

## Bureaucracy, Its Reform, and Development \*

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### ABSTRACT

Few aspects of economic policy elicit more conflicting opinions than the role of bureaucracy in policy making and implementation. These range from Max Weber's picture of a rule-governed efficient institution, to the "Yes, Minister" caricature of one bound in complex red tape, operating inefficiently and serving the interests of its own officials. In this lecture I attempt a better understanding guided by the economics of incentives and organizations. I emphasize the multidimensional complexity of government bureaucracies – they are answerable to multiple political principals, must handle multiple tasks, have multiple levels of hierarchy, and so on – and suggest some institutional and organizational reforms that seem relevant for India and other less-developed countries that wish to sustain growth and progress to and beyond a middle-income level.

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## 1 INTRODUCTION

Few institutions provoke such extreme and contradictory reactions as do government bureaucracies. Weber (1946) offers the most favorable judgment. He characterizes "modern officialdom" as an efficient organization staffed by specially trained people who view their work as a career and a vocation, whose jurisdiction is structured by laws and regulations, and whose duties consist of applying clear general rules to specific cases. At the other extreme, many citizens who encounter officialdom view it as arcane, arbitrary, inefficient, and often corrupt. The British television comedies "Yes, Minister" and "Yes, Prime Minister" depict a brilliant caricature, where the high-ranking civil servants are an elite clique whose main (or only) objective is to protect its own people, privileges, and power, often in conflict with the will of democratically elected politicians and counter to public interest.

Which, if any, of these pictures is true, or close to the truth? In this talk I consider the question from the perspective of economic theories of incentives and organizations. I start with two self-evident propositions:

[1] Social and economic policy in any modern society has many dimensions. No policymaker, whether an autocrat or a democratically chosen legislature or executive, can implement policies directly. The tasks of collecting the requisite information, enforcing the rules, collecting revenues and disbursing payments, initiating and supervising public projects, and so on must be delegated to people and organizations that have or can develop special skills in these matters. Therefore a bureaucracy for policy implementation is unavoidable.

The distinction between policy making and policy implementation is often unclear. The legislature or the executive in charge of making policy can rarely specify everything in fine detail. Many of these details are left to the administrative agency, and open to change as circumstances warrant. And bureaucrats often control the information that politicians need for their decisions. Therefore the bureaucracy formally responsible only for policy implementation often makes a lot of policy choices and decisions in the course of its duties. I maintain the distinction here for conceptual convenience, but it gets blurred in reality. <sup>i</sup>

[2] Complexity and the multidimensionality of policy lead to asymmetry of information and limitation on control. Therefore the relationship between the makers and implementers of policy is one of principal and agent. Its outcome can never be an economist's idealized first-best; we must accept a constrained optimum. This places the questions of organization and reform of bureaucracy squarely in the domain of the economic theory of mechanism design.

My development of these propositions combines two strands of thinking and research. One is James Q. Wilson's (1989) rich description and deep analysis of government bureaucracies. I combine it with economic and political theories of incentives and organizations, such as Williamson (1985, 1996), Holmström and Milgrom (1991), Dixit (1996) and McCubbins, Noll and Weingast (1987). My analysis yields a few suggestions for design of new agencies and reform of existing ones.<sup>ii</sup> However, I can only touch a few themes from the vast subject. Therefore other scholars have plenty of scope for applying similar methods to the topics I have left out.

## 2 GOVERNANCE COSTS AND INEFFICIENCY

Wilson emphasizes that "one cannot explain the behavior of government bureaucracies simply by reference to the fact that they are bureaucracies; the central fact is that they are government bureaucracies" (1989, p. 125). Probably the most important distinction between government bureaucracies and the seemingly equally complex hierarchies of administration found in large firms is that the former are answerable to multiple constituencies. In the language of the economic theory of mechanism design, they are agents with multiple principals. In India as in the United States, the list of principals includes federal and state legislative, executive, and judicial branches of the government, representatives of labor and business, bond markets for agencies that have to raise their own capital, the media, other public forums including religious establishments, NGOs and other activist organizations,

and so on. And each of these principals, particularly the legislatures, may give voice to conflicting concerns of different interests. <sup>iii</sup>

In principle, all these principals can get together, negotiate their interests, and create one goal - a suitable weighted average of their distinct goals - that the agency would then be mandated to serve. The agency problem unavoidably created by information asymmetries and monitoring costs would remain, but the one-dimensional goal would make government bureaucracies more like firms, which are closer to having a single goal, typically profit.

