CHAPTER 4

Administering

The heaviest element known to science was recently discovered ... tentatively named administratium. Since it has no electrons, administratium is inert. However, it can be detected chemically as it impedes every reaction it contacts.

According to the discoverers, a minute amount of administratium causes one reaction to take over four days to complete when it would have normally occurred in less than a second.

—Internet joke

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Government bureaucracy is usually good for a laugh, as the preceding Internet joke indicates, but the stakes are no joke. In the developed countries, taxes take half or more of the marginal earnings from the typical citizen and government expenditures (not counting transfers) account for more than one-third of the economy. Given the stakes, laughter should yield to analysis.

Having analyzed voting and bargaining in the two previous chapters, I turn to administering, which is the third fundamental process of government. Elections ideally transmit the preferences of citizens to politicians, who bargain and translate preferences into programs. Implementing programs in a modern state depends on an array of ministries, departments, and agencies. A democratic state should try to organize its bureaucracies to pursue explicit ends by efficient means.

Here is the complete joke as transmitted to me by Geoffrey Miller.

News Flash: New Chemical Element Discovered

The heaviest element known to science was recently discovered by investigators at a major U.S. research university. The element, tentatively named administratium, has no protons or electrons and thus has an atomic number of 0, but does have one neutron, 125 assistant neutrons, 75 vice neutrons and 111 assistant vice neutrons, which gives it an atomic mass of 312. These 312 particles are held together by a force that involves the continuous exchange of meson-like particles called morons. Since it has no electrons, administratium is inert. However, it can be detected chemically as it impedes every reaction it contacts.

According to the discoverers, a minute amount of administratium causes one reaction to take over four days to complete when it would have normally occurred in less than a second. Administratium has a normal half-life of approximately three years, at which time it does not decay, but instead undergoes a reorganization in which assistant neutrons, vice neutrons and assistant vice neutrons exchange places. Some studies have shown that the atomic mass actually increases after reorganization. Attempts are being made to determine how administratium can be controlled to prevent irreversible damage, but results to date are not promising.
Administration follows a hierarchical chain of command stretching from major politicians at the top to minor civil servants at the bottom. Administration proceeds primarily by orders from superiors to inferiors. Each link in the chain of command tries to impose its will on the next link. The interests of superior and inferior administrators, however, align imperfectly. Consequently, each link in the chain dilutes the purpose transmitted from the preceding link. The dilution of purposes gives each ministry and agency its own life and will.

In this chapter I develop a general theory of administration and predict the response of state agencies to law. I especially focus on the delegation of authority and the imposition of rules. I will consider the consequences of constitutional obstacles to delegating authority ("nondelegation doctrine") and constitutional requirements to follow rules ("legality"). After analyzing administrative processes in this chapter, I will consider the overall behavior of ministries and agencies in chapter 7.

Here are some examples of questions addressed in this chapter:

**Example 1:** In a typical state bureaucracy, the minister and assistants at the top are political appointees, whereas the workers below them are nonpolitical civil servants. If a minister replaces some top civil servants with political appointees, how will the ministry’s behavior change? Where should politics end and administration begin?

**Example 2:** A ministry uses its discretionary power to harm someone, who sues for relief. At the trial’s conclusion, the court orders the ministry to promulgate rules and follow them. How will replacing discretionary power with rules influence the ministry’s objectives?

**Example 3:** Some administrators have discretion and others must follow explicit rules. If the pace of innovation accelerates in a regulated industry, should discretion or legality increase?

**Parables of Administration**

Implementing government policy involves a chain of authority in which superiors delegate to subordinates. Thus the prime minister chooses a foreign minister to direct the foreign office, the foreign minister chooses an assistant to handle administration, and the assistant selects a civil servant to oversee daily operations. Economics models the delegation of authority as a *game* between a *principal* and an *agent*. The principal is the superior who sets policy and the agent is the subordinate who implements it. I will refer to all state organizations that implement policies as “agencies,” regardless of whether they are technically agencies, ministries, departments, commissions, or some other type of organization.

When discharging their responsibilities, the officials in a bureaucracy face two kinds of fundamental decisions that I model in two different games. First, an...
official can exercise power directly or delegate it to a subordinate.\(^2\) The delegation game shows how a rational principal makes this decision. The constitution and other fundamental laws sometimes require or prohibit the delegation of authority. The delegation game predicts some consequences of requirements or prohibitions on delegation.

Second, an official who delegates power can allow the subordinate full discretion in its exercise or constrain its exercise by imposing rules. The rule game shows how a rational principal makes this decision. Imposing a rule decreases flexibility and increases legality. Fundamental laws such as the constitution sometimes require officials to promulgate rules and follow them. The rule game predicts some consequences of discretion and legality in administration.

**Delegation Game**

Now I develop the delegation game. When a principal delegates power, a loyal agent uses the power to implement the principal’s policy. In reality, however, many agents fall short of this ideal, especially when their interests diverge from the principal’s interests. Factors affecting the fidelity of agents include their character, their willingness to take risks, the principal’s ability to monitor the agent’s behavior, and the future need of the principal and agent for each other. Instead of discussing many factors, I will reduce the problem of delegation to its simplest elements and analyze one fundamental trade-off.

A rational, amoral agent will divert resources to his advantage when the probability of detection by the principal is low. When the project enjoys good luck, a high level of productivity disguises the agent’s diversion of resources. Thus, the agent will divert resources when the project enjoys good luck with sufficiently high probability to disguise diversion. Knowing this, the principal in charge of such a project will exercise power directly. Conversely, the principal will delegate power to the agent when the project will suffer bad luck with sufficiently high probability to reveal diversion. Knowing this, the principal in charge of such a project will delegate power to the agent.

