In 1960, Morris Janowitz argued that the publication of Samuel Huntington's landmark study, *The Soldier and the State*, represented "the first time since Alexis de Tocqueville that American military institutions were being analyzed as an aspect of the American political process" (1960: 5). A decade later, Robert Miewald criticized scholars in public administration for their neglect of the military. "It is now obvious," he wrote, "that few students of public administration have been moved to heed the periodic cries that military organization be considered an integral part of their field of study. Despite the importance of the military today, more scholarly care seems to have been lavished on mosquito abatement districts" (1970; 129). A more recent assessment argued there were not "adequate successors" to the 1960s classics in defense scholarship, nor was there an "authoritative scholarly analysis of the U.S. defense buildup in the 1980s" (Walt, 1991; 227). A recent review of Allison's innovative treatment of the Cuban Missile Crisis noted that "for courses dealing with bureaucracy and foreign policy there are few alternatives to *Essence of Decision*" (Bendor and Hammond, 1992; 301), the first parts of which were published a quarter-century ago.

We find these observations to be indicative of a long-standing neglect—by both political scientists and defense analysts—of the connection between the military and the study of American political institutions. Although the intellectual landscape is not as barren as these critics charge,¹ the theoretical and practical literatures on public administration and American institutions typically avoid the study of defense policy and military organizations. Few political scientists trained in either American institutions or policy studies focus on defense as their substantive area, leaving the field to those trained in defense policy and international relations, who in turn have neglected the domestic political aspects of security policy (Nye and Lynn-Jones, 1988; Welch, 1992) despite the recognition of domestic-international linkages in other policy areas (Davis, 1993; Chubb, 1983, 1989).
Scholars have noted the existence of this gap, but our goal in this article is to explain why the gap exists and illustrate how it might be bridged. In our view, the lack of engagement stems from two assumptions about military policy which discourage scholars from looking at how politics—which we take to mean competition between actors and institutions over the control of policy and goals, rather than pork barrel, bureaucratic, or electoral politics—affects defense issues. First, most studies of American politics assume that defense and civilian policies are so different that they belong in separate fields. Second, most defense analysts adopt the normative assumption that defense policy making should be above politics. As a result, scholars in both fields avoid thinking about the connections between political structures, political relationships, and defense policy outputs. We address these issues and then show that the effort to "depoliticize" defense policy is actually part of a broader debate in public administration and public policy studies: striking the proper balance between expertise (which is politically neutral) and accountability to elected officials. In virtually every domestic policy arena, as in the study of defense policy, analysts bemoan the intervention of politics in the definition, administration, and evaluation of public policy.

Our effort to find some common ground between defense policy and the study of institutions led us to recent developments in what is commonly referred to as the new economics of organization. Its framework of principals, agents, and the transaction costs associated with bringing about compliance has been applied to a number of domestic policy areas (Moe, 1984, 1989; McCubbins, 1985; Weingast, 1984; Wood and Waterman, 1991; Woolley, 1993) but has not yet been used to investigate questions about defense policy. The chief advantage of this framework, for our purposes, is that it permits us to consider the implications of multiple principal principals, with diverse preferences, and the competition among them to control policy outcomes.

Further, we show how applying this framework can help us to understand a critical problem in defense policy—managing defense acquisition. Nowhere has the firebreak between students of politics and students of the military been more apparent. Defense analysts decry the excessive controls that characterize this system, while politicians insist that an extreme level of oversight is necessary to prevent abuses. Our application of the transaction-cost framework helps us move beyond the stale debate. We find that the top-down and procedural controls that characterize defense acquisition result from characteristics of defense contracting that pose particular principal-agent challenges. The conflicting goals mandated by multiple and competing principals and the imposibility of establishing unambiguous standards of evaluation lead naturally to ex ante controls, to the formal language, rather than ex post controls. By highlighting these features, we are able to offer some suggestions on what meaningful reform might look like.

Explaining the Gap

The major causes of the problem of the politics of military affairs are the parallel assumptions made about defense policy by both American policy and defense scholars. Political scientists who study domestic institutions and processes typically argue that the demands of foreign and defense policy making differ in so many important respects from domestic policy making that the two are really separate classes of problems. The idea that the political requirements of decision making for defense and foreign affairs are unique has a long history. In The Federalist Papers 64 and 8, Jay and Hamilton (1961) noted the requirements for "secrecy and dispatch" in negotiating treaties and the tendency for nations under threat to rely on "institutions which have a tendency to destroy their civil and political rights." de Tocqueville concurred, arguing that "foreign politics demand scarcely any of those qualities which are peculiar to a democracy; they require, on the contrary, the perfect use of almost all those in which it is deficient" (1945; 241).

From here, scholars in the two fields diverge in their assessment of why the differences exist. Political scientists typically assume that defense policy is made without reference to what are regarded as "political" pressures, that the process is much more centralized, hierarchical, and incompatible with democratic values (openness, accountability, compromise). It is also possible that political scientists have shied away from studying defense issues out of an ideological bias against the military, a legacy of the Vietnam War (Walt, 1991; 216) and the critical view of the military-industrial-academic complex (Fullbright, 1971; Rapoport, 1969). Nye and LynnJones argue that most political scientists see the study of military policy as a problem of military science, not social science (1988; 22). This attitude exists in other disciplines as well. Military historian John Keegan has noted that throughout the 20th century anthropologists proved reluctant to examine war making in primitive societies (1993; 84-94). Harry Turney-High, whom Keegan cites as one the few anthropologists to examine the question, criticized the way scholars looked at warfare. "Anthropologists, sociologists, and other social scientists," he concluded, "have largely confined their writing to deprecating war rather than understanding it" (1971; xiii).

