The Scientific Study of Bureaucracy: An Overview

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The Foundations of the Scientific Study of Public Bureaucracy

The study of bureaucracy is the analysis of how administrative agencies function as organizations within a governmental system. The study includes interinstitutional relationships with democratic institutions such as chief executives, legislatures, or the judiciary as well as intrainstitutional activities concerned with explaining the organizational structure and behavior of administrative agencies. Scientific inquiry pertains to the development of systematic, generalizable explanations and subsequent empirical tests of the "what, how, and why" of bureaucratic agencies. This book contains essays that emphasize theory building and empirical testing of theories, theories of interest to students of public administration within political science. Our primary concern is how public bureaucracies operate in a democracy.

The study of bureaucracy within political science has an intellectual history that harkens back over a century. German sociologist Max Weber's (1947) notion that maintaining a "rational-legal authority" was the appropriate way to conduct the business of governance was both a normative and an empirical theory. He advocated the basis for *general* explanations regarding how bureaucratic institutions should be designed, including the need for a division of labor, career personnel with specialized training and expertise, hierarchical formal organizational structures that do not duplicate other administrative units, and explicit rules and procedures to ensure clear lines of authority and accountability within the organization. This work has had a profound impact on our theoretical understanding of how superior-subordinate relationships within such or-

ganizations actually play out (e.g., Barnard 1938; Brehm and Gates 1997; Crozier 1964; Cyert and March 1963; Downs 1967; March and Simon 1958; Miller 1992; Simon 1947; Tullock 1965).

Similarly, Woodrow Wilson's (1887) argument for an administrative apparatus that is devoid of politics and meddling arose from a normative concern of the era that American bureaucracy served as a bastion for political patronage (Nelson 1982; Skowronek 1982). Wilson's call for an independent administrative state not beholden to the particularistic interests of elected officials reflects issues of theoretical interest in understanding the role and functioning of bureaucracy within our American democracy that range from whether the bureaucracy responds to political control from electoral institutions (e.g., Moe 1982, 1985; Weingast and Moran 1983; Wood and Waterman 1994) to the importance of professional expertise in policy administration (Eisner 1991; Khademian 1992; Mosher 1968).

Goodnow, Taylor, and Gulick: The Progressive Era

The early American study of bureaucracy finds its roots in the work of Goodnow, Gulick, and Taylor rather than that of Weber and Wilson. The influence of both Weber and Wilson, substantial as it was, came late to scholars of administration. Weber was not translated into English until 1946 (Weber 1946, 1947) and therefore his work was relatively inaccessible. Similarly, Wilson's original essay disappeared from the literature until it was republished in 1941 (Van Riper 1983).

Goodnow (1900) also proposed a politics-administration dichotomy; he considered these to be two different functions but recognized that in practice politics was rarely separate from administration. This distinction became part of the progressive philosophy in public service training and was incorporated in the field's first textbook (White 1926). The functional division allowed progress on two dimensions. On the administrative side, efforts were made to study implementation and the processes of bureaucracy in a scientific manner. On the political side, the focus was on designing governmental institutions, that is, creating the institutions that would formulate, adopt, and implement policy. The latter was inherently prescriptive. This effort (known as the study of the separation of powers) continued to occupy the time of public administration scholars until the 1950s (Waldo 1984, chap. 7; Appleby 1949).[1]

On the administrative side, efforts were made to discover the prin-

ciples of administration, the one best way to design a work process or structure an organization. Work process design is most closely associated with the work of Fredrick W. Taylor (1919), who used experiments to determine how jobs should be structured. Taylor advocated a division of tasks with management charged with designing the optimal work processes and individual workers charged with responding based on the incentives offered for production. Taylor's controversial motivation theory, the reliance on piecework and pure economic incentives, drew attention away from his scientific, albeit atheoretical, approach and generated skepticism (including a congressional investigation) about the contribution of Taylor (see Henry 1995, 55–56).

Taylor's experimental approach also generated the first empirical challenge to this type of inquiry with Western Electric's Hawthorne experiments. Those experiments demonstrated how human factors and relationships subverted material incentives (see Roethlisberger and Dickson 1939). Although scholars of public administration paid little attention to this work after the Hawthorne experiments, the fields of industrial engineering and operations research continue within the tradition of Taylor and the Hawthorne experiments.