Figure 4-1 concretely embodies these facts in a game tree. In the first branching of the tree, the principal decides whether to exercise power directly or delegate it. If the principal delegates power, the agent can either implement the principal’s policy (loyal agent) or divert resources to his own advantage (disloyal agent). After the agent chooses an action, random events result in a good state or a bad state of the world. To illustrate, most state administrators cannot predict or control elections or the stock market. For convenience, I describe such random events as nature’s choosing between a good or bad state. Finally, in the right side of figure 4-1, the game tree ends in the payoffs to the principal and agent, which I explain later.

Having described what the principal and agent do, now I describe what they know. The parties know the structure of the game as depicted in figure 4-1, but each player may or may not know the details. The principal who delegates

\(^2\) Mashaw 1985.
knows fewer details than the principal who exercises power directly. To stylize this difference, I assume that the principal who exercises power directly can observe the state of nature, whereas the principal who delegates power cannot observe the state of nature.

Now I relate these assumptions to the right side of figure 4-1 where the game tree ends in payoffs. At each terminal point on the right side of figure 4-1, the principal's payoff is first in the parentheses and the agent's payoff is second. The absolute values of the payoffs signify nothing, but the relative magnitudes depict important facts. First consider the payoffs from delegating power. After delegation, the principal does not observe the agent's choice of an action or nature's choice of a state. If the principal's payoff is very high, as indicated by the number 1 in figure 4-1, then the principal can infer that the agent was loyal and lucky. If the payoff is very low, as indicated by 0, the principal infers that the agent was disloyal and unlucky. If, however, the payoff is modest, indicated by .5, the principal cannot infer whether the agent was loyal and unlucky, or disloyal and lucky.

The summary of the payoffs in figure 4-2 shows what the principal can infer from what he observes. The values 1 and 0 are unique payoffs that appear only once in figure 4-2, so the principal can infer the agent's action and nature's state from these payoffs. Good luck reveals loyalty and bad luck reveals disloyalty. In contrast, .5 appears in two of the cells in figure 4-2. This nonunique payoff does not support an inference about the agent's act or nature's state. Bad luck disguises loyalty and good luck disguises disloyalty.
Instead of delegating power, the principal can exercise it directly. By exercising power directly, the principal in figure 4-1 receives .7 in a good state and .3 in a bad state. For a given state of nature in figure 4-1, the principal who exercises power directly receives less than he would receive from delegating authority to a **loyal** agent. The principal gains from delegating to a loyal agent by saving time and effort. Conversely, the principal who exercises power directly receives more than he would receive from delegating authority to a **disloyal** agent. The time and effort spent by the principal on the direct exercise of power is less than the resources diverted by a disloyal agent.

When the principal exercises power directly, the agent receives his basic payoff, which I designate as 0. Delegating authority to the agent increases his responsibility and opportunities. After delegation, the agent who is loyal or lucky receives more than his basic payoff. Specifically, the loyal and lucky agent receives 1, the loyal and unlucky agent receives .5, and the disloyal and lucky agent receives .5. In contrast, the agent whose bad luck reveals his disloyalty receives less than his basic payoff, specifically -.5.

**SOLUTION**

The delegation game’s solution is a pair of strategies that maximize each player’s expected payoff, given the strategy of the other player. To find the game’s solution, proceed recursively (backward in time) from the last decision to the first decision. Assuming the principal delegates, the last decision is the agent’s choice between implementing and diverting. The agent’s payoff from diverting exceeds his payoff from implementing in a good state of nature, whereas the opposite is true in a bad state. So the agent’s best strategy depends on the relative probability of a good state and a bad state of nature. To be precise, the rational agent diverts when the probability of a good state exceeds \( \frac{1}{2} \), and implements otherwise.  

\[ \text{Implementing yields the agent's expected payoff of } 1p + .5(1-p). \]

\[ \text{Diverting yields the agent's expected payoff } 1.2p - .5(1-p). \]

Implementing and diverting yield the same expected payoff to the agent when \( p \) solves the following equation:

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**Fig. 4-2 Principal’s Payoff From Delegating**

<table>
<thead>
<tr>
<th>Nature</th>
<th>good (lucky)</th>
<th>bad (unlucky)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement (loyal)</td>
<td>1 (reveal)</td>
<td>.5 (hide)</td>
</tr>
<tr>
<td>Divert (disloyal)</td>
<td>.5 (hide)</td>
<td>0 (reveal)</td>
</tr>
</tbody>
</table>

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3 The following table summarizes the agent’s payoffs.

<table>
<thead>
<tr>
<th>Agent’s Act</th>
<th>Implement (loyal)</th>
<th>Divert (disloyal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>State of Nature</td>
<td>good</td>
<td>bad</td>
</tr>
<tr>
<td>good</td>
<td>1</td>
<td>.5</td>
</tr>
<tr>
<td>bad</td>
<td>1.2</td>
<td>-.5</td>
</tr>
</tbody>
</table>

4 Let \( p \) denote the probability that the state of nature is good, and let \( 1 - p \) denote the probability that the state of nature is bad. Implementing yields the agent’s expected payoff of \( 1p + .5(1-p) \). Diverting yields the agent’s expected payoff \( 1.2p - .5(1-p) \). Implementing and diverting yield the same expected payoff to the agent when \( p \) solves the following equation:
Now consider the principal’s best strategy. When the agent diverts, the principal’s best strategy is “don’t delegate.” Conversely, when the agent implements, the principal’s best strategy is “delegate.” So the rational principal exercises power directly or delegates depending on the probability that nature will disguise or reveal the agent’s act. In this example, the rational principal exercises power directly when the probability of a good state exceeds $\frac{5}{6}$, and delegates otherwise. The game’s solution can be summarized as follows:

$$p \geq \frac{5}{6} \Rightarrow \text{principal exercises power directly}$$
$$p < \frac{5}{6} \Rightarrow \text{principal delegates, agent implements}.$$

Note that this “solution” assumes a contract between the principal and agent with invariable terms. Civil service rules and union rules severely constrain contracts within government. Computing the optimal contract without constraint on the terms poses a different, more complicated problem from the one I solved.