To some, the military culture is inconsistent with civilian democratic values. Whereas democratic societies embody due process and recognize the value of the individual and the legitimacy of dissent, military organizations are organized as rigid hierarchies that require strict obedience and the subjugation of the individual to the whole. Although the military has, over recent decades, adopted many civilian management practices (Janowitz, 1960; 38-53), one need not be an expert to conclude that the Air Force does not look much like the Department of Education.

These differences have provided a justification for maintaining defense as a separate field of study dominated by those with military expertise. Huntington argued many years ago that the unique nature of the military function required the military to develop into a profession in its own right, with a distinct officer corps trained in military science and politically neutral (1957; 70). Defense scholars extended Huntington's conception of the politically neutral military to argue that politics should be absent from the defense policy process—something that Huntington (1957;
thought was impossible, as he distinguished between making policy, which was fundamentally a political problem, and the military’s job of executing that policy, which was not. The mainstream position among defense scholars is that there is an objective “national interest” that should guide defense policy, and that politics (which involves negotiation and compromise) contaminates what should be a logical process.

Two examples show how robust this assumption is. First, we consider the reaction to an early challenge to the notion that politics should play no role in the making of defense policy. In *The Common Defense*, Huntington (1961) argued that strategic policy in the United States between 1945-1960 emerged from a political process in which the players bargained for societal resources. This contrasted sharply with the common perception that strategic policy was made rationally in a highly organized process within the executive branch. Huntington concluded that strategic policy was dominated by brokering, compromise, and negotiation (p. 126), but he did not see this as a problem. In his view, the goal of the policy process was not to come up with the “single correct decision,” which did not exist in any case, but rather to achieve consensus even though the process necessarily “weaken[s] the content of policy” (p. 169).

Huntington’s argument did not sit well with many defense policy scholars and practitioners, then or now. In a review of *The Common Defense*, Snyder insisted that “to a much greater degree than in most other policy areas, military policy is a problem of factual analysis, informed prediction, and logical deduction, although value questions cannot be entirely excluded” (1962; 371). Where domestic policy is premised upon compromise, “because the stakes are the conflicting values of subnational groups,” he argued, defense policy should be a function of a “rational” determination of the ensemble of means which best supports the agreed national interest in security” (p. 371). More recent assessments make the same point. Krasner’s contention that domestic politics is not a major factor in security policy reiterates Snyder’s thesis that there is an objective and logically determined “best” security policy. “[A]ll groups in society,” he argues, “would preserve the protection of territorial and political integrity” (Evangelista, 1989; 150). In a critique of the defense planning process, Haffa (1988; 8) claimed that rationality “is unachievable in a system dominated by parochial interests.” Nincic’s argument that a “disinterested pursuit of the national weal should guide the government’s dealings with the outside world, no matter what is necessary to domestic affairs” (1989; 370), summarizes the dominant normative view.

Many political scientists adhere to the premise that defense policy should have no other goals beside defense, and thus they implicitly accept Snyder’s idea that there is an objective determination of the national interest and the policies that will best achieve it. Chittick (1990) is alarmed at the politicization of security policy through the appointment to civilian defense management positions of political loyalists. Others consider congressional politics as inappropriate intervention in defense budgeting or administration (Higgs, 1989; Art, 1989). A third group, composed mostly of defense policy scholars, argues that efficiency should not be sacrificed in the name of accountability, or geographical and social equity (Gansler, 1989; Fox, 1988; Thompson, 1993).

Second, rationality is emphasized by the dominant methods of defense analysis, especially systems analysis (the RAND model). This approach, originally proposed as an alternative to the experimental models favored by the military (Brodie, 1949), is designed to attack only specific tactical or decision problems and does not address the impact of broader institutional or political relationships. Systems analysis requires rigorous quantification of costs, benefits, and tradeoffs and leaves political judgments to policy makers. The analyst is simply trying to find the optimal means of reaching a specified goal and pays no attention to context.

Although some progress was made in the 1970s when scholars such as Allison (1971) began to explore the effect of political and organizational relationships on the policy-making process, the rational approach has retained its dominant status. The legacy is clearest in the literature on strategic theory. From Schelling’s original contribution, *The Strategy of Conflict* (1960), to more modern work on crisis bargaining and deterrence (Powell, 1989; Wagner, 1991; Huth and Rustett, 1993), scholars have investigated outcomes based on the presumed behavior of a utility-maximizing and unitary-rational actor. While these approaches provide insight into individual level decision making, they necessarily exclude consideration of organizational dynamics and political conflict that would have a profound impact on any such decisions (Bracken, 1983).

Both of these assumptions—that politics plays a secondary role in the defense-policy process, and that politics should play a secondary role—raise a barrier to theoretical and empirical studies of defense policy. But, as we argue in the following section, these assumptions are common elsewhere and provide an opening for a theoretical approach that can move seamlessly across issue areas.