A second stream of work went beyond production processes to examine how to structure organizations such as specialization, span of control, unity of command, and similar factors (Gulick and Urwick 1937; Fayole 1949). The method of analysis was observation rather than systematic data collection and analysis (for an early attempt at formal theory, see Stene 1940). Despite an impressive set of principles, Gulick (1937) himself lamented the lack of research supporting the principles and sketched out a research design to determine how one of them, span of control, could be systematically verified. That research agenda remained untouched, however. Simon's (1947) devastating critique of the "proverbs of administration" effectively ended this approach to the science of administration within public administration.[2]

The work of Progressive Era scholars arguing for a scientific approach to administration gave way to the behavioral revolution in the study of organizations. The intellectual roots of this revolution can be traced to Barnard's (1938) *The Functions of the Executive,* in which issues of authority relating to superior-subordinate relationships were analyzed. Central to Barnard's argument are joint issues: (1) what motivates bureaucrats to behave as they do? and (2) why are they willing to sacrifice their individual

goals and belong to an organization? This line of inquiry sought to develop generalizable theoretical principles to facilitate our understanding of how administrative agencies make decisions rather than emphasizing normative descriptions as to how administrative agencies should function as entities in their own right and within a larger governmental system.

Simon's (1947) classic *Administrative Behavior* focused on individuals as the key unit of analysis in order to understand how organizations perform. The two major cornerstones of this work were an emphasis on (1) providing a theory of administration centered on efficiency and (2) analyzing the nature of information processing by bureaucratic organizations by asserting that individuals' cognitive limitations did not allow for rational-comprehensive decision making. The latter subject is developed in March and Simon's (1958) *Organizations,* in which the rational-comprehensive method is shown to be empirically unrealistic and theoretically ungrounded. This stream of work also emphasized how routines (standard operating procedures [SOPs]) could be employed to overcome uncertainty and individual cognitive limitations and allow individuals in organizations to behave in a more efficient manner (Cyert and March 1963). Within this intellectual stream, Cyert and March attack the foundations of the neoclassical theory of the firm by maintaining that organizations are not optimizers in the traditional sense of maximizing profits. Instead, organizations behave inefficiently in a strict microeconomic sense since they will accrue slack resources.

Constitutional Perspectives

As the administrative science side of public administration focused on management and organizational questions, a parallel movement grappled with the issue of how to fit bureaucracy into the Constitution. The key challenge was reconciling the policy-making discretion of nonelected bureaucrats with the imperatives of democracy. Scholars were well aware of bureaucracy's potential to subvert democratic ends; Herring's (1936) work on bureaucratic power documented the ability of bureaucracy to engage in politics and shape the direction of public policy.

This debate was effectively framed by an exchange between Carl Friedrich and Herman Finer. Friedrich (1940) challenged the notion that elected officials could control the bureaucracy. Foreshadowing future principal-agent concerns about information asymmetry, Friedrich focused on the influx of scientists in government and how the possession of tech-

nical knowledge made political control difficult. In such a situation, the potential for a bureaucrat to dress his or her policy preferences in the guise of expertise was high. Friedrich's solution was a fellowship of science whereby competing sets of scientists would serve as a check on each other and thus provide multiple viewpoints for politicians.

Finer (1941) responded critically to this proposal, arguing that democracy was the preeminent value, not one on a par with technical competence. Finer contended that democratic institutions had sufficient methods with which to control bureaucracy and therefore abrogating their political responsibility was not necessary. The Friedrich-Finer debate established two competing camps on the question of bureaucracy and democracy—the proponents of overhead democracy or control by political institutions (Finer 1941; see also Hyneman 1950; Key 1959; Redford 1969; and Wood and Waterman 1994)—and the proponents of the inner check or competition, ethics, participation, and so on (Friedrich 1940; see also Long 1952; Dahl 1970; Appleby 1952; and Frederickson 1997).

Significant for the development of public administration was the publication of Waldo's (1946, 1984) *Administrative State*. Waldo considered himself a normative theorist and generally eschewed empirical questions for normative ones. His approach provided a place for scholars not interested in the behavioral revolution but still concerned about the relationship between bureaucracy and democratic institutions.

Research questions in this area were not only concerned with how the bureaucracy fit into constitutional governance (e.g., Rohr 1986) but also with alternative views of the constitutional chain of command. The separation of powers in the United States made the establishment of clear lines of bureaucratic authority difficult (Appleby 1949), a topic later known as the multiple principals problem. Although most scholars accepted the notion of presidential hierarchy in terms of the bureaucracy, a sizable group of scholars defended the constitutional preeminence of Congress (Rosenbloom 2000; Hyneman 1950; Key 1959). Accepting a Congress-centered view of the Constitution with regard to bureaucracy has clear implications for how the bureaucracy should relate to other political institutions (see Rosenbloom 2000).