GRAPH

Figure 4-3 graphs the trade-off characterized by the delegation game. The horizontal axis represents the proportion of power directly exercised by the principal. Moving from left to right on the horizontal axis, the principal’s direct exercise of power increases from 0 percent to 100 percent, and, conversely, the principal’s delegation of power decreases from 100 percent to 0 percent. The

$$lp + .5(1 - p) = 1.2p - .5(1 - p).$$

Solving this equation yields $p = \frac{3}{4}$, which is the tipping point discussed in the text.

5 This conclusion follows immediately from the agent’s payoffs as depicted in the following table.

<table>
<thead>
<tr>
<th>State of Nature</th>
<th>Principal’s Act</th>
</tr>
</thead>
<tbody>
<tr>
<td>good</td>
<td>delegate don’t delegate</td>
</tr>
<tr>
<td>bad</td>
<td>5</td>
</tr>
</tbody>
</table>

6 This conclusion follows immediately from the agent’s payoffs as depicted in the following table.

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<th>State of Nature</th>
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<tr>
<td>good</td>
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<tr>
<td>bad</td>
<td>.5</td>
</tr>
</tbody>
</table>

7 In a general game of contracting, the parties could adjust the payoffs by making side payments, which could improve their incentives. To illustrate by using figure 4-1, the principal and agent both prefer a contract in which the principal promises to pay the agent a bonus of .3 conditional on the agent’s receiving a payoff of 1. This contract is optimal because it always induces the agent to implement as required for efficiency, rather than divert. State bureaucracies, however, contain many rigidities and nontransferable benefits that preclude optimal contracting. In general, the typical obstacles to an optimal contract include the principal’s limited information and the agent’s risk aversion or inability to borrow (Shavell 1979).
vertical axis in figure 4-3 represents two kinds of marginal cost. Moving from left to right, the principal devotes more time to supervising the project, so total and marginal administrative costs typically increase, whereas total and marginal diversion costs typically decrease.\(^8\)

A principal who wants to minimize total costs equates the marginal cost of administrative and diversion. Such a principal prefers the level of delegation indicated by the intersection of the administrative cost curve and the diversion cost curve in figure 4-3.

As the probability \(p\) of a good state of nature increases, good luck disguises disloyalty and agents divert more resources. Figure 4-3 represents this fact by shifting up the diversion cost curve as the probability of good luck increases from \(p_{\text{low}}\) to \(p_{\text{high}}\). Notice that an increase in the probability of a good state of nature from \(p_{\text{low}}\) to \(p_{\text{high}}\) causes the principal's optimal level of delegation to shift down from 50 percent to 25 percent. In general, luck that disguises the behavior of agents makes delegation less attractive to principals.

EXAMPLE

Here is a concrete example of the delegation game. Assume that the minister of health (principal) develops a plan to maximize the number of kidney transplants obtained by spending a given sum of money. The plan's success depends on cooperation by the nurses. If the nurses cooperate (good state), the plan will succeed. If the nurses resist (bad state), the plan will fail. The minister cannot control or predict the response of the nurses (nature).

The minister can implement the plan directly or delegate power to her chief administrator (agent). If the minister directly implements the program, she receives a high payoff if she is lucky (.7) and a low payoff if she is unlucky (.3). Alternatively, the minister can delegate power to the administrator, which saves

\(^8\)Marginal diversion costs typically decrease, and marginal administration costs typically increase, because the principal typically supervises first those activities where diversion is worst and administrative costs are least. These facts justify the standard assumption of convexity.
the minister's valuable time. The administrator, however, would prefer to divert some funds from kidney transplants to his special field of emergency care. After delegating power, the minister is too remote from daily operations to observe the behavior of the administrator and nurses. If the program fails badly (0), the minister will infer correctly that the unlucky administrator diverted funds, and so the minister will punish the disloyal administrator (−5). If the program succeeds highly (1), the minister will correctly infer that the lucky administrator implemented the program loyally and reward the loyal administrator (1). If the program succeeds modestly (.5), the minister will not know whether the administrator diverted funds and enjoyed good luck (1.2) or implemented the program and suffered bad luck (.5).

If the probability is sufficiently high that good luck will disguise diversion, the self-interested administrator prefers to divert funds, so, anticipating this fact, the minister will implement the program directly. Conversely, if the probability is sufficiently high that bad luck will reveal diversion, the self-interested administrator will implement the minister's plan, so, anticipating this fact, the minister will delegate power to the administrator.

Another example concerns monitoring the behavior of state agencies by courts. If the probability is sufficiently high that bad luck will reveal wrongdoing by the state agency, courts may prefer to give wide discretion to the agency. To give wide discretion, courts will defer to the agency and dismiss most suits alleging wrongdoing. If, however, the probability is low that bad luck will reveal wrongdoing, courts may prefer to monitor carefully the behavior of an agency. To monitor the agency, courts will allow most suits alleging wrongdoing by the agency to proceed to trial.

**SIGNIFICANCE OF DELEGATION GAME**

Having developed a model to analyze delegation, I next consider its legal significance. Constitutions and other fundamental laws usually allow officials to delegate power and sometimes require officials to exercise powers directly. A *nondelegable* power has consequences predicted by the delegation game. With unrestricted delegation, the principal balances diversion costs and the opportunity cost of his time spent on administration, as indicated in figure 4-3. With a prohibition against delegation, the principal may not strike this balance. A binding prohibition forces him to use time on administration whose value to him exceeds the cost of the precluded diversion. Prohibiting delegation imposes a larger loss on the principal when he wants to delegate more power, and he wants to delegate more power when the fear of bad luck deters agents from diverting resources.