**Common Ground: Expertise versus “Politics”**

By recasting the argument that the defense-policy process is, and should be, different from civilian processes, we can tie it directly to broader controversies in the public policy and public administration literatures. At root, this argument is actually about finding the proper balance between substantive expertise, which should be politically neutral, and accountability and control. Finding this balance is a central problem of public administration and is common to every domestic policy area.

In critiques that are just as pointed as those made by defense scholars, many domestic policy analysts complain about political contamination of what should be rational planning processes. Economist Robert Haveman (1983) has criticized the way legislators evaluate programs. Instead of relying on “substantive staff analysis and interpretation,” he argues, legislators are more concerned with what their constituents think. Consequently, “objective analysis has to compete...with partial and slanted data, analysis, and studies sponsored by interested parties” (p. 571). Similarly, Judith Feder takes Medicare administrators to task for choosing an implementation strategy that was designed to respond to political pressure and minimize conflict, rather than on calculations “of how to finance hospital care most effectively and efficiently” (1977: 3). These complaints are repeated in studies of consumer goods, air travel, education, and energy policy, which conclude that the public would be better served if the policy process was not dominated by well-organized groups with high stakes in the policy (Noll and
Owen, 1983; Mackay, Miller, and Yandle, 1987; Litan and Nordhouse, 1983).

Similar themes are found in the public administration literature. The problem, from the manager's point of view, is that political leaders intervene in the management of government activities once policy goals are determined. Today, every aspect of the public manager's job (the selection and promotion of personnel, the making of rules, the expenditure of funds, and the management of third-party contractors for providing government goods and services) is constrained by what Gormley (1991) calls the “new Madisonian system,” and Chubb (1989) calls the “new delegation”—the growing propensity of members of Congress, representatives of the administration, and the courts to place restrictions on the authority delegated to bureaucrats to protect a right, provide access, or bring about responsiveness to particular interests (Wilson, 1989; Horner, 1988). The problem is intensified by the short-term and often contradictory concerns of multiple political overseers when imposing their procedural constraints (Derthick, 1990; Seidman and Gilmour, 1986).

Here, too, we see the tension between the presumed political neutrality of implementation and management and the politician's concern over accountability and control. Reformers of the administrative process argue that elimination of the intrusive oversight mechanisms (which stem from political demands not management imperatives) enhances efficiency and program effectiveness. The normative position in much of the reform literature is that traditional bureaucratic control structures and processes are inferior to alternative arrangements such as public-private partnerships, greater discretion for managers to use their expertise, and mechanisms to ensure political isolation (Osborne and Gaeble, 1992; Savas, 1982; Donahue, 1989).

Recent reform proposals address the accountability question by arguing that accountability should be imposed at the outcome stage rather than through procedural controls (Osborne and Gaeble, 1992). With an outcome-based system, greater responsibility could be delegated to officials in the field, personnel practices could reward excellence and the occasional risk, and the burgeoning responsibility of managing federal procurement practices could be streamlined, simplified, and made more efficient.

The emphasis upon outcomes or performance as a means to liberalize the management of government programs begs the question: How can we pursue policies efficiently when the public policy goals can be multiple and subject to debate among competing political principals? More important, how do we use a bottom-line for purposes of accountability when the ultimate outcome is difficult to measure or is an unknown product or service yet to be developed? Herein lies the management challenge of a myriad of public programs, and nowhere is this challenge more prominent than in the defense procurement process. Public managers are asked to contract for complex weaponry, yet to be developed and tested, that requires a tremendous commitment of up-front funding to initiate the process. Further, they conduct this process within a complexity of public policy goals associated with the expenditure of public funds: the protection of fraud and abuse, the protection of minority rights, securing the most economical bid, and the distribution of contracts in a geographically balanced manner. Yet nowhere is the management challenge more misunder-

How can we pursue policies efficiently when the public policy goals can be multiple and subject to debate among competing political principals?

stood than in the defense studies literature.

Just as the argument about taking politics out of defense policy is mirrored in the broader public administration and policy literatures, there is an immediate connection between the concerns of public managers about micromanagement and the dominant position of defense scholars about management of defense acquisition. In fact, the arguments are identical. Among students of defense policy, the standard position is that the acquisition process is woefully inefficient, choked by an inordinate level of regulation, and too concerned with adherence to rigid procedures that make no economic sense. As characterized by the Packard Commission (1986; 5), the process is “increasingly bureaucratic and over regulated,” and reform efforts make “acquisition procedures even more inflexible...by removing whatever motivation exists for the exercise of individual judgment.” Constraints on discretion and excessive levels of specification permeate the entire process, and every few years the immensely complex and detailed contracts for trivial items such as fruitcake, toothbrushes, or chocolate chip cookies are offered as an example of regulation run amok.

Military specification MIL-F-1499F describes, in 18 pages, exactly what must go into a fruitcake...there is a 20-page specification for towels, a 20-page specification for underwear, and 16-page specification for plastic whistles, a 17-page specification for olives, a 20-page specification for hot chocolate, and a 17-page specification for chewing gum...hot chocolate is prevented from containing large chunks through a specification stating that "when washed with petroleum ether, not less than 98 percent [of the hot chocolate] shall pass through a U.S. standard No. 200 sieve" (Gansler, 1989; 191-192).