Of the inner check proposals, one, representative bureaucracy, is of particular interest because it developed and tested a systematic body of midrange empirical theory of public bureaucracy. Representative bureaucracy in a nutshell contends that a bureaucracy representative of the

general public in demographic terms is likely to produce policies generally in accord with public preferences. The logic of the theory was first set forth by Long (1952), although he made no effort to test it. Critical tests and theoretical reformations came later (Meier and Nigro 1976; Rosenbloom and Featherstonhaugh 1977; Saltzstein 1979). A consistent body of empirical literature now indicates when and under what conditions passive representative (demographic similarity) might lead to active representation (policy congruence) in terms of race, ethnicity, and gender (Selden 1997; Meier 1993b).

Bureaucratic Pathologies and the Public Choice Approach to Administrative Organizations

Public choice approaches to the study of organizations focus on problems of control and responsiveness. Using economic tools of analysis, this brand of research analyzes the pathologies of the administrative state and their implications for organizational performance. Tullock's (1965) work on hierarchical distortion posited the pernicious effects of misinformation that can be channeled both horizontally and, even more critically, vertically through administrative organizations. According to Tullock, agency efforts to combat information flow problems within organizations are essentially futile since "authority leakages" are both inevitable and cumulative.

In his classic treatise *The Bureaucratic Phenomenon,* Crozier (1964) arrived at conclusions similar to Tullock's. Rather than focusing on information flows, Crozier viewed the crux of the problem confronting administrative agencies as being centered on the question, How is power allocated within bureaucratic organizations? Crozier argued that organizations reflect imperfect social compromises that arise in bargaining among individuals and groups. Specifically, the organizational design, structure, and operation are not randomly determined but reflect an equilibrium agreement among actors and stakeholders behaving in a purposeful manner.[3]

Both Tullock and Crozier separately conclude that bureaucratic agencies are sufficiently ossified that they require abolishment. This lack of responsiveness to constituency demands, whether it be from elected officials, citizens, or pressure groups, is attributable to bureaucratic inertia that occurs within the organizational setting. Subsequent work by Niskanen (1971) extended this work on the limitations of administrative

governance. Niskanen's central claim is that bureaucracy is preoccupied with resource (budget) maximization and that its monopoly power over the distribution (administration) of the supply of public goods and services made it inefficient and unresponsive to both citizen and politician preferences.[4]

One notable departure from this malignant view of bureaucratic pathologies is Downs's *Inside Bureaucracy* (1967). He argues that individual bureaucrats have different preference structures, thus making effective coordination and policy-making difficult. He extends the behavioral tradition, describing different behaviors exhibited by zealots, advocates, statesmen, conservers, and climbers. The implication of these bureaucratic personality types is that communication channels in bureaucratic organizations will be muddled and will lead to performance distortions. Downs contends that bureaucratic pathologies can be corrected by finding the proper mix of agency personnel types, adopting extraorganizational means such as reorganization, obtaining feedback on its performance from outside sources, or creating overlapping administrative responsibilities to encourage competition and discourage subordinate collusion.[5]

The Modern Advent of the Scientific Study of Bureaucracy

Principal-Agent Theory

At the heart of much of the modern "scholarship" on administrative organizations is the application of the principal-agent model. According to Terry M. Moe,

> The principal-agent model is an analytic expression of the agency relationship, in which one party, the principal, considers entering into a contractual agreement with another, the agent, in the expectations that the agent will subsequently choose actions that produce outcomes desired by the principal. . . . [T]he principal's decision problem is far more involved than simply locating a qualified person—for there is no guarantee that the agent, once hired, will in effect choose to pursue the principal's best interests or to do so efficiently. The agent has his own interests at heart, and is induced to pursue the principal's objective only to the extent that the incentive structure imposed in the contract renders such behavior advantageous. (1984, 756)

Implicit in the notion of a principal-agent relationship for studying the bureaucracy is not only the issue of task delegation by a superordinate (principal) to a subordinate (agent) but also the existence of inherent goal conflict between the principal and agent (e.g., Mitnick 1980; Perrow 1972). This began as a means of investigating issues pertaining to incomplete information and uncertainty in microeconomic decision making (Mitnick 1980; Moe 1984; Jensen and Meckling 1976; Ross 1973). Incomplete information means that principals, who wish to delegate authority to perform tasks on their behalf, have neither full nor accurate information regarding agents' actions. Typically, agents possess specialized knowledge about the particular problem that the principal does not. Hidden information and actions are therefore embedded within these relations (Arrow 1985; Moe 1987, 480–82). Even in those rare instances in which the principal has specialized knowledge equivalent to that of the agent, he or she still experiences informational problems since the responsibility for task execution lies with the agent.