However, political forums in India and the United States are not conducive to the striking of such binding agreements among the differing and often antagonistic interests. Each group can, and does, continue to fight to achieve a larger weight to its objective at the expense of the concerns of the other groups. Wilson (1989, pp. 299-300) gives a memorable analogy. "Policy making in Europe is like a prizefight. Two contenders, having earned the right to enter the ring, square off against each other for a prescribed number of rounds; when one fighter knocks the other out, he is declared the winner and the fight is over. Policy making in the United States is more like a barroom brawl: Anybody can join in, the combatants fight all comers and sometimes change sides, no referee is in charge, and the fight lasts not for a fixed number of rounds but indefinitely or until everybody drops from exhaustion. To repeat former Secretary of State George Shultz's remark, 'It's never over.' " India seems, if anything, worse than the United States in this regard.

The balance of interests in this political process will be shifting; therefore the constitution or legislation that creates longer-lived public agencies to perform these functions deliberately gives them vague goals or mandates, listing only very broad concerns that can be agreed upon, and leaving the determination of their precise meaning for later political forums. Wilson (1989, pp. 32-33) gives some examples in the United States: [1] Department of State (what would be called the Foreign Ministry in most countries): Promote the long-range security and well-being of the United States. [2] Department of Labor: Foster, promote, and develop the welfare of the wage earners of the United States. [3] Federal Communications Commission: Achieve the orderly development and operation of broadcast services.

Such agencies must constantly negotiate with all their stakeholders to translate these vague goals into more precise operational ones. The need for administrators and operators to devote time and effort to such activities to maintain external relations adds to the agencies' costs of transaction and governance. No private firm would take on the burden of satisfying so many diverse and vocal stakeholders and still expect to operate profitably. In cases where a public service has a goal that can attract broad agreement, for example collect garbage at a reasonable cost, the task can be outsourced to a private contractor.<sup>iv</sup> But many other essential public services and goods cannot be provided in this way. In other words, the high transaction costs of defining operational goals, and then the high governance costs of striving to meet them, help explain why certain activities fall to government bureaucracies in the first place.

This observation yields a new interpretation of the supposed inefficiency of government bureaucracies. The schematic Figure 1 extends the firms versus markets analysis of Gibbons (1999, 2005) to a three-way comparison that includes bureaucracies. The figure shows two attributes of tasks: their transactional and governance complexity on the horizontal axis, and the efficiency with which they are carried out on the vertical axis. For each of the three institutions - an anonymous market, a hierarchical private firm, and a government bureaucracy - efficiency declines as complexity increases; we see this in the three downward-sloping lines. Markets are the most efficient setting for the simplest tasks, but become less efficient than firms when complexity rises beyond a critical level. This is the basic insight of Coase (1937, 1990) and Williamson (1975, 1985, 1996). In the figure, markets are the more efficient forum for transactions with complexity less than the level corresponding to the point M; tasks with greater complexity are more efficiently carried out in firms than in markets. Williamson's "discriminating alignment hypothesis" (1996 p. 12) says that there is a tendency for transactions to be aligned with institutions in this cost-economizing manner. Thus the firms we observe are carrying out tasks and transactions along the segment MB. Therefore they exhibit less absolute efficiency than the markets we observe, which handle transactions along the segment OM. But this does not mean that the transactions

carried out in firms should be shifted to markets. If they were, their efficiency would drop even further along the dashed continuation of the line OM. In other words, there is no realistic or feasible way to reduce the inefficiency; in Williamson's terminology (1996, pp. 7-8), it is not "remediable."

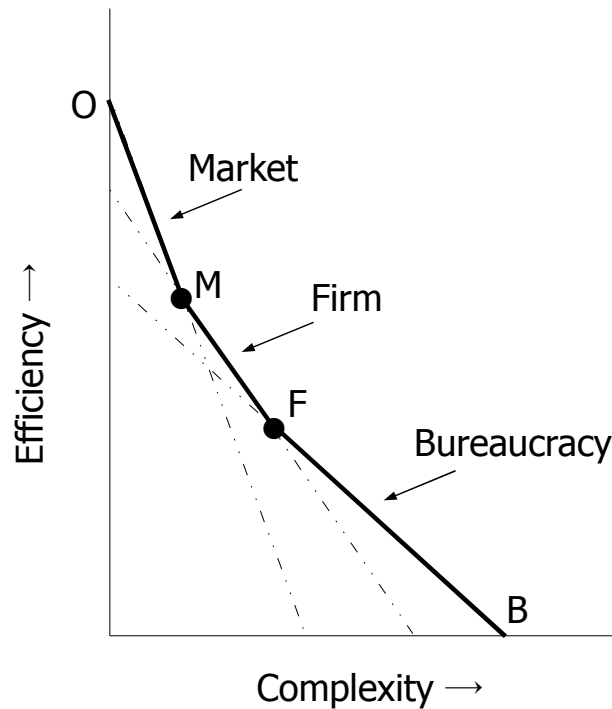


Figure 1 - Discriminating alignment of tasks and institutions

The same concepts help us compare bureaucracies with firms or markets. For very high levels of complexity that arise from irreconcilably conflicting multiple goals and severe information asymmetries, all institutions operate inefficiently, but government bureaucracies are relatively better for coping with this. When each task is allocated to the institution best suited to carry it out, we see bureaucracies performing tasks that are along the segment FB. Their efficiency is lower than that of tasks we see being carried out by firms along the segment MF or in markets along

the segment OM.<sup>v</sup> But this inefficiency is not remediable; privatizing these tasks would only make matters worse because private firms' costs of coping with the political conflicts would be even higher.