The common theme in most acquisition reform proposals is that the system must be reorganized to emphasize outcomes rather than procedural controls, and efficiency rather than accountability. By procedural controls, we mean an emphasis on specifying how each actor is to perform the individual steps in a procurement action, multiple layers of review and a lack of discretionary decision making, extensive documentation, and top-down controls (Thompson, 1993). This contrasts with the ideal system, in which decentralization allows greater discretion and personnel are judged on their performance. Gansler argues that procedural controls should be replaced by a "more desirable alternative mechanism, namely the creation of incentives to replace the controls in the defense marketplace" (1989; 163). Similarly, Adelman and Augustine urge a move toward the commercial practice of placing a "single individual in charge and [giving] that individual the resources and responsibility to carry out that undertaking. The individual is also held accountable for measurable goals. The practice, of course, greatly increases the risk felt by that individual, but it also demonstrably increases the probability of getting the job done" (1990; 170). Kelman (1990), who now heads the Office of Feder-

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Most reform advocates begin with a wholly unrealistic picture of how the defense regulatory structure fits into the broader institutional framework of American politics....

al Procurement Policy within the Office of Management and Budget, argued in 1990 that the authority of government personnel was too constrained. Public officials, he argued, are unable to use "common sense and good judgment.... The System should be significantly deregulated to allow public officials greater discretion" (p. 1).

Our position is that these reform proposals suffer from the disciplinary gap identified in the first section of this article. With few exceptions (Kelman, 1990; Burnett and Kovacic, 1989), the debate over defense procurement practices has taken place without reference to any broader issues in the study of political institutions, although the connections are clear enough: as we noted above, the arguments made about defense acquisition are indistinguishable from other themes in the public administration and policy literatures. Most reform advocates begin with a wholly unrealistic picture of how the defense regulatory structure fits into the broader institutional framework of American politics; they also finesse the key questions of goal definition and evaluative mechanisms. By simply advocating that procurement be deregulated for the sake of efficiency, reformers ignore the central management challenges of ensuring accountability and the inevitable disputes among competing principals over goal definition and outcome evaluation.

We argue that this gap can be bridged by tying the questions of procurement reform to the broader literature on multiple principals (Hill, 1985; Woolley, 1993; Anderson and Wood, 1993; Hammond and Knott, 1993). In addition, the language and theoretical concepts of principal-agent analysis, as set out in the new economics of organization literature (Moe, 1984), provide analytic leverage that we can use to more clearly identify the relationship between political structures and control mechanisms.

This approach provides an alternative view of defense acquisition. Public managers are the agents in a chain of accountability that begins with congressional delegation of authority and extends through intermediaries (the executive branch and structures within the Department of Defense [DOD]) who, depending on context, act sometimes as principals and other times as agents. At each stage, the key analytical task is to identify what the principals want from their agents and then explain why certain types of control structures emerge. The issue is control: who, as principal, has the authority to decide what the bureaucracy (the agent) will do, and how does the principal monitor and control behavior to determine if, and insure that, the agent is acting in accordance with his or her wishes?

An important conclusion of this line of reasoning, which is directly applicable to the problem of defense regulation, is that as the goals of an institution or process become more ambiguous or a matter of dispute, the greater the tendency to rely on procedural constraints as a mechanism for controlling the behavior of a regulatory bureaucracy. In some circumstances, the goal might be clear and the end product readily measured, allowing principals to exercise outcome-based accountability. In others, the lack of goal consensus and the difficulty of measuring outcomes will force principals to rely upon procedural constraints as a means of assuring compliance. While the costs of one method might exceed the others, the task that is procedurally constrained is also likely to be more complex and perhaps more important. Splice the process with competing principals anxious to influence the behavior of an agent and the costs of policy implementation escalate. The new economics of organization offers a means to conceptualize the political dynamics of policy execution. In the case of procurement, the problem is not how to eliminate politics, because procurement is part of the political process. Rather the problem is determining what method of accountability will best meet the principals' needs, given the competing demands placed upon the procurement process and the difficulty of evaluating the results of procurement.

The Politics of Procurement Reform

In our view, the prevalence of process-oriented controls in defense acquisition stems not from bureaucratic intransigence, legislative imperialism, or contractor avarice. Instead, it stems from the nature of the procurement environment as a whole, which has several important characteristics that cannot be waved away by deregulation. First, the process is controlled by multiple principals, each of whom has the ability to shape the choice of goals the system must fulfill. As we will see, economic efficiency is only one of a number of options, and it is often relegated to a secondary role. Second, the tangible items that the system produces—weapons systems—are complex, expensive, and "lumpy" in the sense that they emerge in small and discrete units only after a large investment of time and money. A corollary is that it is often difficult to specify in advance how to determine whether a particular weapon program is a success or a failure. Taken together, these attributes lead us to an obvious, yet important, conclusion about the nature of procurement: In the government procurement environment, it is much harder to insure compliance by holding people accountable for outcomes than it is to do so by monitoring their behavior through procedural controls. Shifting to outcome-based processes (or, alternatively, what Thompson [1993] calls an "after the fact control system") requires that the goals of the policy or process be unambiguous and that an objective standard exists against which outcomes can be compared. Next, there must be some agreed-upon enforcement mechanism, with some entity given the authority to evaluate the outcome and apply an appropriate sanction (or provide a reward). In addition, efficient outcome-based processes should allow principals to correct bad outcomes once they are detected and to do so at an acceptable cost. When these conditions are lacking, outcome-based processes are inappropriate.