How do principals attempt to rein in the behavior of agents whose preference profiles are not in sync with their own? The dual cornerstones of the principal-agent model are its emphasis on the nature of incentives and the monitoring of behavior employed by the principal (superordinate) to ensure faithful action by an agent (subordinate). The principal, in theory, can structure incentives to get the agent to comply with the principal's wishes. For example, an elected official may provide greater slack resources to an agency that is faithfully executing the former's policy preferences (ex post incentive). He or she may also provide an agency possessing a credible organizational reputation with greater discretion vis-à-vis the rules and procedures issued through enactment legislation. Monitoring of agent behavior is a more intricate task than creating incentive structures, thus making the former more daunting for purposes of ensuring agent compliance. Intensive monitoring of bureaucratic performance initiated by congressional oversight committees akin to "police patrols" is a costly endeavor (McCubbins and Schwartz 1984; Ogul 1976; Scher 1963; but see Aberbach 1990). Similarly, presidents who invest heavily in "activist" monitoring devices, such as detailed budgetary and performance auditing via the Office of Management and Budget (OMB), also incur transaction costs (i.e., costs incurred in carrying out such oversight activity) as well as opportunity costs (i.e., time and resources that could be spent on policy activities that would yield greater marginal net benefits to

the administration's policy agenda). The use of active monitoring, therefore, contains the stigma of punishment and generates displeasure among agents who receive close and frequent scrutiny of their task performances (Brehm and Gates 1997, 43).

The use of principal-agent theory in political science has generated conflicting models. Considerable work within this paradigm by scholars suggests that agencies' information asymmetries are sufficiently large to make it difficult for elected officials (principals) to monitor the behavior of administrative agencies (agents) (e.g., Banks and Weingast 1992; Bendor, Taylor, and Van Gaalen 1985, 1987; Niskanen 1971; Woolley 1993). Conversely, a larger body of work adopting the principal-agent perspective views incentive structures and monitoring activity employed by elected officials as being effective in reining in the behavior of administrative agencies (Breton and Wintrobe 1975; McCubbins and Schwartz 1984; McCubbins 1985; McCubbins, Noll, and Weingast 1989; Miller and Moe 1983). Specifically, these works are termed principal-agent models of political control over the bureaucracy since political institutions have various policy and administrative tools at their disposal to ensure bureaucratic compliance to their policy wishes. A voluminous body of empirical literature testing this theory in various manifestations over the past two decades has demonstrated strong support for the principal-agent model of political control over the bureaucracy (e.g., Carpenter 1996; Moe 1982, 1985, 1987; Rothenberg 1994; Scholz and Wei 1986; Scholz, Twombly, and Headrick 1991; Weingast and Moran 1983; Weingast 1984; Wood and Waterman 1994; but see Krause 1996a, 1999).

Principal-agent theory has both strengths and weaknesses as an analytic device for understanding public bureaucracies in a democratic system. One advantage of principal-agent theory is that it makes relationships between superordinates and subordinates tractable, which in turn can cull generalizable theoretical and empirical insights about how public bureaucracies function in a democracy. Also, while this paradigm at its elemental level is a static theoretical conceptualization, it has the flexibility to allow for the dynamic elements of principal-agent relationships (Carpenter 1996; Wood and Waterman 1993). Finally, not only can principal-agent theories be applied to study relationships external to the administrative organization that are commonplace, but this paradigm can also be adapted to investigate intraorganizational relations within bureaucratic agencies (Brehm and Gates 1997).

Inherent limitations associated with principal-agent theory do exist. The theory assumes goal conflict from the onset (Mitnick 1980; Perrow 1972). In numerous instances, however, agency-political relationships may typically reveal goal congruence (Meier, Wrinkle, and Polinard 1995; Waterman and Meier 1998). Second, the application of principal-agent relationships in numerous studies of public bureaucracy falsely views administrative agencies as being subservient agents of the principal(s) (see Brehm and Gates 1997 for an exception). In such studies, hierarchy is imposed, which assumes that principals serve as superordinates to the agent's subordinate relational position. This alternative view, however, is problematic since a contract is an agreement between equals; introducing hierarchy negates the ability to use standard economic principles that do not assume an ability to coerce agents into compliance.

Moreover, classical organizational theorists have long noted that agency-political as well as supervisor-subordinate relationships are predicated on a "zone of acceptance" where both parties have a stake and a voice in the agent's actions (Barnard 1938; Simon 1947). Finally, principal-agent models of bureaucracy are generally not flexible in how they handle the inherent complexity of structural relationships among relevant actors (Krause 1996a, 1999). For instance, the multiple levels containing multiple principals and agents that are common in bureaucratic organizations, and more broadly the administrative state, are difficult to fit into this framework. Relatedly, principal-agent models do not allow one to assess potentially vital relationships that fail to fit neatly within the confines of this theoretical paradigm. A principal, for example, can possess noncontractual authority over an agent whereby the former is not responsible for appointing or selecting individuals to represent his or her interests yet the latter perform this role anyway given both the positions that they hold within an organization and the resulting policymaking authority that it possesses (Krause 1994).

