1991 marked the twentieth anniversary of the publication of Graham Allison's *Essence of Decision: Explaining the Cuban Missile Crisis*. The influence of this work has been felt far beyond the study of international politics. Since 1971, it has been cited in over 1,100 articles in journals listed in the *Social Sciences Citation Index*, in every periodical touching political science, and in others as diverse as *The American Journal of Agricultural Economics* and *The Journal of Nursing Administration*. The book continues to sell thousands of copies every year, reflecting its widespread use in university curricula. To those familiar with it, none of this will be surprising, particularly in view of its genesis: as Allison notes in the preface (*ED*, p. ix), it "represents to a large extent the most recent but still unfinished 'Evolving Paper'" of the Research Seminar on Bureaucracy, Politics, and Policy at Harvard University's Institute of Politics, a group that included Ernest May, Morton Halperin, Stanley Hoffmann, Fred Ikle, William Kaufmann, Andrew Marshall, Richard Neustadt, Don Price, Harry Rowen, Thomas Schelling, James Q. Wilson, and Adam Yarmolinski—the kind of gathering that would have prompted President Kennedy to quip, "Never has so much talent been gathered in one room since Thomas Jefferson dined alone."

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It was Jefferson who advocated a fundamental reconsideration of prevailing institutions once every generation. Thus the twentieth anniversary of this seminal work seems an appropriate time to reflect on the achievements and the prospects of the revolution that it wrought. My aim is not to review the book per se; little can be added now to the perceptive critiques it received at the time of publication. Rather, my aim is to use the book as a vehicle for assessing the contribution to our understanding of international politics of that which it spawned: the bureaucratic politics approach, broadly construed. Allison himself represented Essence of Decision as experimental, exploratory, and preliminary; his purpose was to chart a course for others to follow (ED, p. 273). Fidelity to his project requires that we periodically take a bearing and, if necessary, make mid-course corrections. Such is the intent of this paper.

Allison’s Project

In the preface to Essence of Decision, Allison writes that the book had two main aims: to try to solve certain puzzles about the Cuban missile crisis, and to explore the influence of the analyst’s unrecognized assumptions upon his or her thinking about events of that kind. “Answers to questions like why the Soviet Union tried to sneak strategic offensive missiles into Cuba must be affected by basic assumptions we make, categories we use, our angle of vision,” Allison writes. “But what kind of assumptions do we tend to make? How do these assumptions channel our thinking? What alternative perspectives are available?” (ED, p. v).

5. My evaluation is strictly confined to the field of international politics. Specialists in other disciplines (e.g., agricultural economics) are better positioned than I to judge the impact of these paradigms on their own fields.
6. An excellent analysis with a similar goal from a complementary perspective appeared as this article was in press; see Jonathan Bendor and Thomas H. Hammond, “Rethinking Allison’s Models,” American Political Science Review, Vol. 86, No. 2 (June 1992), pp. 301–322.
The dominant frame of reference most analysts of world politics use is the rational actor model (Allison's "Model I"), which conceives of states as unitary and purposive, making consistent, value-maximizing choices within specified constraints (ED, p. 30). The major contribution of Essence of Decision is to elucidate two alternative frameworks, the organizational process model (or Model II) and the governmental (or bureaucratic) politics model (Model III). Each is developed in one theoretical chapter, and applied to the case of the Cuban missile crisis in another. For the political scientists, Allison maintains, "the theoretical chapters constitute the contribution" (ED, p. vi), presenting relatively rigorously-formulated paradigms that "provide a basis for improved explanations and predictions" (ED, p. 5). In other words, Allison claims that the organizational process and bureaucratic politics paradigms perform better than the rational actor paradigm in the tasks paradigms are meant to fulfill. Do they?

To answer this question, I briefly describe the nature and function of "analytic paradigms"; I comment on Allison's specification of Models II and III; and I examine the performance of each on three crucial dimensions. I reach two negative conclusions, and one positive one. First, students of international politics have largely failed to take up Allison's challenge to build and to test theory at the intra-governmental level of analysis. Second, despite the dearth of rigorous tests, there are convincing reasons to believe that neither Model II nor Model III is as useful as, let alone analytically superior to, Model I. Nevertheless, Allison's motivating intuition that bureaucracies are important may yet be vindicated since there are strong prima facie grounds to believe that some paradigm concentrating the analyst's attention on organizational characteristics or processes other than those on which Models II and III focus might yield significant analytical gains. While I stop well short of specifying such a paradigm in detail, I make a few preliminary remarks intended to be suggestive in this regard.

The Nature and Purpose of a Paradigm

Allison works with the conception of a paradigm developed by Robert Merton for sociological analyses: "a systematic statement of the basic assumptions, concepts, and propositions employed by a school of analysis." The components of Allison's paradigms include the basic unit of analysis, the organizing concepts, the dominant inference pattern, and several purely illustrative propositions (ED, p. 32). None of Allison's three models is a fully-specified
causal model relating dependent and independent variables; instead, each is meant to be pretheoretical, or, better, "metatheoretical," since it merely invites the reader to "think about X as if it were Y."