Figure 4-3 illustrates these facts. To be concrete, assume that the probability of good luck equals $p_{good}$, so the principal's preferred level of delegation equals 25 percent. Now assume that laws prohibit the official from delegating power, so delegation falls from 25 percent to 0 percent. The prohibition against delegation imposes a total loss on the principal indicated by area A in figure 4-3. If the
probability of good luck falls from \( p_{\text{high}} \) to \( p_{\text{low}} \), the prohibition against delegation imposes additional costs on the principal. With \( p_{\text{low}} \), the principal prefers to delegate 50 percent of his power. Thus an effective prohibition against delegation imposes costs on the principal equal to the area \( A+B+C \) in figure 4-3.

I used figure 4-3 to depict the cost imposed on the principal by a nondelegation rule. As explained, the costs rise with the value of the principal’s time and the probability that bad luck will reveal diversion of resources. To illustrate, the constitution may require a high court to decide appeals or certain kinds of cases, rather than refer them to a lower court. For example, in the U.S. federal system, the circuit courts must accept all appeals on questions of law, not delegate the decision to the lowest-level courts. The circuit court’s loss from such a requirement increases with its load of cases, which increases the opportunity cost of its time. Similarly, civil courts in European countries often have to refer constitutional questions to the constitutional court, and the constitutional court cannot delegate constitutional questions to lower courts. The constitutional court’s loss from such a requirement increases with its load of cases.

The executive’s responsibility provides another example of nondelegation. If the constitution imposes on the executive the duty to execute the laws, as with Article 2 of the U.S. Constitution, then the executive cannot delegate power in a way that would undermine this duty. As the extent of delegation increases, the constitution may impose limits. The executive’s loss from such restrictions increases with the opportunity cost of its time and its ability to monitor lower levels of administration. In general, the nondelegation doctrine imposes larger costs on the principal when diversion by the agent is less likely.

Many constitutions give the legislature exclusive power to tax, so administrators cannot impose new taxes. The courts may rule that the legislature cannot delegate its taxation powers to administrators. Circumstances sometimes arise, however, in which administrators make decisions about fees that resemble taxes. The courts may decide that new fees are in fact new taxes, thus prohibiting administrators from imposing the new fees. Instead of the administrators setting the new fees, the legislature must set them. As before, the legislature’s loss from this restriction on delegation increases with the opportunity cost of its time and its ability to monitor fee-setting by administrators.

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9 U.S. federal courts have three levels: trial (district courts), appeals (circuit courts), and the Supreme Court. The courts of appeal (circuit courts) must accept all appeals from trial courts with a justiciable issue. In principle, trial courts decide the facts and appeals courts decide the law. In practice, however, the federal courts of appeal achieve some control over their dockets by declaring issues appealed to them as “matters of fact” rather than “matters of law,” thus assigning the issue to the trial court. Unlike the appeals courts, the Supreme Court has full control over its docket of cases. The Supreme Court accepts approximately 1.5 percent of appeals to it, thus delegating the rest of the decisions to an intermediate court. (Each year the November issue of the Harvard Law Review provides data on appeals and acceptances for the U.S. Supreme Court.)

10 This issue is explored in *Industrial Union Dept., American Petroleum Institute*, 448 US 607, 100 SCt 2844, 65 LEd2d 1010 (1980).

In another example, this one from Germany, the "statute against literature threatening the youth" (mainly directed against free advertisement for pornography and positive descriptions of violence) must contain exact provisions regarding how the members of the censoring body are selected. The legislature cannot delegate the task of specifying these provisions. On the other hand, the legislature can delegate choice of the orthography of the German language taught in schools.

**Benefits of Nondelegation**

I have explained the loss imposed on an official by a rule prohibiting delegation. Sometimes, however, society gains from the such a restriction. Now I turn from the costs of nondelegation borne by officials to possible public benefits.

So far I have interpreted "diversion" in the delegation game as the agent's following his preferences rather than implementing the principal's policy. A more sinister interpretation concerns corrupt officials diverting resources for personal gain. Corruption has a long tradition in state administration. In Europe and the United States in the past, many state officials received bribes, not wages, for their work. To illustrate, in seventeenth-century England, Pepys, whose reform of the admiralty allegedly created Britain's first modern civil service, was told that the pay for his first admiralty job was what he could make of it.

Corrupt officials, who occupy some offices in all countries and most offices in some countries, break laws and distort policies in exchange for bribes. By diffusing and obscuring responsibility, delegation increases opportunities for corruption. Bribe-taking by an agent may harm the public more than it harms the principal. Consequently, the public might benefit from more direct administration by the principal than he would voluntarily choose. (Later in this chapter I analyze a more important mechanism for reducing corruption, specifically, replacing individualized decisions with rules.)

Now I turn to a different kind of public gain from nondelegation. Delegation of power can occur within a branch of government or between branches of government. Intrabranch delegation preserves the constitutional separation of powers, whereas interbranch delegation may violate the constitutional separation

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12 *Entscheidungen des Bundesverfassungsgerichts* (Constitutional Court decisions), vol. 83, 130.
13 Constitutional court file I BvR 1640/97. Thanks to Georg von Wagenheim for this and the preceding citations.
14 Thanks to Dan Rodriguez for help on this section.
15 "This morning my Lord [Sandwich] carried me by coach to Mr. Crews, in the way talking how good he did hope my place would be to me and, in general, speaking that it was not the salary of any place that did make a man rich, but the opportunities for making money while he is in the place" (Latham and Matthews; 1970, p. 222). Thanks to Peter Hacker for this citation.

Here is a popular joke in Mexico.