Of course, real-world bureaucracies can be, and often are, riddled with remediable inefficiencies in addition to the unavoidable ones arising from the transaction and governance costs of the complex issues they must handle. Therefore there is scope for improving their organization and functioning. I now turn to some of these issues.

### 3 INCENTIVES IN GOVERNMENT BUREAUCRACIES: SOME GENERAL IDEAS

The theory of incentives was developed in the context of firms and markets. The key idea was the power of an incentive: if an agent's action generates an extra dollar of expected profit for the principal, what fraction of this would be given to the agent? At the margin, giving the agent the whole dollar creates the fully optimal incentive. But various considerations dictate less powerful incentives; these include error in the measurement of performance, lack of perfect alignment between what the principal wants and the observable indicators of performance, the agent's aversion to risk, and so on.

The qualitative concept of power remains valid in other contexts of principal-agent relationships, but in many of them the payoffs are not monetary. This makes the design of incentives in the public sector harder in some respects, but in other respects it offers new opportunities that the private sector lacks.

In the realm of business and money, giving a dollar to the agent costs the principal exactly a dollar. But in other contexts, where payment can be in other "currencies", there is scope for more imaginative incentives that the agent values highly but the principal finds relatively cheap to give. People who have chosen careers in the public policy area usually value public recognition. Therefore honors such as knighthoods and OBEs in Britain and the various Padma awards in India serve to incentivize them, and are indeed used for this purpose.

The agency problem is less severe if the agent's value system is better aligned with the principal's. If the agent gets some direct utility from furthering the principal's objective, then the principal need not offer powerful costly incentive payments, and can attract the agent to work for him for a lower salary. The principal may be able to achieve this by selecting a suitable agent.

This is more likely to happen in the public sector than in private firms. It is difficult to imagine managers or workers in industry taking direct pleasure from increasing the owners' profits, although many firms do try to instill a company spirit in all its employees. By contrast, many managers and even front-line operators in government agencies get some natural direct pleasure from serving the public. Policy makers should therefore look for administrators who share these values. Career government bureaucrats, especially at higher levels, are often trained in special colleges, and selected through competitive examinations. These impart and test not only analytical and administrative skills, but also attitudes. Applicants to public policy courses are to some extent already self-selected to have some preference for public service; their training can reinforce this. Weber (1946, pp. 198, 240-242) stresses the importance of "thorough and expert training" of bureaucrats. But a good system of education of public policy administrators has the useful by-product of instilling in them a sense of duty to serve the public interest.<sup>vi</sup> Of course I am not saying that anywhere near 100% of government bureaucrats are driven by the desire for public service, rejecting all personal selfish considerations of salary, promotion, and honors. Far from it. But selecting and fostering such spirit is somewhat easier in the public sector than in private firms, and to the extent that the bureaucrats internalize the ultimate objective of the policy, they will perform a better job with weaker external incentives. Indeed, some recent research in behavioral economics, for example Benabou and Tirole (2003), shows that external materialistic incentives may even interfere with the intrinsic motivation.

Such internalization of an agency's objectives in its individual officials' and operators' minds can be reinforced by two forces: peer interaction, and by the agency's sense of mission.



In almost all organizations, approval of peers acts as a powerful motivator for all members. If selflessly serving the public interest is regarded as laudable by most of the staff in these organizations, then each individual member will benefit by adopting that ideal as a part of his personal value system, and this process will reinforce itself in a virtuous circle with positive feedback. Policy makers and heads of agencies that implement public policy should strive to cultivate such attitudes.

Wilson (1989) explains the concept of an organization's "mission" as follows:<sup>vii</sup> "Every organization has a culture, that is, a persistent, patterned way of thinking about [its] central tasks (p. 91). [M]any have several [cultures]. When a single culture is broadly shared and warmly endorsed it is a mission. The great advantage of mission is that it permits the head of the agency to be more confident that the operators will act [as the head would wish] (p. 109)." Extrinsic incentives become less important; information flows are less distorted. However, "[t]he advantages of a clear sense of mission are purchased at a cost. Tasks that are not defined as central to the mission are often performed poorly or starved for resources. [T]he ablest members will avoid assignment to these [peripheral tasks] (p. 110)". This has implications for the design of organizations. The tasks assigned to one agency should have enough coherence to enable a single culture and a sense of mission to develop. The agency should not be assigned other unrelated tasks that will erode its sense of mission. Using the income tax collecting agency to administer welfare payments would be an example of this: although the two have a common feature in that they involve collection or disbursement of money, they differ too much in their ethos and procedures to foster a single culture and a sense of mission. Using the army for policing an occupied territory is another example, and many countries have found this error turning their initial victories into costly pyrrhic ones. Agencies themselves value their culture and mission, and resist attempts to add such non-complementary tasks to its remit (pp. 107-109).