By themselves, metatheories have no explanatory or predictive power; they are neither testable nor falsifiable, since no expectations or predictions follow directly from them. Consequently, their performance cannot be judged by direct empirical test. Instead, they must be assessed on the basis of how well they perform what Merton calls "at least five closely related functions":

1. Paradigms serve a "notational function. . . . They provide a compact parsimonious arrangement of the central concepts and their interrelations as these are utilized for description and analysis."

2. The explicit statement of an analytic paradigm "lessens the likelihood of inadvertently importing hidden assumptions and concepts, since each new assumption and each new concept must be either logically derivable from the previous terms of the paradigm or explicitly incorporated in it. The paradigm thus supplies a pragmatic and logical guide for the avoidance of ad hoc (i.e., logically irresponsible) hypotheses."

3. Paradigms "advance the cumulation of theoretical interpretation. In this connection, we can regard the paradigm as the foundation upon which the house of interpretations is built. If a new story cannot be built directly upon the paradigmatic foundations, if it cannot be derived from the foundations, then it must be considered a new wing of the total structure, and the foundations (of concepts and assumptions) must be extended to support the new wing. Moreover, each new story which can be built upon the original foundations strengthens our confidence in their substantial quality just as every new extension, precisely because it requires additional foundations, leads us to suspect the soundness of the original substructure."

4. Paradigms, "by their very arrangement, suggest the systematic cross-tabulation of presumably significant concepts and may thus sensitize the analyst to types of empirical and theoretic problems which might

otherwise be overlooked. They promote analysis rather than concrete description."

5. Paradigms "make for the codification of methods of qualitative analysis in a manner approximating the logical, if not the empirical, rigor of quantitative analysis."8

Of these, the third and fourth functions provide the clearest criteria for assessing the performance of paradigms. While paradigms themselves have no explanatory or predictive power, theories derived from them do, and it is by assessing the performance of these theories that we ultimately judge the value of the paradigms. This is what Allison means when he suggests that Models II and III provide a basis for improved explanations and predictions. Useful paradigms, therefore, facilitate the development of successful theories that permit general causal inferences, provide cogent explanations, and improve predictions. In contrast, unproductive paradigms generate theories that perform poorly, or result only in a proliferation of atheoretical concrete descriptions. Judgments about the worth of paradigms are always relative, however. As Thomas Kuhn notes, "Paradigms gain their status because they are more successful than their competitors in solving a few problems that the group of practitioners has come to recognize as acute. To be more successful is not, however, to be either completely successful with a single problem or notably successful with any large number."9

The Specification of the Paradigms

Allison introduces the organizational process paradigm (Model II) by contrasting it with Model I, the rational actor model:

For some purposes, governmental behavior can be usefully summarized as action chosen by a unitary, rational decisionmaker: centrally controlled, completely informed, and value maximizing. But this simplification must not be allowed to conceal the fact that a government consists of a conglomerate of semi-feudal, loosely allied organizations, each with a substantial life of its own. Government leaders do sit formally and, to some extent, in fact, on

top of this conglomerate. But governments perceive problems through organizational sensors. Governments define alternatives and estimate consequences as their component organizations process information; governments act as these organizations enact routines. Governmental behavior can therefore be understood, according to a second conceptual model, less as deliberate choices and more as *outputs* of large organizations functioning according to standard patterns of behavior. . . . To perform complex routines, the behavior of large numbers of individuals must be coordinated. Coordination requires standard operating procedures: rules according to which things are done. . . . At any given time, a government consists of *existing* organizations, each with a *fixed* set of standard operating procedures and programs. . . . Existing organizational routines for employing present physical capabilities constitute the range of effective choice open to government leaders confronted with any problem. . . . The fact that the fixed programs . . . exhaust the range of buttons that leaders can push is not always perceived by these leaders. But in every case it is critical for an understanding of what is actually done (ED, pp. 67–68, 79).

The crucial respect in which Model II represents a revision of Model I, therefore, is its understanding that governmental behavior is constrained by the routines of the organizations of which the government is composed. Belying the title of the book, Model II does not operate at the moment of decision; rather, it explains deviations from ideal rationality at the moment of decision by highlighting the ways in which organizational routines constrain the formation of options, and it explains deviations from perfect instrumentality after decisions are made by revealing how routines affect implementation. Within those constraints, however, Model II has nothing to say about the decisions themselves, which by default may be analyzed in terms of bounded rationality, the operation of bureaucratic politics, or some other conceptual framework highlighting such factors as the influence of cognitive and perceptual biases, the role of affect, the dynamics of small-group decision-making processes, and so forth.

