
<td>As above</td>
<td>One agency, one legislature with ideal points</td>
<td>Uncertainty with regard to future states of the world</td>
<td>Legislature choose agency’s discretion, exogenous shock, agent sets policy</td>
<td>Agency discretion increases with uncertainty, decreases with increased conflict between legislature and agent</td>
</tr>
<tr>
<td>Bendor and Meirowitz (2004) (model A without extensions)</td>
<td>As above</td>
<td>Several agents, one boss with ideal points on a multidimensional space</td>
<td>Uncertainty with regard to future states of the world (but random shock is not additive nor uniformly distributed)</td>
<td>Boss decides whether to delegate, if she delegates she choose an agent, agent sets policy after observing the shock</td>
<td>Boss delegates even if she is not risk averse, closer agent is chosen, boss utility falls with increased conflict</td>
</tr>
</tbody>
</table>
References