To put it another way, outcome-based systems are predicated on an effective mechanism for program evaluation. Yet, as Wholey (1994; 37) describes it, meaningful program evaluation is hampered by (1) lack of agreement on the goals, objectives, side effects, and performance criteria that are to be used in evaluating the program; (2) program goals and objectives that are unrealistic given the resources that have been committed to the program and the program activities that are under way; (3) unavailability of relevant
information on program performance; (4) inability of policy makers or managers to act on the basis of evaluation information.

Our argument is that the process of acquiring complex systems for defense has precisely the characteristics identified by Wholey as problems: goals are multiple and ambiguous, it is impossible to construct a well-defined and objective standard to use when evaluating outcomes, and correcting outcome deficiencies is unacceptably costly.

Major defense acquisitions are not unusual in this regard. Whether the government is purchasing an advanced fighter aircraft, a system for disseminating financial market data (Khademian, 1992), or licensing a nuclear power plant (Komanoff, 1981; Chubb, 1989), we can identify some common properties: the price tag is steep, the technology is sophisticated and uncertain, the outputs are considered critical to an essential governmental function, and the level of the government’s anxiety about the final product is high. In such an environment, there is a natural tendency to rely on a “myriad of rules” to insure the user gets what is wanted (Gabig and Bean, 1987; 594). Similarly, when accountability becomes a high priority, principals tend to rely on complex monitoring and reporting requirements along with detailed instructions about how the agent is to perform its task (Haug, Mackenzie, and Barker, 1975), no matter how economically inefficient those requirements may be. Major weapons programs, like all complex and costly acquisitions, pose special problems, to which we now turn.

Multiple Principals and Multiple Goals

The goals of defense acquisition are, if not actually ambiguous, certainly multiple and contradictory. The main problem is one of multiple principals, each of whom has a say in choosing the goals to be achieved. In any large scale weapon program, this control is shared by a number of different principals, each of whom has the equivalent of a veto power, and each of whom demands accountability on the part of the manager. Legislators, the President, the Office of the Secretary of Defense, and service officials all have some claim on programs, and there is no assurance that the demands they make will be consistent. Taken as a whole, such multiple veto opportunities make no sense. Yet each individual decision stage may have arisen from a sensible desire to institute management reforms, or from a struggle among principals for control. The defense establishment is no different than any other government agency in this respect: multiple principals are a basic fact of life in public organizations (Moe, 1984; 768-769).²

Some principals argue that defense expenditures must be allocated in part based on considerations of social justice, geographic equity, or in response to demands of particular interest groups, rather than strictly technical or cost efficiency grounds (hence the existence of “buy American” provisions, small- and minority-owned business set asides, or the requirements of the Davis Bacon Act). Although some may question the appropriateness of such admittedly political considerations, no one should be surprised that in a pluralistic system interest groups and factions will fight over access to a multi-billion dollar pot of money and the right to influence how it will be allocated. Expecting political principals to insist on efficiency or economy criteria as the goals of an institu-

The goals of defense acquisition are, if not actually ambiguous, certainly multiple and contradictory.

tion or program “denies the realities of politics” (Moe, 1989; 268). Rather than ask, “How efficient is this process?”, a principal is more likely to ask, “How well does it meet my political needs?”

The demands imposed by competing principals will almost always be contradictory. Some will insist that accountability must be maintained, even at inefficiently high costs. Some principals have a preference for procuring weapons as cheaply and as quickly as possible, even if it means sacrificing some performance, while others insist on the most advanced technology, even at the price of buying fewer units. Far from reflecting theoretical problems of interest only to scholars, these multiple pressures have real consequences. The Advanced Medium-Range Air-to-Air Missile (AMRAAM) program experienced large cost increases and a five-year schedule delay, as measured against initial estimates. In making the early cost and schedule projections, however, the Air Force was trying to be responsive to congressional pressure to shorten the acquisition cycle and keep AMRAAM’s cost competitive with the cost of simply upgrading an existing missile (Mayer, 1993; 16-17).

Multiple and competing principals pose special challenges for agents. There is no guarantee that the principals who establish the initial goals will have the authority to reward or punish at the end of the process, and no assurance that the rules will not change midstream. Presidents, secretaries of Defense, and even legislators come and go, and supportive principals can be replaced by others less sympathetic to a program. Just as principals worry about agents performing faithfully, so too do agents worry about principals following through on their end; fear of discretion runs both ways.³ Agents thus see advantages in procedural controls because rules provide cover and place limits on principals. Military managers who must explain an indisputable technical disaster will appreciate the existence of procedural requirements that allow them to deflect blame. Such a system, from their perspective, is preferable to one where the only alternative is to say, in effect, sorry, but we promise to discipline those responsible and do better next time.

In formal terms, multiple principals will be less able to achieve stable policy choices. This poses a problem because agents can take advantage of that instability for their own purposes (Hill, 1985; Woolley, 1993). Multiple competitive principals thus have two separate worries: that agents will fail to perform, but also that other principals will impose a different set of goals on the agents. Ex ante procedural controls are a rational, though not necessarily economically efficient, solution to both problems.