According to Model III, ‘The ‘leaders’ who sit on top of organizations are not a monolithic group. Rather, each individual in this group is, in his own right, a player in a central, competitive game. The name of the game is politics: bargaining along regularized circuits among players positioned hierarchically within the government.’ Players ‘make governmental decisions not by a single rational choice but by the pulling and hauling that is politics’ (ED, p. 144). Model III therefore explains deviations from ideal rationality by revealing the political gamesmanship behind them. Unlike organizational
routines, these games may operate during the moment of decision itself as well as in the option-formation stage or during implementation, rendering Model III broader in scope, more ambitious in its goals, and potentially more fruitful than Model II. Note that Model III does not suppose that the individual players behave irrationally in the games in which they participate, merely that the net effect of those games is to deflect state behavior from the course that would have been chosen by a unitary rational actor.10

It is unfortunate that Allison's successors have focused overwhelmingly on Model III, all but ignoring Model II. Allison himself contributed to this tendency in a later article with Morton Halperin that conflated the two models, relegating organizational processes to the status of "constraints" within the bureaucratic politics paradigm.11 In reality, while the two may well operate synergistically, they postulate fundamentally different constraints on rationality and are worthy of the distinct development they received in Essence of Decision.12 The temptation to conflate the two models may have stemmed from errors in the original specification of the paradigms. For example, among the organizing concepts Allison includes in his specification of Model II are the parochial priorities and perceptions of organizations (ED, p. 81), which, in fact, have nothing to do with routines and which properly belong to the bureaucratic politics paradigm. Likewise, in elaborating the crucial Model II concept of "action as organizational output," Allison writes that, in producing outputs, the activity of an organization is characterized by its goals, or "constraints defining acceptable performance," for example, the imperative to defend one's turf against rival organizations. While this may well be true of organizational behavior (and for some issues, such as budget allocations, most certainly is true), the goals of organizations also properly belong to Model III, for while they define interests (and thus the structure of the "game"), they are logically distinct from routines.13

11. Ibid., pp. 40-79; 43, 54-56.
13. ED, pp. 81-82. Mis-specifications such as these lead to the inclusion of "imperialism" on the list of general propositions suggested by Model II, when it undoubtedly falls under the rubric of Model III: "Most organizations define the central goal of 'health' in terms of growth in budget, manpower, and territory." ED, p. 93. Allison's specification of the bureaucratic politics
The Performance of the Paradigms

It is obvious that Model I is, in important senses, wrong; states are not unitary, purposive, rational actors. As Allison puts it, "We are forced to recognize that in treating happenings as actions, and national governments as unitary purposive actors, we are 'modeling.' The fact that the assumptions and categories of this model neglect important factors such as organizational processes and bureaucratic politics suggests that the model is inadequate" (ED, p. 254). Nevertheless, as Allison argues, the criticism that Model I is unrealistic—while true—does not provide a basis for assessing its performance as a paradigm.14 Newton assumed wrongly that mass concentrates at a point, but he could not have relinquished this assumption without jeopardizing his prodigious accomplishments in specifying theoretical relationships between physical objects. While it may be, as David Kozak insists, that "recognizing bureaucratic politics leads to a realistic understanding of the U.S. policy process" and that "ignoring bureaucratic politics can only lead to ignorance and naiveté," only someone seeking mere concrete description will consider the point important.15

Allison’s claim that Models II and III represent improvements on Model I hinges not on their superior realism, but on their potentially greater power and fruitfulness as paradigms. To determine how well paradigms perform, and hence to judge their relative worth, we must gauge the productivity of the "normal science" that they permit.16 Normal science is the activity of
articulating theory, determining significant facts, and matching facts with theory. A productive paradigm paves the way for a normal science capable of solving a good proportion of the puzzles drawn to the analyst's attention. Let us look closely at the performance of Models II and III in these terms.

ARTICULATING THEORY
Since students of international politics have paid comparatively little attention to Model II, or have conflated it with Model III, they have made little attempt to develop theories of state behavior in which organizational routines play a central role. In Essence of Decision, however, Allison advances several theoretical propositions derivable from Model II: (1) existing organizational routines limit the range of available options in a given situation; (2) organizational routines resist change; (3) existing organizational routines determine the course of implementation; and (4) organizational routines systematically induce instrumental irrationalities in state behavior. These are sound theoretical propositions, in that they are clear, plausible, and (with perhaps the exception of the fourth, as I discuss below), testable.

Ironically, despite the considerably greater attention analysts have paid to Model III, the body of theory it has spawned is far less clear, far less plausible, and more difficult to test. The central difficulty revolves around the hypothesized relationship between a player's bureaucratic position and his or her preferences. The tightest theoretical proposition is captured by Miles's Law: "Where you stand depends upon where you sit." Allison writes: "For large classes of issues—e.g., budgets and procurement decisions—the stance of a particular player can be predicted with high reliability from information about his seat." In addition, Allison suggests that bureaucratic position determines a player's perception of an issue: "Where you sit influences what you theory. Possible explanations for the interminability of these paradigm debates include (a) poor specifications of the paradigms (each is a moving target); (b) insensitivity to fundamental incommensurabilities; (c) the uniformly poor quality of theory; (d) the possibility that political phenomena are too indeterminate to permit any one paradigm to enjoy more than marginal success; and (e) the possibility that the political scientists are too wedded to their paradigms to recognize the advantages competing paradigms may offer.