#### 4 MULTIPLE PRINCIPALS AND INCENTIVES

According to the economic theory of agency, the existence of many principals with diverse objectives greatly reduces the strength of incentives for the agent. This is partly because one principal may attach negative value to something that another principal values positively; for example in the United States religious groups oppose abortion while feminist groups favor a woman's right to choose, and both bring pressure to bear on health and welfare agencies that must make actual decisions on funding and facilities. But the effect is much stronger than the mere cancellation of positive and negative valuations when adding up the several principals' objectives. The principals compete in the incentives they offer the agent. The negative valuer tries to inflict penalties to offset the rewards that the positive valuer offers; this strategic game between them amplifies the mere adding up effect. In the Nash equilibrium of the principals' game, it turns out that the power of the overall incentive for the agent is almost inversely proportional to the number of principals (see Dixit 1996 Chapter 3, 1997). This result explains why large bodies such as the United Nations are often so ineffective; it also helps us better understand the paralysis of policy we often see in multi-interest polities in which the process of policy making resembles a barroom brawl as Wilson (1989, pp. 299-300) argued.

In such an organization with weak external incentives, the agent may have considerable independence to pursue his own intrinsic interests. Sometimes this may be a good thing. For example, during the last two decades technocratic civil servants in India have been able to pursue broadly sensible and consistent economic policies regardless of which party was in power, because the multi-party coalitions in power usually put only weak external pressure on them.

However, the theory of delegation in political science points to a different possibility about the effect of multiple principals. In this model, as developed by Gilligan and Krehbiel (1987), McCubbins, Noll and Weingast (1987, 1989) and others,<sup>viii</sup> the political principals do not offer the agency any outcome-based rewards or penalties. Instead, the agency has some freedom to pursue its own

interests, but the political principals can override its choices. How this works out depends on the specification of how this can be done.

I illustrate these ideas in an example. Consider two economic outcomes: growth and inequality. Suppose that up to a point, higher growth brings more inequality, but beyond that point, greater inequality is harmful for growth. This relationship is shown by the thick inverse-U shaped curve in Figure 2. Everyone knows this curve, but the details of policies required to implement any point on it are the preserve of a specialized agency, for example the Planning Commission. The government delegates the relevant economic policy to this agency, but can override its choices.

Suppose the government is a coalition of three interests. One is pro-growth; its most preferred point on the curve is at the peak, labeled G. The second is egalitarian; it likes the point I where the curve meets the vertical axis. The third is environmentalist. It does not want growth to be too rapid but has only moderate concern about inequality, and likes the point labeled E the best.

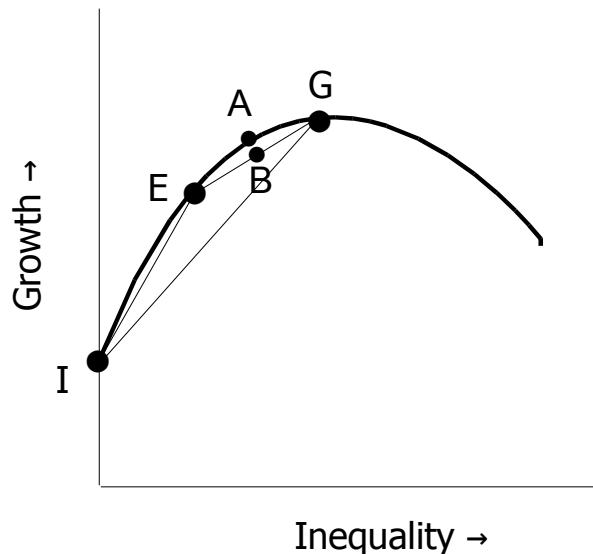


Figure 2 - Multiple principals and coalitions

The triangle formed by the most-preferred points of the three groups is the region where a shift from one outcome to another is bound to leave at least one of the groups worse off.<sup>ix</sup> Suppose unanimity in the political coalition is required to override the agency. Therefore, if the agency chooses any point within the triangle, its decision will stick. But suppose the agency's most preferred point is A. If it were to choose this policy, the government coalition would replace it with something within the triangle. A strategically savvy agency will foresee this, and choose a point within the triangle that comes closest to A, such as the point B shown in the figure. This choice will not be overridden. But this does not mean that the political principals are ineffective. The threat of legislative intervention alters the agency's choice; it must accept a more constrained optimum. But if the number of coalition members whose unanimous agreement is needed for intervention increases, this threat becomes less potent; multiple principals increase the agency's freedom.