Ambiguous Outcomes

Even if it were possible to establish a clear goal, there is still the problem of constructing unambiguous standards or an evaluative process that allows for measuring results to see if they comport with that goal. In the defense reform literature, authors take for granted that such standards are obvious, but that is rarely the case. A short thought experiment highlights the difficulties.
Even if it were possible to establish a clear goal, there is still the problem of constructing unambiguous standards or an evaluative process that allows for measuring results to see if they comport with that goal.

Consider the following question: How should we evaluate the performance of a program manager who has overseen the development of an advanced tactical fighter aircraft (assuming for the moment that the manager has the authority to make and enforce all of the relevant decisions)? Common sense dictates that we should see if there were cost overruns, technical problems, and schedule delays in determining whether the manager's performance was good or bad. Yet problems with this approach emerge immediately. The acquisition literature shows that there is no way to maximize performance along all three dimensions simultaneously. In practice, this means that managers must find some balance among the incompatible dimensions, and it ensures that someone will always be unhappy with the result. Maximizing performance means higher costs, longer schedules, and an increased risk of failure, whereas compressing schedules usually means that initial production units fail to fulfill all performance expectations (Mayer, 1993: 8-9).

Acquisition programs necessarily involve a series of tradeoffs among and within the three dimensions, and there is no way to determine what the proper balance should be, a priori. The task of retroactive evaluation might be easy for programs that are complete disasters, but it would be much harder for programs that meet some goals but not others. What happens when a weapon works as advertised, but costs more than expected? Or when a weapon is delayed by two years because of a redesign effort that lowers the cost? Or when performance standards are relaxed to meet cost targets because the initial technical goals proved unachievable?

More important, an outcome-based system would require evaluating performance on these dimensions measured against initial projections; the results, therefore, would be “sensitive to whether these goals were established so as to be easy or difficult to achieve” (Rich and Dews, 1986: 3). Comparing final cost schedules and performance outcomes against initial projections would probably lead to more accurate early cost estimates (which have been getting much better over the last 40 years in any case) but also could lead to conservative performance projections. Managers who try for dramatic performance improvements would be penalized if they fail to achieve their ambitious goals. At the other extreme, a program manager could guarantee that performance and schedule standards would be met by proposing only a marginal improvement over existing capabilities. Once again, this is not a hypothetical problem. In their study of government reform efforts, Gaebler and Osborne noted that under typical outcome-based organizational processes “managers...tend to set their objectives artificially low so they can be sure to meet them” (1992: 157).

The problem becomes even more complex when we consider that information about failures can be ambiguous, or even entirely incorrect. In the early stages of a program, writes McNaugher, the “cost and performance information [available to decision makers] is almost always wrong” (1989: 123). Advanced weapons programs, even those considered superbly managed, always experience technical problems, and even critics of the present structure acknowledge that there is no way to eliminate risk from the process (Thompson, 1992: 731). Peck and Scherer (1962), in their classic study of the weapons acquisition process, knew 30 years ago that focusing solely on outcomes in this sort of environment was unrealistic because “the uncertainties connected with weapons acquisition preclude the development of a market system in anything approaching the usual meaning of that term” (p. 55).

Given the ambiguities of evaluating outcomes, the decision about who, or what, would have the authority to determine whether performance was acceptable is a matter of great importance. We can be certain that none of the principals involved would agree on an enforcement mechanism. Ongoing disputes between the services and the Office of Operational Testing and Evaluation, an office established by Congress to conduct independent realistic weapons tests, are indicative of this problem. More important, given the potentially ambiguous nature of failure and the inherent subjectivity of standards, an outcome-based system would not remove politics from the acquisition process but would merely shift it to another, and probably more contentious, point: determining whether the program has achieved the goals established for it.

Lumpiness

A final reason why an outcome-oriented evaluation process should not be viewed as a panacea is that by the time it becomes clear that a program manager is failing to perform, billions of dollars may have been spent over many years, making correction expensive and time consuming. In such an environment, waiting until the project is complete to obtain clear evidence of failure may make the costs of correcting that failure unacceptably high. For example, the Army had sunk $1.5 billion into the ill-fated DIVAD anti-aircraft gun when Secretary of Defense Caspar Weinberger canceled the program in 1985; the Navy had spent well in excess of that on the A-12 attack aircraft when Secretary of Defense Richard Cheney killed the program in 1992, and neither of these programs had entered full-scale production (in addition, the Navy and McDonnell Douglas have been involved in protracted litigation over the question of who was responsible for the A-12’s woes). Thompson cites the C-5A, which he characterizes as “the worst procurement fiasco in recent memory,” as an example of what can go wrong with an after-the-fact control system. Lockheed signed on to the C-5A program in a fixed-price contract that set prices for both development and production versions. A fixed-price contract is a type of after-the-fact control, since the government does not have to monitor the contractor's costs, and the contractor is rewarded for efficiency and punished for cost increases. Lockheed seriously underestimated its costs, and, by the time the government had discovered the error, it had no choice except to bail out the contractor because the program was considered so important (Thompson, 1993: 313).