17. Kuhn, The Structure of Scientific Revolutions, p. 34.
19. ED, p. 176; see also ED, p. 165. As David Kozak puts it, "policy positions are determined by or are a function of an actor's perspective as developed by his or her bureaucratic culture." Kozak, "The Bureaucratic Politics Approach: The Evolution of the Paradigm," p. 7.
see as well as where you stand (on any issue).” But Allison confuses matters by insisting that “Each player pulls and hauls with the power at his discretion for outcomes that will advance his conception of national, organizational, group, and personal interests,” and that “each person comes to his position with baggage in tow. His bags include sensitivities to certain issues, commitments to various projects, and personal standing with and debts to groups in society” (ED, p. 166). Moreover, “individuals’ perceptions of the issue will differ radically. These differences will be partially predictable from the pressure of their position plus their personality” (ED, pp. 180–181). It is not clear, therefore, whether, or on what issues, we should expect bureaucratic position to be determinative. As Stephen Krasner puts it, bureaucratic analysis implies that the office—not its occupant—determines how players behave. Indeed, at points Allison seems actively to deny any theoretical relationship between a player’s position and his or her preferences and perceptions. “The peculiar preferences and stands of individual players can have a significant effect on governmental action,” Allison writes. “Had someone other than Paul Nitze been head of the Policy Planning Staff in 1949, there is no reason to believe that there would have been an NSC 68. Had [Douglas] MacArthur not possessed certain preferences, power, and skills, U.S. troops might never have crossed the narrow neck [of Korea]” (ED, p. 174). If the idiosyncracies of particular individuals determined these important actions and policies, specifically bureaucratic determinants can hardly have played an important role.

20. ED, pp. 178, 166; Allison and Halperin, “Bureaucratic Politics,” p. 44.
22. Krasner, “Are Bureaucracies Important?” p. 171. See also Art, “Bureaucratic Politics and American Foreign Policy,” pp. 472–473. Art notes that what he calls the “first wave” of scholars studying the relationship between bureaucratic politics and foreign policy (such as Warner Schilling) generally treated pre-existing mindsets as more important than bureaucratic processes, and refrained from formulating general theory along the lines of Miles’s Law as a result: See ibid., p. 471. Art goes further to suggest that the “second wave,” of which Allison is the most prominent, should have been at least as circumspect: “If you cannot specify in what issue areas other than budgetary and procurement decisions stance correlates highly with position, instead merely stating that this works ‘in many cases,’ then why claim something for your paradigm that your own analysis does not bear out? By asking these questions of the position-perception proposition, we begin to see in microcosm one of the central difficulties with the bureaucratic politics paradigm: we must qualify it with so many amendments before it begins to work that when it does, we may not be left with a bureaucratic paradigm, but may in reality be using another one quite different.” Ibid., p. 473.
A second and related difficulty concerns the theoretical relationship between bureaucratic position and influence in the decision-making process. "What determines each player's impact on results?" Allison asks; "1. Power. Power (i.e., effective influence on government decisions and actions) is an elusive blend of at least three elements: bargaining advantages, skill and will in using bargaining advantages, and other players' perceptions of the first two ingredients" (ED, p. 168). But bargaining skills and advantages, and the will to use them, are idiosyncratic. They are not necessarily linked to bureaucratic positions per se. Again, Allison himself is his clearest critic on this point: "The hard core of the bureaucratic politics mix is personality," he writes. "How each man manages to stand the heat in his kitchen, each player's basic operating style, and the complementarity or contradiction among personalities and styles in the inner circles are irreducible pieces of the policy blend."23

The third major element in Allison's theoretical articulation of the bureaucratic politics paradigm is the conceptualization of the manner in which decisions are made: through a bargaining process characterized by the "pulling and hauling that is politics," the net result of which is action rarely intended by any player in particular (ED, p. 175). This third conceptualization would seem to present no theoretical difficulties.

DETERMINING SIGNIFICANT FACTS AND MATCHING FACTS WITH THEORY

Despite being clear and plausible, the four theoretical propositions Allison advances in his presentation of Model II do not match up well with the facts of the Cuban missile crisis as they presently appear, which demonstrate that existing organizational routines neither exhaust the range of available op-

23. ED, p. 166. A serious attempt to mediate Models I and III by introducing a notion of role that permits two-way causal inferences between the preferences of particular players and the positions they occupy in the bureaucratic structure—while avoiding altogether leaning on the idiosyncratic variable "personality"—may be found in Martin Hollis and Steve Smith, "Roles and Reasons in Foreign Policy Decision Making," British Journal of Political Science, Vol. 16, No. 3 (July 1986), pp. 269–286. This may well be a theoretical track worth exploring. The adjustment can work either on the supposition that roles constrain personalities, or that for any given role only certain personality types will, as a matter of fact, be admitted. It would therefore be possible, if this track were followed, to concede that preferences and perceptions depend in crucial respects on personalities, without weakening the hypothesized correlation between preferences or perceptions and bureaucratic positions. In any event, what is necessary is to be clear that what the bureaucratic politics paradigm seems to require here is correlation, not causation. Interpreting Miles's Law in this fashion would seem an adequate theoretical response to the difficulties Allison's discussion presents.
tions, nor resist change, nor necessarily determine the course of implementation, nor systematically induce instrumental irrationalities in state behavior.