1st boy: What do you want to be when you grow up?
2nd boy: President of Mexico.
1st boy: Then I want to be your brother.
of powers. To illustrate, if the constitution separates courts and legislature, a high court can remand a decision to a lower court, but a high court cannot remand a legal decision to the legislature, and the legislature cannot assign a political decision to a court.

Disputes over interbranch delegation often involve ambiguity in the definition of constitutional powers. To illustrate, Article I of the U.S. Constitution gives the legislature the exclusive power to make laws, and the legislature cannot delegate this power to the executive. Does the executive “make laws” for purposes of the Constitution by imposing wage and price controls on the economy, or by imposing burdensome regulations on employers? Does the comptroller general “make laws” by imposing limits on government expenditures to reduce the deficit?

Similarly, the German government or Parliament must decide on disputes that are “political,” whereas the German constitutional court must decide disputes that are “constitutional.” Thus the question of who must decide whether or not nuclear medium-range missiles may be deployed in Germany turns on whether it is a political or legal question.

In effect, interbranch delegation revises the constitution without following the procedures prescribed for a constitutional amendment. The theory of cartels explains the resulting harm. Like vertical mergers in industry, intra-branch delegation typically does not affect the concentration of state powers. Like horizontal mergers in industry, interbranch delegation can concentrate state powers. Concentrating powers removes obstacles to a political cartel. To illustrate, courts would destroy the rule of law by delegating their power over legal disputes to the executive. Prohibiting interbranch delegation helps maintain competitive government, which defines democracy.

Just as the members of an economic cartel favor restraining trade, the officials who want to form a political cartel will favor interbranch delegation of power. For example, if the president’s party enjoys a majority of seats in the legislature, then the legislature may eagerly vote to give some of its power to the president.

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16 Note that constitutions sometimes separate powers within the same branch, in which case interbranch delegation can undermine the constitutional separation of powers. To illustrate, if the constitution creates a bicameral legislature, then one chamber may be unable to relinquish some of its power to the other chamber. See Immigration and Naturalization Service v. Chadha, 462 US 919, 103 SCt 2764.


19 Entscheidungen des Bundesverfassungsgerichts (Constitutional Court decisions), vol. 68, p. 1: “The constitutional court must not review foreign and defense policy unless the policy is obviously arbitrary. Further, the court decided that the government may decide on foreign and defense policy on its own, unless binding treaties are concluded.” Thanks to Georg von Wagenheim for this information.

20 Note that interbranch delegation can disperse powers rather than concentrate them. For example, a relatively powerful executive might delegate powers to a relatively weak legislature. The usual case, however, goes in the opposite direction.
By reducing competition, interbranch delegation of power benefits politicians in the ruling party for the same reason that it harms the public. The fact that officials in the legislature and executive both want to concentrate power without formally revising the constitution is no reason for the constitutional court to allow it. Courts do not require a disagreement between the executive and legislature to justify policing the separation of their power.21

The "separation of powers" means separate institutions sharing powers (Neustadt 1986). When separate institutions share powers, action requires cooperation among them. Cooperation often proceeds through bargains. By separating powers, the constitution makes government proceed through bargains rather than orders. By policing the separation of powers, the courts maintain the bargaining strength of each branch against the others. According to the bargain theory of democracy, the courts should aim to preserve bargaining power, but not obstruct cooperation.

Questions

1. Explain how good luck in a project disguises diversion of resources.
2. Explain why prohibiting delegation costs the principal more when good luck becomes less likely.
3. Figure 4-1 assumes a fixed penalty for detected diversion. Assume the penalty increases. Does the "tipping value" increase or decrease?
4. Figure 4-1 assumes that the principal who delegates cannot observe the agent or nature. Discuss alternative ways of monitoring the agent, such as periodic observations of the state of nature or random observations of the agent’s decisions.
5. Footnote 4 computes the probability of a good state at which a rational agents tips between implementing and diverting. Assume that the agent’s highest possible payoff for undetected diversion of resources rises from 1.2 to 1.4. Compute the new tipping value of p.
6. An economic cartel reduces the supply of private goods to increase profits, whereas a political cartel often increases the supply of public goods to enlarge the state. Economists have a long history of estimating the economic costs of private monopolies, whereas no accepted methodology exists for estimating the economic costs of political cartels. Discuss some ways to measure the economic costs of reducing political competition by interbranch delegation of power.

Rule Game

After delegating responsibility for implementing a policy, should the principal give the agent discretion or require the agent to follow a rule? Principals

21 In contrast, Choper 1980 argues that disagreement between branches typically justifies intervention by courts.
impose rules on agents for a variety of reasons, such as reducing transaction costs, improving coordination, increasing predictability, reducing disparity, and facilitating transparency. Instead of discussing many reasons, I will reduce the problem of imposing rules to its simplest elements and analyze one fundamental trade-off. Imposing rules on agents reduces their opportunities to divert resources, whereas giving discretion to agents allows them to respond flexibly to changing circumstances. Diversion of resources is the cost of flexibility in an organization.

I will formulate the rule game to analyze the trade-off between diversion and flexibility. In the delegation game, the agent acts and then nature chooses a state of the world. The rule game reverses the order: nature chooses a state and then the agent acts. Knowing nature's state, the agent who enjoys discretionary power can respond flexibly to events as they develop. The principal wants the agent to reallocate resources when unexpected events occur, and the principal does not want the agent to divert resources when events occur as expected. Discretion gives the agent control over the decision, whereas a rule requires the agent to implement the principal's plan in all circumstances. The principal must decide whether to give the agent discretion or impose a rule.

Figure 4-4 depicts the rule game concretely as a tree. First, the principal decides whether to give the agent discretion or impose a rule. Second, nature chooses a good or bad state. Third, if the agent has discretion, the agent decides whether to follow the principal's plan or divert resources. Alternatively, if the principal imposes a rule, the agent must follow the principal's plan, regardless of the state of nature.