Taken together, the multiplicity of principals, the difficulty of evaluating outcomes, and the expense of cleaning up after the fact
point naturally to procedural control. To be sure, such controls are often imperfect, and there is no guarantee that they will produce satisfactory results. Indeed, as the complexity of decision making increases, procedural restrictions become increasingly inadequate (Greehnstein, 1993). Even so, it is not true that the current regime has consistently produced inferior results. Thompson, for example, a major proponent of deregulation, notes that "nowadays DOD development projects experience on average fewer schedule delays, and smaller cost overruns than similar large scale, high complexity projects carried out by either government or business... Between 1960 and 1980, cost overruns, schedule slippages, and performance failures all significantly decreased" (1992-93; 732).

Moreover, the fact that procedural controls are imperfect mechanisms does not mean that the alternatives would be an improvement. The C-5A is only one example of how an after-the-fact control system can go awry. Gansler (1989; 191) notes that efforts in the 1980s to increase the level of competition in procurement—part of an effort to replace procedural controls with market-based incentives—ironically increased the level of specificity in contracts because losers had more of an incentive to protest. And, as even Thompson admits, the evidence that deregulation would actually work is thin.

Regrettably, the case for deregulation is based primarily on experience with a few programs, most of them secret. Evidence that secret programs were on average more efficient and effective than other programs when they were burdened with fewer bureaucratic gatekeepers and less congressional scrutiny and micromanagement would be extremely useful. But we don't know that they were. Neither do we know for certain that they have become less efficient on average because their management has become more bureaucratized. All we have to go on is hearsay (1992-93; 748).

**Conclusion**

Our goal in this article is less to provide a comprehensive proposal for realistic acquisition reform than to establish that the intersection of the political science and defense policy literatures remains relatively unexplored and to show how bridging the gap can improve our understanding of an important problem. The framework that governs defense contracts is a perfect example of the gap, as political scientists have shown virtually no interest in it, and defense scholars wish mostly to take politics out of it. Yet both of those positions obscure the crucial aspect of defense procurement, which is that it embodies exactly the same accountability and control problems that exist in every other area of government administration. Whether the government is purchasing paper clips or aircraft carriers, light bulbs or air traffic control radar, principals will seek to monitor and control the behavior of whoever or whatever provides the product. We have identified some characteristics that make this task especially difficult, no matter if the contracting authority is located within the Pentagon or the Federal Aviation Administration: multiple principals, contradictory goals, uncertainty about what constitutes an acceptable outcome, and lumpy and expensive outcomes. It makes little sense to move to an outcome-oriented control system unless the underlying conditions are appropriate.

The problems of accountability and control are central to public administration in a democratic system; they are nonnegotiable, and one cannot wish them away. This is a difficult point for reformers to accept. McNaughton is one of the few defense scholars who recognize that defense procurement is a political, rather than a technical, enterprise. Nevertheless, he argues that "reform must seek to remove political incentives from an elaborate technical process whose proper workings they can only disrupt" (1989; 182). The politics of defense procurement are costly, but cost efficiency is not the only, or even the central, concern of those who constructed the system. The lead principals in defense procurement, elected officials, are responsible for ensuring accountability to the public. If that could be done by focusing upon the success or failure of procurement officials and the contracting companies to deliver the expected product, one could imagine the delegation of broad authority to procurement officials and the contracting companies. If outcomes are not readily evaluated and if there is competition to detail the functions of procurement, outcome-based accountability is not feasible.

Rather than debate reform of the procurement process by simply advocating fewer procedural controls, we must understand why defense acquisitions are regulated with "public controls of unqualified scope and complexity" (Kovacic, 1990; 105), and the transaction costs associated with alternative means of controlling the process. As a consequence, we argue that procurement reform should not begin with major systems acquisition but is best tailored to activities that encompass less technical risk, sunk costs, and complexity. Nevertheless, just as the past failures to reform government bureaucracy should not detract reformers from their current effort to make government work better, we should not stop trying to improve the procurement process. Many of the reforms make sense. But the notion that DOD could conduct its business more efficiently by issuing general instructions to highly trained acquisition personnel and then setting them loose, ignores the nature of the government enterprise.

Although it is easy to agree with the Packard Commission that "DOD must displace systems and structures that measure quality by regulatory compliance... excellence in defense management cannot be achieved by numerous management layers, large staffs, and countless regulations" (1986: xiii), we argue that the prerequisites to meaningful reform are simply unobtainable for large-scale weapons programs as a whole. Yet the experience of successful acquisition programs demonstrates that when the various principals can reach and enforce agreements about what constitutes an acceptable outcome for a particular program, there is less chance of failures and surprises. The keys to successful program management, a recent study of acquisition policy concluded, are "having..."
Rather than debate reform of the procurement process by simply advocating fewer procedural controls, we must understand why defense acquisitions are regulated with "public controls of unequalled scope and complexity."

Qualified people, possessing adequate 'slack' in the program to cope with adverse events, and being overseen by people capable of both understanding development issues and reflecting concerns of the larger policy environment on decisions concerning...adverse events" (Glennan et al., 1992: 28). Unfortunately, it will never be possible to do this routinely because, although some problems are correctable (ensuring that program office officials have experience, an institutional memory, and expertise), others are not, because they stem from the nature of accountability and policy advocacy in democratic systems.