The deployment of Soviet missiles to Cuba itself clearly illustrates that existing organizational routines do not exhaust the range of available options to decision-makers. The Soviet Union had never deployed nuclear missiles outside its borders before and had no set procedures for so doing. On short notice, the various branches of the Soviet military put together a massive redeployment of missiles already operational in Central Europe, demonstrating the remarkable ability of organizations to respond to political directives issued essentially without concern for the available set of routines. The Soviet Union had never deployed nuclear missiles outside its borders before and had no set procedures for so doing. On short notice, the various branches of the Soviet military put together a massive redeployment of missiles already operational in Central Europe, demonstrating the remarkable ability of organizations to respond to political directives issued essentially without concern for the available set of routines.24 Nor was the list of possible responses to the Soviet deployment generated by the ExComm (President Kennedy’s executive committee) wholly dependent upon existing organizational routines. Certain options—such as a quiet diplomatic démarche—could have been arranged ad hoc and implemented immediately. It seems likely that if President Kennedy had chosen this option, his preferred channel would have been a secret approach to Ambassador Anatoly Dobrynin by his brother, Robert Kennedy.25 This would have been neither bureaucratic nor routine; but the fact that it was one channel among several possibilities indicates that organizational rigidities did not constitute a serious constraint on the range of diplomatic options. Even the range of military options was little constrained by organizational routines. Some pre-existing plans were inherently flexible in the choice of missions and targets.26 Other military options could have been worked up over a period of time.27

24. As Allison notes, several aspects of the redeployment were undoubtedly done “by the book.” Others, however, were not. Roger Hilsman notes, for example, that the concrete arches for the nuclear storage sheds were pre-cast in the Soviet Union and shipped all the way to Cuba, which according to a Model I analysis would suggest that the Soviets placed a premium on speed. Roger Hilsman, To Move a Nation: The Politics of Foreign Policy in the Administration of John F. Kennedy (Garden City, N.Y.: Doubleday, 1967), p. 165.
27. It is correct, as Allison maintains, that the Air Force failed in the first instance to brief the president on a surgical air strike option, instead presenting for consideration a much larger-scale attack on Cuban military installations more appropriate to the early stages of an invasion. But as Allison’s own discussion indicates, this was because the president had failed to make clear what it was that interested him. A truly surgical air strike could have been planned and executed on short notice; the Air Force’s failure to present one was the result of a miscommunication compounded by the Air Force’s judgment that a truly surgical air strike would not be
Of course, the existing repertoire of organizational routines can restrict the range of available options prior to a decision in special circumstances: namely, when complex operations are involved, and when time is particularly short. As Glenn Snyder and Paul Diesing note, the July Crisis of 1914 might well have unfolded differently if, in addition to the Schlieffen Plan, the German General Staff had prepared a plan for a deterrent show of force in the east. But a spectacular example such as this does not establish a general theoretical point; such a constraint is always a matter of degree, and generally affects only a portion of the range of options available to national leaders (namely, immediate large-scale military options).

The power of an appeal to organizational rigidities as a constraint on rational action seems further weakened by the observation that routines can be quite flexible, and are often modified or overridden (cf. ED, pp. 94–95). The annals of military history are full of examples of this. Few organizations are as thoroughly “scripted” as military forces, yet in every war they have achieved spectacular results by modifying or overriding standard operating procedures. Jimmy Doolittle’s April 1942 raid on Tokyo was made possible by launching land-based bombers from an aircraft carrier; Sherman’s march through the Carolinas was made possible by innovations to standard fording techniques. In the Cuban missile crisis, national leaders repeatedly and effectively modified organizational routines whenever they felt it necessary to do so. The creation and operation of the ExComm itself short-circuited regular bureaucratic channels. President Kennedy monitored naval activities on the quarantine line through a direct channel to the commander, Vice Admiral Alfred G. Ward, bypassing the normal chain of command. The militarily effective. ED, pp. 124–126. Moreover, as Allison argues, the president and his advisers did not understand that, contrary to the military’s judgment, a large-scale air strike was unnecessary for the intended purpose; “Pure foul-up and confusion are sufficient to account for the fact that most of the civilian members of the ExCom failed to see this point.” ED, p. 205. Foul-ups and confusion are extrinsic to Model II.