Transaction Cost Theory

Running parallel to the evolution of the principal-agent approach has been the increasing use of transaction cost economics. Transaction costs are distinguishable from production costs in that the former term refers to the costs incurred by operating in a complex environment where information and coordination problems exist while the latter pertains to the "nuts and bolts" of the production process found in neoclassical the-

ory of the firm. Simply, the transaction is the unit of analysis for investigating institutions (Williamson 1985, 41). What matters according to this theory is not simply the production of outputs by the firm or administrative agency but rather the costs incurred in the contractual arrangements and production processes that go beyond conventional factors such as labor, capital, and land. Transaction cost theory places an emphasis on how interactions among individuals or institutions will invariably incur costs of information acquisition and task performance concerning either ex post or ex ante activities. Examples of the former include drafting, negotiating, and safeguarding an agreement, and cases of the latter are disequilibrium costs when transactions drift out of alignment, corrections to ex post misalignments, the start-up and operating costs corresponding to government institutions where disputes are typically handled, and those costs incurred in the process of obtaining commitments from other parties (18–19).

Information costs among institutions and actors are nonzero (or at least nontrivial). Knowledge about other actors' preferences and actions is costly because the value of items is not known with certainty and monitoring the behavior of others is expensive. Transaction costs will result in decisions that are allocatively inefficient (Coase 1937). While monitoring costs are considered in principal-agent models in matters of delegation, measurement costs usually are not. Transaction costs are thus simply the costs associated with planning, adapting, and monitoring task completion under alternative governance structures (Williamson 1985, 2). In this light, the underpinnings of this theory serve as a means of gauging the flow of information and subsequent behavior of relevant actors. Since human, organizational, and institutional relations are not frictionless, positive transaction costs will be incurred by these entities.

The transaction cost perspective of public organizations complements the research on public organizations that views public bureaucracies as experiencing information deficiencies (e.g., Downs 1967; March and Simon 1958; Simon 1947; Stinchcombe 1990; Wilson 1989; cf. Williamson 1985), failing to operate in a neatly ordered, authoritative hierarchical fashion (Alchian and Demsetz 1972; Barnard 1938; Simon 1947), and having structures and jurisdictions that play a notable role in defining the parameters of performance (Knott and Miller 1987; Moe 1989, 1990; North 1990; Williamson 1975, 1985). While this theory has been applied to studying how chief executives and legislatures bargain to determine

whether or not the former wish to delegate administrative authority to the latter (Epstein and O'Halloran 1999; Huber and Shipan 2002), it has yet to be explored by political scientists with regard to specific questions of how public bureaucracies make decisions or how they behave in either a political setting or as organizations in macro- or microlevel terms (see Horn 1995 for some initial work). The analysis of public bureaucracies through a transaction cost lens makes sense since these types of costs can be viewed as the operating costs of a system (Arrow 1969). As a result, the application of transaction cost theory to the study of public bureaucracy could be quite useful for understanding how these entities operate in a larger political environment as well as within their organizational subunits and subfunctions.

Transaction cost approaches can also illustrate some advantages of organizations. If, for instance, one views public institutions, including bureaucracies, as having the potential to generate increasing returns to scale in the production of public goods and services, this can result in greatly reduced transaction costs (Pierson 2000).[6] Government, for example, has the ability to coerce, and thus it can eliminate some transaction costs by fiat (declaring standards for products [e.g., high-definition television] or processes [pollution control]). The ability to apply a uniform pattern of policy to all situations nationwide dramatically reduces the overall transaction costs of implementing a government policy.[7]

Organizational Theory Perspectives

Although political scientists rarely contribute to organizational theory, they frequently use it to guide their research. Four strains of work in organizational theory are relevant to our discussion here—the open systems approach of Thompson, the organizational behavior approach of Argyris and others, the empirical work on public versus private organizations, and the contributions of Herbert Kaufman. Each will be discussed in turn.

Interest in organizational structure per se (rather than in how external political institutions use structure) has roots in the work of Gulick (1937) but was brought back to respectability by Thompson (1967) and Perrow (1972). Thompson presented the classic theory of organizations as open systems; within this presentation, he provides a series of testable hypotheses about how organizations respond to environmental pressures and how structures influence what the organization does. Al-

though Thompson's hypotheses have not been of interest to political scientists, his open systems approach can be found in the work of several scholarly works in political science (Rourke 1984; Keiser 1999; Meier 2000). Perrow's work, in turn, is a vigorous defense of organizational sociology and the importance of structure in studying organizations. It interprets the literature, stressing structural rather than "people" questions. Within sociology, the work of Perrow and Thompson is most fully developed in Mintzberg's (1979) research agenda on structural influences in organizations.