The payoffs from different paths in the game tree appear in parentheses at the right side of figure 4-4, with the principal's payoff given first and the agent's
payoff second. As with the delegation game, relative payoffs illustrate important facts, whereas absolute payoffs signify nothing. The principal’s plan is designed for a good state. If a good state materializes, the payoff to the principal is higher when the agent implements the principal’s plan (1), instead of diverting resources to an alternative project (.5). If a bad state materializes, however, the payoff to the principal is higher when the agent reallocates some resources to the alternative project (.5) instead of implementing the principal’s plan (0). Thus, a loyal agent with discretion implements the principal’s plan in a good state and reallocates resources to an alternative project in a bad state.

The agent’s interests do not coincide perfectly with those of the principal. In a good state, the agent’s payoff is higher when he diverts resources to his preferred project (1.2) instead of implementing the principal’s plan (1). In a bad state, the agent’s payoff is also higher when he reallocates resources to his preferred project (.5) instead of implementing the principal’s plan (0). The agent’s dominant strategy is to divert resources, which serves the principal in a good state and diserves the principal in a bad state.

Now I turn from what the actors do to what they know. As in the delegation game, the rule game assumes that the principal who delegates a task to the agent knows the entire payoff matrix and observes his own payoff, but he does not observe the state of nature or the agent’s act. Figure 4-5 summarizes what the principal can infer from what he observes. When his payoff equals 1, the principal can infer both the state of nature (good) and the agent’s act (implement). Similarly, when his payoff equals 0, the principal can infer the state of nature (bad) and the agent’s act (implement). When his payoff equals .5, however, the principal cannot infer whether the agent’s reallocation was loyal (bad state) or disloyal (good state).

**SOLUTION**

The rule game’s solution is a pair of strategies that maximize each player’s expected payoff, given the strategy of the other player. As before, I solve the game recursively. Assuming the principal gives discretion to the agent, the last decision in time is the agent’s choice between implementing the principal’s policy or reallocating resources. As depicted in figure 4-4, the agent’s payoff from reallocating exceeds his payoff from implementing, regardless of the state of nature, so the agent has a dominant strategy. Knowing this, the principal computes his best strategy by assuming that the agent will use discretion to reallocate resources. As depicted in figure 4-4, imposing a rule on the agent.

---

<table>
<thead>
<tr>
<th>Nature</th>
<th>good (lucky)</th>
<th>bad (unlucky)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement</td>
<td>1.0 (reveal)</td>
<td>0 (hide)</td>
</tr>
<tr>
<td>Reallocate</td>
<td>.5 (hide)</td>
<td>.5 (hide)</td>
</tr>
</tbody>
</table>

Fig. 4-5 Principal’s Payoff From Giving Discretion to Agent

---

22 The following table summarizes the agent’s payoffs.
yields a higher payoff to the principal in a good state, whereas giving discretion to the agent yields a higher payoff to the principal in a bad state. In this example, the rational principal imposes a rule when the probability of a good state exceeds \( \frac{1}{2} \), and, otherwise, the rational principal gives the agent discretion.\(^{23}\) The game’s solution can be summarized as follows:

\[
\begin{align*}
p > .5 & \Rightarrow \text{principal imposes rule, agent implements} \\
p < .5 & \Rightarrow \text{principal gives agent discretion, agent diverts.}
\end{align*}
\]

I mention in passing several more special assumptions in my formulation of the rule game. First, my “solution” solves the problem of delegating power for a given contract between the principal and agent. Computing the optimal contract for the principal and agent requires another formulation of the problem.\(^{24}\) Second, I computed the game’s solution when rationally self-interested actors play it once. In reality, the actors may repeat the game, which gives the agent more reason to cooperate. Third, I implicitly assumed that the principal cannot invest in monitoring the agent. In reality, monitoring increases the risk of punishment, which deters diversion by agents. Finally, I assume that agents are self-interested, whereas some agents may remain loyal due to moral commitment.

GRAPH

Figure 4-6 graphs the trade-off between diversion and flexibility characterized by the rule game. The horizontal axis represents constraint of the agent by rules, which increases when moving to the right. The rule of law implies that officials follow rules, instead of exercising discretion. Consequently, the horizontal axis characterizes more constraint by rules as an increase in “legality.” Conversely, the horizontal axis represents the agent’s discretionary power, which increases when moving to the left.

The vertical axis of figure 4-6 depicts the principal’s marginal costs. Moving from left to right, the principal imposes more rules and allows less discretion.

<table>
<thead>
<tr>
<th>Agent’s Act</th>
<th>implement</th>
<th>reallocate</th>
</tr>
</thead>
<tbody>
<tr>
<td>State of Nature</td>
<td>good</td>
<td>1</td>
</tr>
<tr>
<td>bad</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>

\(^{23}\) If \( p \) denotes the probability that the state of nature is good, imposing a rule and giving discretion to the agent yield the same expected payoff to the principal when \( p \) solves the following equation:

\[
1p + 0(1 - p) = .5p + .5(1 - p).
\]

Solving this equation yields \( p = .5 \), which is the tipping point.

\(^{24}\) In a general game of contracting, the parties could adjust the payoffs by making side payments, which could improve their incentives. To illustrate, if \( p < .5 \), instead of retaining the contract resulting in the payoffs in figure 4-4, the principal and agent both prefer a contract in which the principal promises to pay the agent a bonus of .3 conditional on the agent’s receiving a payoff of 1. This contract, like any optimal contract, induces the agent to maximize the joint payoffs.
to the agent, so diversion costs typically decrease and inflexibility costs typically increase at the margin. The intersection of the marginal cost curves corresponds to the level of legality that minimizes the principal's total costs.