29. It is interesting to note that the First World War is the only war in history whose outbreak analysts have been tempted to explain in Model II terms.
30. “My engineers . . . reported that it was absolutely impossible for an army to march across the lower portions of the State in winter,” Confederate General Joseph E. Johnston remarked in reference to the latter feat. “I made up my mind that there had been no such army in existence since the days of Julius Caesar.” James M. McPherson, Battle Cry of Freedom (New York: Oxford University Press, 1988), pp. 827–828.
32. Cf. Raymond L. Garthoff, Reflections on the Cuban Missile Crisis, 2d ed. (Washington, D.C.:
president also countermanded a preauthorized retaliatory strike on the surface-to-air missile site responsible for downing an American U-2 on October 27.\textsuperscript{33} Attorney General Robert Kennedy succeeded in canceling the planned sabotage operations in Cuba of Operation Mongoose's Task Force W when he found out about them.\textsuperscript{34} In one case, a subordinate brought potentially counterproductive aspects of routines to the attention of national leaders precisely so that they could modify them: NATO Supreme Allied Commander General Lauris Norstad, fearing that a highly-visible unilateral alert of American forces in Europe might undercut the allies' support for Kennedy's stand on Cuba, in view of the fact that he had not consulted them on military contingencies, requested and received permission to modify the nature of the alert in Europe. Raymond Garthoff calls it "a wise move, and a good example of political-military 'feedback' in decision-making."\textsuperscript{35} It is also a good demonstration that Model II errs in conceiving implementation as essentially mechanical once a decision is made.

This leaves the claim that organizational routines systematically degrade instrumentality. One respect in which we might believe they do so is by constraining decision-makers' access to information. As Allison puts it, "information about Soviet missiles in Cuba came to the attention of the President on October 14 rather than three weeks earlier, or a week later, as a consequence of the routines and procedures of the organizations that make up the U.S. intelligence community. These 'eyes and ears' of the government function less as integral parts of a unitary head that entertains preconceptions and theories than as organs that perform their tasks in a habitual fashion" (ED, p. 118). Roger Hilsman notes that intelligence-gathering procedures in 1962 resulted in a lag of ten days to two weeks between the time an informant

\textsuperscript{33} Garthoff, Reflections, pp. 98–99n.
\textsuperscript{35} Garthoff, Reflections, pp. 60–61n.
in Cuba noticed something unusual and the time the report reached Wash-
ington.36 While this may seem an inordinately long period of time, the
discovery of the missiles was actually an impressive accomplishment, in view
of the volume of information the Central Intelligence Agency (CIA) had to
process and the fact that the Soviets were taking pains to prevent it.37 The
key point is that without routines, the government would not have discov-
ered the missiles in time, and would not have been able to react. Routines
are instrumentally rational given the opportunity costs of doing without
them.38

Moreover, during the Cuban missile crisis, some of the greatest dangers
to successful crisis management stemmed from the breakdown of routines,
not from their normal operation. Consider three examples:

First, when President Kennedy ordered the Strategic Air Command (SAC)
to a higher state of alert, General Thomas Power, SAC commander-in-chief,
ordered the alert sent out in the clear, rather than in code, as would have
been standard procedure. Power's intention was to make the Soviets feel
vulnerable to American nuclear might; but this was far from the president's
desire at the time, and under other circumstances might have prompted an
adverse reaction from the Soviet Union.39

Second, at the height of the crisis on October 27, 1962, Soviet air defense
forces in Cuba—much to Khrushchev's shock and chagrin—shot down an
American U-2 reconnaissance plane without requesting permission from their
superiors.40 Under other circumstances, this might have been the first step
on a ladder of escalation.

36. Hilsman, To Move a Nation, p. 168.
37. Ibid., p. 191. Allison's argument that a struggle between the Air Force and the CIA for
control of the U-2 flights over Cuba contributed to delays in discovering the Soviet missiles (a
Model III argument that does not actually belong in a discussion of Model II, since it involves
pulling and hauling, not routines), is seriously flawed. ED, pp. 122–123. As Allison notes, the
Stennis Report concluded that there was "no evidence whatsoever to suggest that any conflict
between the CIA and SAC existed or that there was any delay in photographic coverage of the
island because of the fact that the U-2 program was being operated by the CIA prior to October
14. Likewise there is no evidence whatsoever of any deadlock between the two agencies or any
conflict or dispute with respect to the question of by whom the flights should be flown." ED,
p. 307 n. 90. In any case—contra ED, p. 187—it is unlikely that the Soviet missile bases would
have been identifiable from the air much earlier, simply because of the rapidity with which they
were being constructed. See Blight and Welch, On the Brink, p. 44.
62; Blight and Welch, On the Brink, pp. 207–209.
40. Blight and Welch, On the Brink, pp. 338–340. Khrushchev and others evidently believed that
such a request would have been a matter of routine. The actual wording of the air defense
Third, also on October 27, an American U-2 violated standing orders to stay clear of Soviet territory and inadvertently strayed into Siberian air space, heightening Khrushchev’s fear of nuclear attack at a crucial point in the confrontation.41 This could have provided the spark that ignited the powder keg.