Next consider an alternative scenario, where each of the groups in the coalition has veto power over the agency's choice. Of course the groups cannot all simultaneously insist on their most preferred points being implemented. But each will have some range of tolerance; if that is exceeded, it can bring make life sufficiently difficult for the agency and its leaders that they will avoid that route. Figure 3 shows such a situation. Thus each of the three political principals has (limited) veto power.

Suppose the pro-growth group will veto any proposal of the agency that yields growth below the level represented by the horizontal line G, the egalitarian group will veto any proposal to the right of the vertical line I, and the environmental group will veto any proposal above the vertical line G. When all three groups have such veto power, the agency is effectively constrained to choose a point from only the small segment of the feasible curve that lies between X and Y. If instead only the pro-growth and the pro-environment groups have veto power, then the feasible segment extends from X to Z. The greater the number of principals who have veto power, the smaller is the feasible set of choices for the agency.

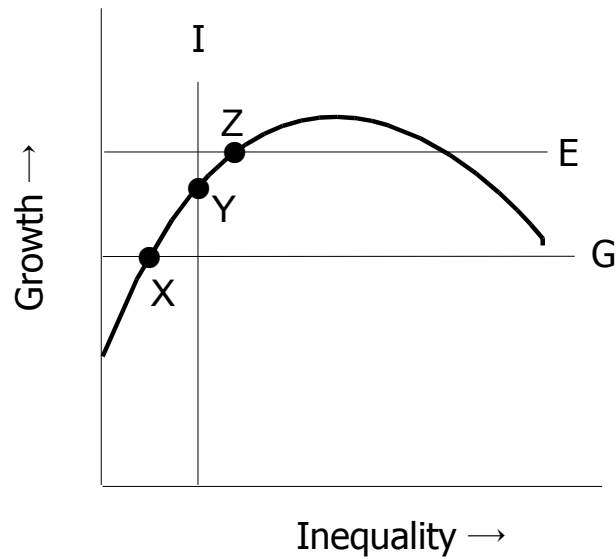


Figure 3 - Multiple principals with veto powers

This picture conforms well to Wilson's observation (1989, p. 115) that government bureaucracies operate in a severely constrained environment: "Control over revenues, productive factors, and agency goals is all vested to an important degree in entities external to the organization -- legislatures, courts, politicians, and interest groups. ... As a result, government management tends to be driven by the constraints on the organization, not the tasks of the organization. ... [W]hereas business management focuses on the 'bottom line' (that is, profits), government management focuses on the 'top line' (that is, constraints)."

The above analysis follows the standard theory of incentives in assuming a unidirectional process: the principals set in place the incentives and overriding rules, and the agent makes the policy proposal in response. But in reality there is room for some back-and-forth communication and negotiation. The agency may attempt to encourage formation of sufficiently powerful coalitions of political principals who will support its favored policy. If the opposition of some principals is based on their lack of full understanding of the policy and its outcomes, the agency may try to correct that. This can be problematic because the principals know the agency's

agenda and will be suspicious of the information they receive from it, but some such persuasion may be feasible. In other words, agencies can deploy some strategies for dealing with multiple principals, and systematic case studies of such efforts and their outcomes seems a good project for future research.

## 5 MULTIPLE TASKS

Implementation of policy even in specific areas - for example education, power supply, or transportation - involves thousands of distinct tasks. But the number of agencies is limited, so most agencies must handle multiple tasks. The main problem about incentives that arises from this fact is the tendency to attach stronger incentives to tasks that are better defined or more accurately measured. Typically, this means favoring quantity at the expense of quality. In service agencies it means favoring speed and accuracy at the expense of being helpful to clients. The principal should counter this tendency by relying on less objective but more comprehensive assessments of an agent's performance. This problem is not specific to government agencies, and is well understood and explained by Holmström and Milgrom (1991); therefore I do not dwell on it here.

The existence of multiple tasks and agencies raises another issue concerning the design of agencies. Any organization has a limited span of control; therefore the tasks must be split among different agencies. How, then, should the tasks be allocated among the agencies? This choice affects how incentives work.

The analysis hinges on a very basic economic distinction: substitutes versus complements. Two tasks are substitutes (resp. complements) if exerting more effort on one reduces (resp. increases) the marginal product of effort on the other. In the substitutes case, if the principal increases the agent's marginal reward for one task, the agent diverts effort toward this task. That reduces the marginal benefit from the other task, which is bad for the principal. Thus the agent's incentives for the two tasks interfere with each other. The result is that the principal must accept weak incentives all round. But if two tasks are complements, then the incentives offered for each have the additional benefit of increasing the marginal product on the other.