The costs of inflexibility and diversion depend on the environment's predictability. Good luck reduces the cost of inflexibility, so an increase in the probably $p$ of a good state causes the "inflexibility curve" to shift down in figure 4-6. Conversely, good luck increases the diversion of resources by agents, so an increase in $p$ causes the "diversion" curve to shift up. Combining these effects, an increase in the probability of good luck from $P_{\text{low}}$ to $P_{\text{high}}$ causes the principal's preferred level of legality to shift up from $L^*_{\text{low}}$ to $L^*_{\text{high}}$.

In general, predictability makes rules more attractive to principals, whereas unpredictability makes discretionary power more necessary.

EXAMPLES

To illustrate the rule game, I will modify the example in which the minister of health constructs a plan to maximize the number of kidney transplants. Implementation of the plan requires the work of an administrator and cooperation from the nurses. If the nurses cooperate, the minister's highest payoff (1) comes from the administrator's implementing the plan. If the nurses resist, however, the minister's highest payoff is higher when, instead of implementing the plan (0), the administrator reallocates some funds to another program (.5). The minister must decide whether to impose rules that enforce the plan or give the administrator discretionary power.

Marginal diversion costs typically decrease, and marginal inflexibility costs typically increase, because the principal typically imposes rules first on those activities where diversion cost most and inflexibility costs least.
The minister cannot observe the behavior of the nurses or the administrator. A high payoff (1) enables the minister to infer that the administrator implemented the plan and the nurses assisted, and a low payoff (0) enables the minister to infer that the administrator implemented the plan and the nurses resisted. In contrast, with an intermediate payoff (.5), the minister cannot infer whether the administrator reallocated funds in response to the nurses' resistance or diverted funds even though the nurses cooperated. If the nurses are more likely to cooperate than resist, the minister's payoff is higher from imposing the rule. Conversely, if the nurses are more likely to resist than cooperate, the minister's payoff is higher from giving discretion to the administrator.

A second example concerns procurement by the state. In many state universities a professor who wants to purchase a computer must follow prescribed procedures that constrain the choice of sellers and the terms of the contract. Procurement rules typically reduce purchasers' discretion in order to avoid kickbacks or bribes.

A third example concerns challenges to the legality of actions by state agencies. Assume the court interprets a statute and imposes a rule on a state agency. Individuals harmed by departures from the rule have the right to sue the agency, thus alerting the court concerning the agency's misbehavior. To illustrate concretely, federal courts interpreted the U.S. Constitution as requiring the police to recite a list of procedural rights when charging a person with a crime ("Miranda warnings"). If police obtain evidence about a crime by failing to recite these procedural rights, the courts exclude the illegally obtained evidence from trial. Like all rules, the procedures do not fit every case. Even so, the courts apparently prefer to prescribe the rules for all cases rather than give discretion to the police.

SIGNIFICANCE OF RULE GAME

Having developed the model of rules, I next consider its significance. The constitution or other fundamental laws sometimes require officials to make rules and follow them. The rule game predicts some consequences of the constraints of legality. Requiring more legality than the principal prefers imposes costs on him. Specifically, the principal loses to the extent that the cost of an agent's inflexibility exceeds the reduction in diversion costs. The magnitude of the principal's loss depends on the environment's predictability. The harm from enforced legality is greater when the environment becomes less predictable.

Figure 4-6 illustrates these facts. To be concrete, assume the probability of good luck equals $p_{low}$, so the principal prefers $L_{low}$. Now assume that the principal is forced to increase legality to $L_{max}$. The resulting loss to the principal equals the amount by which the cost of inflexibility exceeds the marginal cost of diversion in the interval $[L_{low}, L_{max}]$, as indicated by the area $A + B + C + D + E$. If the probability of a good state rises from plow to $p_{high}$, the principal's loss from a requirement of maximum legality $L_{max}$ shrinks from the area ABCDE to the area $A$. 
In many state bureaucracies, politicians occupy the top offices and civil servants occupy the subordinate offices. To illustrate, the U.S. president appoints the head of most agencies, each head chooses a personal staff, and the civil service fills most jobs below the head's personal staff. Alternatively, political appointment can go deep into administration. In a patronage system, the winners in the game of politics distribute state jobs to loyal followers as the spoils of victory. To illustrate, patronage operates deep in administration in the city of Chicago and many developing countries.

Administration by civil servants suffers from inflexibility, whereas administration by political appointees suffers from corruption. The best system apparently provides for political appointment at the top level in the bureaucracy and civil service control below the top. The rule game can explain why patronage produces more efficient government at high levels of administration and civil service rules produce more efficient government at low levels of administration.

Think of the state as a chain of relationships in which each official is an agent relative to those above him. In the typical state bureaucracy, civil servants are agents relative to the political appointees heading the organization, political appointees heading the organization are agents relative to elected officials, and elected officials are agents relative to the citizens who vote. In each of the chain's links, a combination of discretion and legality orders the relationship with the agent. Now I explain why efficiency requires discretion to dominate legality at the top of the chain and legality to dominate discretion at the bottom of the chain.

The closer to the top of the chain, the more citizens know about officials. To illustrate using U.S. foreign affairs, the communications media scrutinize the president, monitor the secretary of state, occasionally notice an ambassador, and mostly ignore civil servants in the State Department. When the principal has more information, the agent has less scope for undetected diversion of resources. In terms of figure 4-6, more information for the principal causes diversion costs to rise more slowly as the agent receives more discretion.

Although voters have good information about top officials, the environment of high politics is unpredictable. In terms of figure 4-6, low predictability increases the costs of inflexibility. To illustrate, unpredictable diplomatic crises require a flexible response by the secretary of state.