The organizational behavior approach traces its roots to the Hawthorne experiments, but the key work was McGregor's (1960) distinction between theory X and theory Y management. The influence of McGregor meant that devotees of organizational behavior was interested in internal management questions (rather than political ones) and how to generate greater performance in the organization. Management theories based on the organizational behavior literature proliferated, including those of Likert (1967) and Argyris (1972). The applied nature of the theory (e.g., in management) means that it has not spawned a significant body of empirical research among scholars of public administration. On a more theoretical level, Mosher (1968) linked many organizational behavior questions to the political side of bureaucracy and in the process presented a strong argument for the inner check on bureaucratic autonomy.

One active area of empirical scholarship is that of public versus private sector differences. This literature starts with March and Simon's (1958) notion of a generic theory of organizations. Subsequent work has found that the public sector attracts individuals with different values than does the private sector (Nalbandian and Edwards 1983; Edwards, Nalbandian, and Wedel 1981); public organizations are also likely to have more and conflicting goals (Rainey 1997), more restrictive procedures (Bozeman 1987), lower levels of turnover except at top levels of the organization (Rainey 1997), and different incentive structures (Perry and Wise 1990). These differences provide a fertile ground for hypotheses for scholars interested in external control over the bureaucracy and how public bureaucracy is likely to respond to efforts aimed at control.

The other notable stream of research is Herbert Kaufman's series of studies on public organizations. In *The Forest Ranger* (1960), Kaufman documented the ability of an organization to socialize its members by

structuring personal policies. In *Administrative Feedback* (1973), he found evidence that agency heads had sufficient tools to monitor subordinate behavior but did not necessarily use them. In *Red Tape* (1977), Kaufman analyzed both the functional and the dysfunctional aspects of procedural controls. In *Are Government Organizations Immortal?* (1976), he found empirical evidence that government organizations, once created, are difficult but not impossible to eliminate (Carpenter 2001; but see Lewis 2000a for a different perspective). Finally, in *Time, Chance, and Organizations,* Kaufman (1991) provocatively argues that government organizations survive not because they perform well but because they are blessed with favorable environments. Although Kaufman generally used case studies and qualitative methods, his systematic approach to key organizational questions and his willingness to probe inside the black box of organizations make his work a key forerunner of contemporary scientific studies of bureaucracy.

What We Have Learned; What Do We Still Have to Learn?

The preceding approaches have one ingredient in common—they have each assisted our systematic thinking on how bureaucratic organizations operate. For instance, the principal-agent approach has helped make the relationship within bureaucratic agencies, and in relation to their political superordinates, a tractable one in which one can deal with the moral hazard and adverse selection problems inherent in the delegation of authority.

The traditional public administration literature has demonstrated the importance of the values held by bureaucrats and the impact that these values have on both political control and public policy outputs (e.g., Eisner 1991; Khademian 1992). Additional research has demonstrated Downs's concerns about external control; specifically, attempts to impose rational budgeting systems (Program Planning Budgeting System [PPBS], Zero-Based Budgeting [ZBB], Management by Objectives [MBO]) have been altered and even subverted by bureaucrats in the implementation process (Wildavsky 1984). Open systems theories of bureaucracy have demonstrated their value in focusing research on how organizations cope with the political environment (Keiser 1999) and as a general framework for assessing political control (Meier 2000).

These approaches also have one common ingredient lacking for continued rapid progress—they apply theories of behavior from economics,

sociology, or psychology to understand bureaucratic organizations. As a result, many key issues have been neither addressed nor resolved. Uniquely political science theories of the administrative state are uncommon, even given the notable advances made in this field of inquiry over the past two decades by political scientists.[8] This is not to imply that interdisciplinary approaches to the study of bureaucracy should be eschewed; instead it is meant to encourage the development of theories and methods that are appropriate for understanding administrative organizations as governmental institutions, not just externally but internally as well. For instance, how do conflicting policy preferences within an agency come about? How does this, in turn, affect its ability to execute its policy mission?

More recent research over the past twenty years has typically (though not always) been more preoccupied with external political forces than with what goes on inside the agency (cf. Brehm and Gates 1997, 2–3). As a result, our knowledge of how politicians structure rules, procedures, and incentives (e.g., McCubbins and Schwartz 1984; Moe 1984, 1989, 1990; McCubbins, Noll, and Weingast 1989); the tools that apply to elicit responsiveness from public bureaucracies (e.g., Carpenter 1996; Scholz and Wei 1986; Scholz, Twombly, and Headrick 1991; Wood and Waterman 1994); and the bargaining among electoral institutions that takes place in determining the fate of administrative agencies (e.g., Bawn 1995; Epstein and O'Halloran 1999) is well developed.