Incentives reinforce each other; the principal can offer powerful incentives for each task without fearing bad effects on the other.

The same distinction also helps in the prior stage of designing the structure of the organizations themselves: we should keep complements together and substitutes apart. Then each agency can have powerful incentives for all the tasks under its umbrella, without harming the incentives on substitute tasks, because those are performed by other agencies with their own separate incentive structure.

Moreover, tasks that are mutual complements look like one coherent task. This facilitates the agency's development of a culture and a sense of mission, which brings the added benefits discussed in Section 3.

## 6 MULTIPLE LEVELS

Most organizations that deal with implementation and management of plans and projects, whether in the public sector or in private firms, have many levels of superiors and subordinates. Principal-agent relationships arise at each level.

In one respect such hierarchies serve a useful purpose; the prospect of promotion within them serves as a powerful incentive that makes immediate monetary rewards unnecessary. But in other respects hierarchy can hinder good policy administration. Most importantly, lower levels can collude to defeat the purpose of the higher levels. In regulatory agencies, the operators stand in the relation of principals trying to control the actions of the individuals or businesses, who are then the agents. In exchange for bribes or kickbacks or promises of well-paid consultancies after retirement from government service, the operators may grant licenses, overlook violations of various laws and regulations, and so on. The operators' demand for such bribes will be higher if they are given more powerful incentives for proper performance of their job. Therefore paradoxically, higher-level principals who wish to reduce corruption have to use weaker incentives (and therefore a higher straight salary component) in the operators' compensation package (Laffont and Tirole 1993, chapters 11, 12). This acts as an "efficiency wage" - income sufficiently higher than the operator could earn elsewhere, plus the threat

of dismissal if caught misbehaving, to keep the operator honest. Some countries use such wage schemes for civil servants. <sup>x</sup>

Hierarchy is unavoidable in any complex administrative agency, but the hierarchy of government bureaucracies poses a peculiar conundrum: Who is whose agent? In my framework policy makers are the principals and administrators are the agents. But in a democracy, the policy makers - the legislature and the cabinet - are themselves agents of the citizens. Thus the citizens are the ultimate principals of the bureaucrats. But to a citizen dealing with, say, the internal revenue service or the driving license bureau, it sure doesn't feel like that. Although we collectively own these bureaus, we have delegated considerable powers to them, and allowed them to act as principals in their dealings with individual citizens in their domain of policy implementation. Thus the agency relationship is not only multi-tiered; it is circular.

To exercise their function as democratic principals, the citizens must use other parallel agents - watchdogs, ombudspersons, investigative committees, media, NGOs - to monitor the delegated agents in government bureaucracies. As with political principals who develop parallel sources of information to reduce the bureaucracy's attempt to control information, checks and balances are crucial.

## 7 INFORMATION AND INCENTIVE DESIGN

Optimal design of incentives depends crucially on the nature of information asymmetry between the principal and the agent. The standard theory, which was developed to fit the circumstances of business firms, assumed that the principal's bottom line (usually profit) was well-defined and observable. Even this was not as simple as it may seem. A firm's owners may want to maximize its long-run profit, but can only reward managers based on short-run profits, and the two may be imperfectly aligned. Also, it is not enough for the principal and the agent to be able to observe the measure on which incentive payments are based. If the contract between owners and managers are to be credible, the information has to be verifiable to the court or arbitration tribunal that may be called upon to enforce the contract in the event of a dispute.



Agencies in the public sector differ from this picture. In one respect they have an easier problem to solve. Since the political principals are the de facto enforcers of the contract, the more stringent requirement of verifiability may not be applicable. However, government bureaucracies often have vague and multidimensional goals, along with multiple principals to satisfy. This makes it much harder to devise and apply outcome-based incentives.

Wilson (1989, pp. 159-171) gives us a four-fold classification of information in government bureaucracies depending on whether the actions of their operatives and/or the outcomes of these actions are observable.<sup>xi</sup> I show his taxonomy in Figure 4.

|                  |                | Outcomes          |                   |
|------------------|----------------|-------------------|-------------------|
|                  |                | Observable        | Non-observable    |
| Agency's actions | Observable     | Production agency | Procedural agency |
|                  | Non-observable | Craft agency      | Coping agency     |

Figure 4 - Different types of agencies

Production agencies are the easiest to manage. For example, given good information on the activities of its auditors and on the amounts of taxes collected, the revenue agency can devise and implement efficient procedures for auditing. This still leaves some difficult issues unresolved; for example, if managers reward auditors on the basis of the amounts they collect per audit or per hour, the workers will get overzealous and antagonize the public.