Extensive monitoring and an unpredictable environment tip the balance in favor of giving broad discretion to officials at the top of agencies. Broad discretion requires politics, not the civil service. Instead of imposing rules, voters communicate goals to top officials. Thus, efficient administration in a democracy requires political control over top officials in state agencies.

Conversely, the public cannot scrutinize lower levels of administration. Consequently, the public holds top officials responsible for any diversion of resources detected in the lower levels of administration. To discharge their responsibility, high officials impose rules to reduce diversion by low officials.
In terms of figure 4-6, less information for the principal causes diversion costs to rise more quickly as the agent receives more discretion. Rules constrain such abuses. So efficiency in a democracy requires civil service rules to control employment at less visible levels of administration. (High officials also have other reasons to make rules for a complex bureaucracy.)

The problem of monitoring also arises in a judicial hierarchy. When faced with disputes, courts sometimes can choose between deciding each case on its own merits or developing general rules that apply to all cases. Case-by-case adjudication retains flexibility for lower courts and permits them to diverge from the preferences of higher courts. In contrast, rules reduce flexibility in lower courts and compel them to conform more to the preferences of higher courts.

My discussion of politics, administration, and courts suggests three vague boundaries that demarcate significant changes in discretionary power. First, officials enjoy strong discretion when law leaves them free to pursue political goals. To illustrate, legislators have strong discretion in proposing legislation, and the executive has strong discretion when selecting the cabinet. Second, officials enjoy weak discretion when the law prescribes goals and leaves officials free to choose the means. To illustrate, a civil engineer in the ministry of roads can decide how to build a road required by an executive order, and the ministry of education can design a program to improve literacy as prescribed by legislation. Third, pure legality leaves officials without any discretion, which results in mechanical decision making. To illustrate, a table that prescribes an exact punishment for each crime or the exact division of assets on divorce leaves little discretion to judges.

Legislators and the executive typically have political discretion, and civil servants typically have technical discretion. The situation of judges is more complicated. Common-law systems give judges discretion to make some kinds of law, whereas civil-law systems sometimes aspire to eliminate the discretionary power of judges. Philosophers of law disagree about the ideal mix of politics, technique, and legality in judging. In any case, pure legality, or the mechanical application of law, fails for most decisions. British unions periodically...

26 As the state bureaucracy grows, regulatory agencies pose obstacles to citizens, who turn to elected officials for help. Providing help requires knowledge that increases by interacting with the state bureaucracy over many years. In doing such “casework” for constituents (Fiorina 1977), the incumbent in the legislature has the advantage of experience over a challenger. Following the principle, “The best guide to a maze is its architect,” legislators have an incentive to create a bureaucratic maze so that voters reject challengers and rely on incumbents as guides. Thus, incumbent politicians sometimes seek an electoral advantage by increasing the complexity of administration faced by citizens and retaining control over it.

27 In common-law systems, trial courts decide facts and appeals courts decide law. In these systems, case-by-case adjudication allows lower courts to control more outcomes by making them turn on facts. Conversely, general rules allow higher courts to control more outcomes by making them turn on law.

28 Thus Ronald Dworkin, who is among the most celebrated Anglo-American philosophers, argued early in his career that each legal dispute has one right answer, thus suggesting that judges have little discretion (Dworkin 1977). Subsequently he revised his views and allowed the political vision
cally paralyzed the railways by a tactic called "work-to-rule," which means that the workers implemented all rules literally. Like the railroads, courts that apply rules mechanically cannot do justice.

**Questions**

1. Explain why principals give agents discretion rather than rules when the best policy depends on unpredictable contingencies.

2. The worst payoff in figure 4-4 equals 0. Assume that it rises to .25. If \( p = \frac{1}{2} \), then imposing a rule yields the same expected payoff to the principal as giving discretion to the agent. Prove it.

3. Assume that the principal in the rule game in figure 4-4 attaches a reward \( r \) to a loyal agent who implements the principal's plan in a good state of nature. What is the smallest value of \( r \) that would induce the rational agent to claim the reward?

4. Courts can decide disputes by general rules or case by case based on particular facts. Discuss the difference between adjudication by rules and case-by-case adjudication as means by which courts can control state agencies.

**SUMMARY AND CONCLUSION**

Parties propose programs to voters, voters choose among programs in elections, and ministers or heads of agencies direct administrators to implement the programs. Each link in the chain of authority consists of a principal and an agent. Time constrains each principal to delegate power to agents. Delegating power to agents saves administrative costs for principals and gives agents more opportunity to divert resources. So each successive delegation of power permits each successive level of administration to dilute the political purpose received from voters.

A principal delegates more power to those agents with less incentive to divert resources. Agents have less incentive to divert resources when they run a higher risk that events will reveal diversion. Thus, principals prefer to delegate power when their opportunity costs are high and when they have a high probability of discovering diversion by agents. The delegation game models these facts.

By imposing rules on agents, principals can reduce the diversion of resources. Rules, however, reduce the flexibility of agents in responding to changing situations. Agents need more flexibility when the environment is less predictable. The rule game models these facts.

The constitution or fundamental laws may constrain officials by restricting delegation. If the constraint is effective, the official must devote more time than
he prefers to the task in question, thus raising administrative costs. Effective restrictions also reduce the diversion of resources by agents. Nondelegation makes sense when the public interest favors the administrator’s attending to a particular task beyond the level dictated by his self-interest. Nondelegation across branches helps preserve the separation of powers and promote political competition.

In addition to constraining delegation, the constitution or fundamental laws may also require legality. If the legality constraint binds, officials lose flexibility. Agents need more flexibility to respond to unpredictable changes. Thus, when the pace of change accelerates, officials need fewer rules.

The three chapters in part 1 analyze voting, bargaining, and administering. The rest of the book uses these analyses. Part 2 concerns relations between governments, part 3 concerns relations of the branches within a government, and part 4 concerns individual rights.