As these three examples show, we must ask in any given case whether organizational routines are more of a help or more of a hindrance to the promotion of national goals. Violations of standard procedures can represent constraints on ideally rational action at least as powerful as blind, mechanical adherence to routines. Organizational routines thus cannot be said to have a uniformly negative effect on instrumentality. While it may be possible to argue that they have a net negative effect on instrumentality, no study presently exists substantiating such a claim.42

Nonetheless, Model II draws to the analyst’s attention the undeniable fact that from time to time organizations do perform in blind accordance with routines, with results that national leaders would not have chosen deliberately. One reason for the failure of President Carter’s mission to rescue American hostages in Teheran, for example, was the fact that incompatible equipment and procedures prevented Marine helicopter pilots from communicating with their Air Force support planes at Desert One.43 In the Cuban missile crisis on October 27, American fighters attached to Alaska Air Command scrambled to escort the stray U-2 safely back to base in response to its distress call. This was normal procedure. It is conceivable that those planes could have become involved in hostilities with the Soviet fighters that had scrambled to intercept the U-2; but neither the ExComm nor the president was aware of this danger, because neither had authorized the escort.44 What

crews’ standing orders is not known, but some Soviet commentators believe that the orders were ambiguous, and that the officers involved might well have believed that they had pre-delegated authority. See ibid., p. 339.
42. The foregoing discussion presupposes that it is possible to imagine a well-behaved utility function for any given state (or, at least, a well-ordered set of “national goals” that a unitary, instrumentally-rational actor would pursue), and that it is possible to gauge with confidence the utilities of foregone alternatives. The practical and theoretical difficulties of both tasks cast further doubt on the claim that organizational routines systematically degrade instrumentality. See, e.g. Kenneth J. Arrow, Social Choice and Individual Values, 2d ed. (New York: Wiley, 1963).
44. Sagan, “Nuclear Alerts and Crisis Management,” pp. 121–122. It has been reported that American ships on anti-submarine duty in the Atlantic, without presidential knowledge uncritically employed textbook procedures for forcing Soviet submarines to surface, damaging at least
these examples demonstrate is that if decision-makers are unaware of routines, they will be unable to modify them as necessary.45 Decision-makers are never omniscient; they cannot know or control all aspects of organizational behavior. This fact may be relatively innocuous in the normal course of events, but in situations of acute danger such as the Cuban missile crisis, its implications can be profound. Model I's relative insensitivity to organizational complexity suggests that some paradigm focusing attention on organizational behavior might well be useful; but routines are not a helpful analytic category, because they cannot be said to have the uniform characteristics or pervasive and systematic effects upon which to build powerful theories of state behavior.

How well does Model III perform at determining significant facts and matching fact with theory? Given the evident confusion in Model III theory, the question would seem difficult to answer. Let us concentrate on the theoretical propositions that most analysts associate with Model III:

**PROPOSITION 1:** Player preferences correlate highly with bureaucratic positions.

**PROPOSITION 2:** Player perceptions correlate highly with bureaucratic positions.

**PROPOSITION 3:** A player’s influence in a decision-making process flows from his or her bureaucratic position.

**PROPOSITION 4:** A decision-making process may be understood as a bargaining situation in which players “pull” and “haul” to promote their organizational interests, with the net result that governmental decisions do not reflect the intentions of any player in particular.

Let us begin by considering the first two propositions.46 Allison and Halperin noted their hope that the bureaucratic politics paradigm would prove “sufficiently general to apply to the behavior of most modern governments
in industrialized nations." Without controlled, cross-national studies, it is impossible to judge how strongly players’ preferences and perceptions correlate with their positions. Anecdotal evidence is far from conclusive. It is not difficult to find examples that support propositions 1 and 2 strongly. As First Lord of the Admiralty, Winston Churchill was a staunch defender of the Royal Navy’s interests and of its extremely costly building programs; later, as Chancellor of the Exchequer, he was an effective cost-cutter who rebuffed the Navy at almost every turn. Similarly, as the State of California’s Director of Finance under Governor Ronald Reagan, Caspar Weinberger earned the moniker “Cap the Knife” for his budget-slashing prowess; as President Reagan’s Secretary of Defense, however, his single-minded promotion of military spending prompted Senator Mark Hatfield (R-Ore.) to declare him “a draft dodger in the war on the federal deficit.” But for every Winston Churchill or Caspar Weinberger there is a James Watt or an Anne Burford whose attitudes and actions prove to be antithetical to the interests and preferences of the organizations they represent.