Craft agencies are closest to the natural habitat for standard economic theory. Outcome-based incentives can be put in place, and the middle-level managers and line operators can be left to utilize their specialized local knowledge to direct their actions to the most efficient ways in which these outcomes can be achieved. There is no need for higher-level management to micro-manage day-to-day activities; indeed

that is more likely to lower the efficiency of the organization. Some functions of what would be craft agencies in a government bureaucracy, for example garbage collection, may be better outsourced to the private sector.

Production agencies must rely on specifying actions; they develop standard operating procedures. For example, managers of agencies that regulate work safety can specify what warning signs and labels must be displayed in factories and on equipment, what faults their inspectors should look for during factory visits, and what remedial action they should require. The outcomes - how many and how serious accidents are prevented by these actions - are very difficult to observe.<sup>xii</sup> This does not leave the operators much freedom in their day-to-day activities, which is likely to lead to conflicts with the management.

Coping agencies are the hardest to manage. "The managers of these agencies ... can try to recruit the best people (without having much knowledge of what the 'best person' looks like), they can try to create an atmosphere that is conducive to good work (without being certain what 'good work' is), and they can step in when complaints are heard or crises erupt (without knowing whether a complaint is justified or a crisis symptomatic or typical)" (Wilson 1989, pp. 168-169). In this situation, managers focus on the more easily observable dimensions and deny the front-line operators much freedom of action; the operators engage in immediate tasks they regard as essential while keeping the management satisfied about its focus. As with production agencies, this may create conflicts between managers and operators within the agency.

Some private agencies may also be of the coping kind. Wilson (1989, p. 169) gives the example of universities: "How do you improve your educational product when you can neither describe the product nor explain how it is produced?" But private agencies have two big advantages: they can observe whether their clients are voting with their feet and leaving, and if that is the case, they have more freedom to experiment to remedy the situation. Government agencies often have captive clients, and attempts at change are subject to political constraints. Therefore design and reform of coping agencies is particularly difficult. Alas, I have no solution to offer, but can at least point out the problem and its causes.

This classification can serve as a guide to the design of agencies. Their structure, and the incentives put in place for its managers and workers, should be consistent with the nature of information asymmetry that exists in the tasks of the agency. If possible, information flows should be improved to make incentives more effective. How this translates into specific recommendations must be specific to each case; at this level I can only point out the general principles.

Better information enables the political principals of a government agency to put in place more powerful incentives, and thereby better control the bureaucrats. Conversely, the bureaucrats may benefit by concealing information, or releasing selective information, thereby getting more power and freedom to pursue their own objectives, be they a quiet life or corrupt practices. Weber and "Yes, Minister" are in rare agreement on this. Weber says (1946, p. 233): "Every bureaucracy seeks to increase the superiority of the professionally informed by keeping their knowledge and intentions secret. ... The concept of the 'official secret' is the specific invention of bureaucracy, and nothing is so fanatically defended by the bureaucracy as this attitude." Compare this with Sir Humphrey Appleby's aphorism: "The Official Secrets Act is not there to protect Secrets, it is there to protect Officials." <sup>xiii</sup> The principals can counter this by developing alternative sources of information and advice. "The lord begins to surround himself with ... individual and proved confidants or even an assembly of such men" (Weber 1946, p. 234).

## 8 SUMMING UP

I have combined the works of Weber (1946), Williamson (1996), Wilson (1989) and others, with economic and political theories of information and incentives in Holmström and Milgrom (1991), McCubbins, Noll and Weingast (1987), Dixit (1996) and others, to obtain better understanding of the structure and performance of government bureaucracies. This yielded some suggestions for the design of incentives in these agencies, for the organization of new agencies, and for reform of existing ones. I conclude with a brief summary of these lessons.

Government bureaucracies are usually called upon to undertake functions that are too complex for the private sector because of their high transaction and governance costs, which often consist of the costs of satisfying multiple principals with conflicting interests. Therefore it is unrealistic to expect them to display the same levels of transactional efficiency we see in markets or private firms, which selectively undertake simpler tasks with lower transaction costs. But public agencies can also have other avoidable inefficiencies, which can be remedied by organizational reforms and design of better incentives.

The incentives in an agency should be aligned with the nature of information asymmetry in the tasks it performs. The outcome-based incentives that are common in private firms are often inappropriate in government bureaucracies because their outcomes are multidimensional, imprecisely measured, and differently evaluated by conflicting political principals. Monetary incentives can be supplemented by other mechanisms: selection and professional education of operators and officials imbued with a spirit of public service is important, recognition of such service through honors, and career tracks promising promotion within the agency, constitute useful non-monetary incentives.