The 1994 reforms to government procurement law show that, for all the talk about revamping procurement regulation, legislators are reluctant to cede their control over complex acquisitions. Both the Report of the National Performance Review and the Department of Defense recommend the standard menu of reforms—use of commercial items and practices and flexible acquisition procedures (National Performance Review, 1993: 26-31; U.S. Department of Defense, 1994: 104-110). The legislation ultimately enacted, however, is much more modest. The centerpiece was a higher threshold ($100,000 instead of the existing $25,000) for the use of simplified acquisition procedures that allows agencies and contractors to bypass many of the paperwork and solicitation procedures that apply to larger purchases. Yet the legislation does not affect large-scale programs, continues to give advantages to small businesses and women- and minority-owned firms, and drops language that raised Davis-Bacon and Service Contracting Act thresholds (Towell, 1994: 2495-2497). The Republican 104th Congress may well repeal or weaken Davis-Bacon, but any move will have less to do with efficiency concerns than the view that the law provides benefits to a constituency—organized labor—for whom the current congressional majority has little sympathy.

Legislation introduced in March 1995 to reform major defense acquisition (H.R. 1368, The Department of Defense Acquisition Management Reform Act of 1995) disregards the inherent dynamics we have identified here and continues the trend toward attempts to remove politics from the system by fiat. Section 111 of the act directs the Secretary of Defense to "revise the regulations of the Department of Defense relating to the acquisition of major systems and of information technology to insure that, in the acquisition of those systems, program manager focus on achieving results rather than on preparing and transmitting reports and building consensus among interested persons." The legislation proposes consolidating procurement authority within a single civilian acquisition agency (which actually runs counter to the deregulatory theme of decentralization and user control); simply directs the Secretary of Defense to reduce acquisition cycles by 50 percent, and mandates cancellation of programs that are 50 percent behind schedule, 50 percent over cost, or 50 percent short of initial performance specifications.

We draw two lessons from these reform efforts. First, legislators value their ability to control the goals of the procurement process and will not give it up in the name of efficiency without a fight. Second, simplified procedures and rudimentary outcome standards are not suited to complex procurements, largely because of the ambiguities, technical uncertainties, and long-term commitments involved in larger purchases. We reaffirm our argument that the management of large-scale weapons programs will never even remotely resemble the way that agency officials purchase office supplies, or the way that commercial firms conduct their business.

There are other areas where scholars could apply the theoretical tools developed by students of domestic institutions to issues of military policy: applying the concepts and methods of organizational dynamics to the question of how the military is adapting to the end of the Cold War (McCalla, 1991); studying the dynamics of civilian control of the military using the principal-agent methods we have outlined here; and exploring the raw institutional politics of military policy, as exemplified by the struggle over President Clinton's attempts to revise the military's policy banning gays and lesbians from the armed forces. We see a need to review the existing theories of regulatory politics, interest group activities, and congressional behavior to determine whether they can adequately explain the structure of the national security institutions and processes. The Department of Defense is the largest and most complex organization in the world, and there is much to be gained from bringing defense policy back into the study of politics and from bringing politics back into the study of defense policy.

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Notes

1. Lindsay and Ripley (1992) cited 268 works on Congress and defense policy in a review essay, and a number of scholars have examined the connection between defense budgets and domestic politics, both in the United States and elsewhere (Arnold, 1979; Russell, 1990; Bobrow and Hill, 1991; Bartels, 1991; Blechman, 1990; Lindsay, 1991; Mayer, 1991; Wilson, 1989). A definitive treatment of the Reagan defense program can, in fact, be found in Wirfs (1992).

2. The defense reform literature recognizes that multiple principals are a problem for acquisition management, but the standard solution—recommendations to streamline authority channels and give program managers the authority to overrule other parties—is simply to get rid of them (Fox, 1988: 306-311; Thompson and Jones, 1994: 138-139).
3. Many federal managers and union leaders in the government opposed the China Lake experiment, which gave managers broad discretion to distribute merit raises on the basis of performance bands rather than more rigid rules. Management discretion implies the potential for abuse, however, one may define it. Ultimately, concluded Wilson, "pay based on seniority is safer because it minimizes the authority of managers" (1989: 148).

4. One possible criticism of our framework is that companies arrange to sell complex and lumpy products in the private marketplace—such as commercial aircraft—with none of these problems. The key differences are (1) in commercial transactions the producer has total control over its own goals and decisions and can make the cost, performance, and schedule tradeoffs necessary to achieve a competitive product; (2) in every transaction there is only one principal, the buyer; (3) both the buyer and seller agree on what constitutes an acceptable outcome; and (4) enforcement of the original agreement is guaranteed through binding contracts.

5. In private markets, in contrast, the task is simple. The goal is to maximize the return from a particular project or investment, and it is a comparatively trivial task to determine whether the goal has been met: the unit of measurement is clear, the calculations straightforward, and although there can still be disagreement about the nature of the goal itself, there is rarely a question about whether or not it has been met.

6. Most of the success stories in the reform literature, it turns out, address problems where outcomes are simple and unambiguous. Osborne and Gaebler argue that the Defense Logistics Agency was able to increase efficiency through an outcome-based evaluation system precisely because "their desired outcome was so clear: the successful shipment of some item of supply" (1993:164). Our position is that the lessons learned from output-based accountability overhauls in logistics depots, garbage truck repair operations, or managing state-owned liquor stores (Thompson, 1993: 311-312) do not tell us much about how best to manage large-scale weapons programs.

References


Higginbotham Company.