Unfortunately, the systematic, generalizable body of knowledge concerning what makes administrative agencies tick is still largely uncharted territory in need of theoretical and empirical investigation. We know little about how bureaucratic agencies make decisions in a political environment or how bureaucratic structures affect responsiveness and performance in a variety of settings. While we know that all public organizations deal with multiple and conflicting goals, we have little information about how they resolve goal conflict on a day-to-day basis. Similarly, we are just beginning to ask how external performance criteria affect bureaucracies and how they can shape responses in unexpected ways (Bohte and Meier 2000). Finally, we only have general ideas about how well organizations socialize their members (Downs 1967; Kaufman 1960) and have little empirical knowledge about how effective such methods are and whether or not they can be overcome by external political actors (see Carpenter 2001 for a notable exception).

This volume intends to shed light on several issues of considerable importance to understanding public bureaucracies as both governmental institutions and administrative organizations. One basic theme underlying these works is an emphasis on theory-ladeness, whether it involves mathematical/symbolic logic, statistical analysis, or verbal conceptualization. Another is a bureaucentric focus that places administrative agencies front and center in understanding how the administrative state functions. We feel that the original scholarly essays contained in this volume will stimulate ideas and research on topics that either have not been addressed or need to be reexamined in a distinct, fresh manner that will challenge our current way of thinking. While the vast majority of research on public administration within political science has focused on top-down accountability issues involving political control over the bureaucracy by democratic institutions, this volume is intended to redirect some of those energies toward administrative decision making and behavior.

The dual emphasis on systematic social scientific inquiry and a bureaucentric focus contained in this volume reflects a neoorganizational approach to studying administrative institutions. This general thematic approach parallels that of new institutionalism, which has risen to prominence within political science over the past two decades.

Daniel P. Carpenter's essay, "Why Do Bureaucrats Delay? Lessons from a Stochastic Optimal Stopping Model of Agency, Timing, with Applications to the FDA," advances a theoretical model of bureaucratic decision-making processes that allows us to gain insight into the *timing* of decisions. With theoretical roots linked to March and Simon (1958), Carpenter's approach can be refined and applied to other bureaucratic settings in which we wish to understand *when* agencies make policy decisions such as the timing of prosecution cases (Whitford 1998). George A. Krause's essay, "Agency Risk Propensities Involving the Demand for Bureaucratic Discretion," focuses attention on the demand side of this commodity, as opposed to the supply side commonly analyzed within political science. Krause derives comparative-static results concerning the risk-bearing nature of an administrative organization based on a simple model of agency demand for discretion under uncertainty derived from the separate impact of discretion and policy outcome (implementation) uncertainty. Thomas H. Hammond's essay, "Veto Points, Policy Preferences, and Bureaucratic Autonomy in Democratic Systems," provides us with an important theoretical window into the amount of bu-

reaucratic autonomy agencies enjoy based on the preference configuration of elected officials in relation to potential veto points across different institutional designs. Hammond entices us to grapple with important cross-national differences in the design of electoral institutions and administrative governance that often get overlooked in the study of political control over the bureaucracy. David B. Spence's essay, "The Benefits of Agency Policy-making: Perspectives from Positive Theory," extends his recent line of research on a key point central to this volume—that bureaucracy matters in the delegation of authority. Spence argues that agencies enjoy expertise advantages in delivering public goods and services that enable them to serve citizens' needs better than elected officials can. These essays are contained in part 1 of this volume, "Theory," since each study employs a deductive-theoretical approach to analyzing issues germane to public bureaucracies.

Part 2 of the volume contains essays that advance cutting-edge methodological technologies for studying public bureaucracy. The essay by John Brehm, Scott Gates, and Brad Gomez, "Donut Shops, Speed Traps, and Paperwork: Supervision and the Allocation of Time to Bureaucratic Tasks," examines the allocation of time along a variety of work-related task subfunctions of a street-level bureaucrat. This is done by applying a rarely employed statistical distribution, the Dirichlet distribution, to deal with compositional data problems that involve the allocation of a fixed total amount of labor effort. Andrew B. Whitford's essay, "Adapting Agencies: Competition, Imitation, and Punishment in the Design of Bureaucratic Performance," employs numerically based computer simulation methods in order to analyze administrative agencies as a complex adaptive system. Whitford demonstrates that the design of bureaucratic organizations with respect to optimal performance entails difficult trade-offs involving predictability versus change, search versus outcomes, and stasis versus growth.