In a diverse and conflict-ridden polity like India, too many principals in government are going to try to constrain the actions of its administrative agencies. If the agencies can be put in the hands of competent officials, then it would be better if its decisions can be overridden only by unanimity (or at least a large supermajority) of these political interests, not by too many interests each with a veto power. More generally, in Wilson's (1989, pp. 299-300) picture, India should make serious efforts to change its political process from the American-style "barroom brawl" model to the European "boxing match" model.

Each agency should be designed to perform a group of coherent, mutually complementary tasks, so as to foster development of a culture and a sense of mission, and to permit the extrinsic incentives for individual tasks to reinforce one another.

In a democracy, the citizens are the ultimate political principals, but must delegate the functions of making and administering policy to elected officials and

bureaucrats. In the normal course of the exercise of these delegated powers, the citizens become clients or agents of the officials. For the system to function as intended, the citizens must exercise oversight using alternative channels including the media and NGOs. The immediate political principals should similarly reduce their reliance on the bureaucrats' control of information by developing parallel sources.

Of course nothing is perfect, and transparency in a “barroom brawl” polity may merely lead to an even more chaotic situation where nothing ever gets done. But that only emphasizes the importance of trying to change the political process; it does not negate the importance of an informed citizenry. Sometimes authoritarian rulers may produce good economic outcomes, but it is difficult to tell in advance whether such a ruler will prove an efficient promoter of economic development or a kleptocrat who ruins the economy. A democracy with an informed citizenry may be too slow and frustrating, but on balance it is a safer bet.

In this lecture I could touch upon only a very small subset of the issues and ideas in Wilson's masterpiece, or in the literature on incentives and organization that has burgeoned in the last quarter-century. There is great scope for further research that can help in the design and reform of government bureaucracies. The need for conscious attention to such design and reform is important in developing countries whose societies and economies are changing rapidly, because their institutions and organizations will become suboptimal faster. And more than most countries, India stands to benefit from research in this area. Better policy design and administration will promote better economic development; there are also feedbacks in the other direction. "The bureaucratic structure everywhere is a late product of development" (Weber 1946, p. 244). India seems to be near this critical stage of getting to, and beyond, a middle-income level where demand for better public administration becomes strong. I hope Indian economists, political scientists, and students of public administration will take up these challenges.

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## NOTES

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i "We shall ask whether or not these structural principles, in turn, release specific economic effects. In doing this, one of course from the beginning has to keep his eye on the fluidity and the overlapping transitions of all these organizational principles. Their 'pure' types, after all, are to be considered merely as border cases which are especially valuable and indispensable for analysis. Historical realities, which almost always appear in mixed forms, have moved and still move between such pure types." (Weber 1946, p. 244)

ii I do not consider reform of specific policies. Instead I focus on reform of the organizations and institutions that make and administer policies. Good policies could emerge from weak or bad institutions by chance or strategy in individual cases, but deeper reform is essential to ensure lasting and continuing improvement in the whole policy process.

iii Waterman and Meier (1998) identify fourteen political principals (groups) that are effective in influencing the decisions of many government agencies in the United States. The line of demarcation between legislatures and courts – between making and interpreting laws – is blurred in practice, further complicating the principal-agent relationships.

iv Even this case is not completely clear-cut. Labor unions as political stakeholders may be more concerned about the employment and wages of their members, and resist privatization or cost-reduction.

v The precise positions of these lines, and therefore of the points F and M and of the optimal allocation of tasks between markets, firms, and bureaucracies, will depend on the circumstances of the country, including its other institutions, particularly its quality of contract governance. I am not sure whether developing countries will find it optimal to have more or fewer of tasks performed in private or public sectors, and for the former, in anonymous markets or firms. There are conflicting considerations. This seems a useful area for research.

vi See also Wilson (1989), especially pp. 59-60, 68.

vii See also Besley and Ghatak 2003 for related discussion.

viii A synthesis, extensions, and much related empirical work can be found in Epstein and O'Halloran (1999).

ix In the jargon of economics, it is the Pareto set (taking into account the preferences of the groups in the political principals' coalition, not the broader citizenry).

x Singapore is probably the most prominent among them, and although it fares very well in various corruption indices, the scheme is being clawed back because "most



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Singaporeans feel that their representatives have stretched that argument too far” (“Singapore politics: Falling on their wallets. Politicians take a pay cut—poor things,” *The Economist*, 7 January 2012). The future will reveal whether corruption increases as the efficiency wage declines.

<sup>xi</sup> Wilson uses the word "output" instead of action. As this is easily confused with outcome, I have not followed his usage.

<sup>xii</sup> Econometricians have a hard enough time inferring such cause-and-effect relationships from masses of data; for managers of an agency to do so in real time seems virtually impossible.

<sup>xiii</sup> <http://tvtropes.org/pmwiki/pmwiki.php/Main/OfficialSecretsAct>, accessed January 21, 2012.