Part 3 contains a set of theoretically motivated empirical studies of bureaucratic institutions. Steven J. Balla and John R. Wright's essay, "Consensual Rule Making and the Time It Takes to Develop Rules," examines a regulatory reform/regulatory renegotiation. By structuring the regulatory process akin to a corporatist process, various parties that will be affected by a regulation are allowed to participate in the actual rule-making process. In theory, such processes should result in a faster process with fewer post-regulation disputes. Lael R. Keiser's essay, "Why It Matters Whether State

Bureaucrats as Opposed to Federal Bureaucrats Administer Federal Programs," poses the important question, Does it matter that state bureaucrats administer the social security disability program? Her study finds that state bureaucracies respond rationally to fiscal incentives and thus shape programs in ways not necessarily intended by the federal government.

Michael J. Licari's essay, "Bureaucratic Discretion and Regulatory Success without Enforcement," on indoor smoking policies, presents the interesting null case. At times, bureaucracies might be given too much credit for program results. Licari examines a policy with no bureaucratic enforcement and still finds a fair amount of compliance. This raises interesting questions about what one might expect without bureaucratic activities and whether this implies that we need to reformulate the null hypothesis. Kevin B. Smith's essay, "Administrative Structure and Social Democratic Results: The Case of Education," examines the relationship between institutional structure and bureaucratic goals. Using data on teachers, he compares how mission goals change in public, Catholic, other religious, and nonsectarian schools. How these goals vary and their relationship to liberal democratic values permit him to make inferences about the impact of major structural changes in the implementation of education such as school choice programs. Kevin Corder's essay on federal credit programs, "Structural Choice and Political Control of Bureaucracy: Updating Federal Credit Programs," examines an underresearched area of the federal bureaucracy. Corder finds that bureaucratic institutions are afforded considerable autonomy and that this does not come into conflict with legislative goals as much of the existing scholarly research on the topic would predict.

In presenting these studies, we showcase what we feel reflects the frontier of basic scholarly inquiry into the study of public bureaucracy within political science. This subfield is an interesting blend of rigorous theoretical reasoning and well-crafted, sophisticated empirical research. All the essays in this volume represent original scholarly inquiry. The work is both a showcase and a challenge, however. It raises many more interesting questions than it answers. Specifically, it highlights the potential of analyzing public bureaucracies from a bureaucentric as opposed to the common focus on elected officials. We hope that our readers take up these challenges, use the material presented here, and conduct their own research to further our knowledge about the role of bureaucracy in politics, policy, and governance.

Notes

1. This work is similar in approach to recent new institutionalism scholarly works on political structure (e.g., Calvert, McCubbins, and Weingast 1989; Knott and Miller 1987; McCubbins 1985; McCubbins, Noll, and Weingast 1989; Moe 1989, 1990). The early work in this vein was not characterized by the same methodological rigor but had a much broader substantive reach. Both literatures addressed the question, Who benefits from the design of a set of structures?

2. The approach remained viable in business administration and organizational sociology. Joan Woodward's (1965) classic study of the relationship between organizational structure and performance is one notable effort. Within organizational sociology, questions of structure have been addressed empirically by Blau (1968), by Meyer (1968), and theoretically by Perrow (1972). The journal *Administrative Science Quarterly* has continued to serve as an outlet for this work.

3. In this way, one can view Crozier's line of inquiry as being antecedent to the theory of the politics of institutional choice proposed over two decades later by both Knott and Miller (1987) and Moe (1989, 1990).

4. These authors never explain how an organization can be a closed system and still survive. This theoretical flaw perhaps explains the lack of empirical support for these models (Blais and Dion 1991).

5. Downs's work is unique among formal studies in that it builds on the extensive preexisting literature. Although he presents his work as axiomatic and deductive, he incorporates much of the empirical and theoretical work in the field at the time (e.g., his life cycle of bureaucracy is borrowed from the work of Bernstein [1955] and Huntington [1952]). This integration of prior work often went unnoticed because Downs rarely footnoted existing scholarship.

6. This interesting hypothesis is also derived from the institutional economics literature, but it has not yet been subjected to empirical research to the best of our knowledge.

7. Simon (1997), in the fourth edition of *Administrative Behavior,* sees transaction costs as half a step in the right direction away from what he feels is the misleading orientation of the theory of the firm. Simon is critical of the ability to interpret employee relations solely in terms of contracts.

8. One exception is Emmette Redford's "overhead theory of democracy," which serves as a precursor to the principal-agent literature developed in other disciplines (Jensen and Meckling 1976; Mitnick 1980; Ross 1973; Spence and Zeckhauser 1971).