Similarly inconclusive are the many case studies that attempt to assess the power of bureaucratic affiliation as a predictor of preferences and perceptions in particular circumstances. Richard Head found no evidence of bureaucratic politics at work in his study of the 1976 crisis in the Korean demilitarized zone. In contrast, Steve Smith’s study of the Iran hostage rescue mission purports to bear out propositions 1 and 2, because key players took positions that seemed to reflect their locations in the bureaucratic structure. But even

48. The most impressive effort of this kind is Snyder and Diesing’s study of crisis decision making. Snyder writes in a personal note that the bureaucratic politics model can be reduced to “a theory of coalition formation,” and that the proposition that attitudes are “determined” (sic) by bureaucratic role “does not survive our analysis.” Conflict Among Nations, p. 408n.
in that case, the crucial role of Zbigniew Brzezinski raises important questions about what preferences a national security adviser should be expected to have simply by virtue of holding the office, and whether his strong advocacy of the military option cannot be explained more simply and more accurately by appeal to the hawkishness he himself brought to it. The vast majority of cases lead to indecisive verdicts. The debate within the Eisenhower administration following the fall of Dienbienphu is typical in this respect: the hawks included the vice president (Richard Nixon), the secretary of state (John Foster Dulles), and the chairman of the joint chiefs of staff (Admiral Arthur W. Radford), while the most passionate of the doves was a military man, chief of staff of the U.S. Army General Matthew B. Ridgway.\textsuperscript{54} It is impossible to identify any clear bureaucratic pattern in this distribution of preferences. Some studies purportedly offering strong support for propositions 1 and 2 turn out on closer inspection to offer no support at all, such as Jiri Valenta’s attempt to explain the 1968 Soviet decision to invade Czechoslovakia in bureaucratic-political terms.\textsuperscript{55} Still other case studies that purport to demonstrate the power of the bureaucratic politics paradigm actually end up strongly supporting the rational actor model. For example, while the TFX competition was influenced in various ways by bureaucratic parochialism, the actual decision to award the TFX contract to General Dynamics and Grumman rather than to Boeing was made consensually by four men—Secretary of Defense Robert McNamara, Deputy Secretary of Defense Roswell Gilpatric, Air Force Secretary Eugene Zuckert, and Air Force Undersecretary Joseph Charyk—on the basis of a systematic comparison of the pros and cons of the two proposals, and against the backdrop of a very clear conception of interests. Indeed, two of the four men represented the Air Force, yet endorsed the proposal favored by the Navy.\textsuperscript{56}

\textsuperscript{54} Hilsman, \textit{The Politics of Policy Making in Defense and Foreign Affairs}, p. 30.
\textsuperscript{56} Richard Austin Smith, “TFX: The $7-Billion Contract That Changed the Rules,” in Morton
Somewhat more suggestive are studies that demonstrate at least a weak correlation between organizational affiliation and certain attitudes and dispositions. Career military officers’ perceptions of risk, for example, apparently tend to be lower than those of civilians.57 In postwar crises, American military leaders have also tended to be willing to apply greater force than their civilian counterparts once a decision to use force has been made (although they have not been appreciably more willing to resort to force in the first place).58 An extensive study of senior Canadian officials revealed that members of the Department of National Defence had the most positive attitudes toward American foreign policy and U.S.-Canadian relations, while members of the Canadian International Development Agency had the least.59 None of these studies is cross-national, and all demonstrate that a wide spectrum of attitudes and dispositions can be present in any organization; nevertheless, they do suggest that preferences and perceptions can correlate to some degree with positions.

It remains to be shown, however, whether these correlations are strong enough to be important, particularly in serious cases. If the Cuban missile crisis is representative, the answer seems to be negative. As Krasner puts it, decision-makers “often do not stand where they sit. Sometimes they are not sitting anywhere. This is clearly illustrated by the positions taken by members of the ExCom during the Cuban missile crisis, which Allison elucidates at some length.”60 If preferences and positions correlate strongly with positions only on such issues as budget allocations and turf battles, then Model III’s explanatory power would seem to be extremely limited.

What of proposition 3? Again, it is difficult to assess the extent to which a player’s influence in a decision-making process flows from his or her bureaucratic position since no serious attempt has been made to gauge it. Anecdotal evidence suggests an equivocal judgment. For example, some

American secretaries of state have been enormously influential in policy-making (Dean Acheson, John Foster Dulles, James Baker), while others have not (Christian Herter, Dean Rusk, William Rogers). Clearly the office of secretary of state does not in itself carry with it influence; as Henry Kissinger puts it, "presidents listen to advisers whose views they think they need, not to those who insist on a hearing because of the organizational chart." On the other hand, one position that clearly carries with it an enormous amount of influence—whether or not its holder is a forceful personality—is that of the president of the United States. As the Cuban missile crisis demonstrates, the president is all but unfettered in his ability to make decisions and to shape the decision-making process. Kennedy was constrained neither by Congress nor by his advisers. Indeed, when disagreements between the president and the ExComm became acute, Kennedy simply bypassed the ExComm. One is tempted to draw the unremarkable conclusion that a player’s influence in a given situation flows from his or her office only where there is hierarchical differentiation of authority, and only at the top. In all other cases, influence may well be fully determined by such intangible factors as personality, preference congruity, and access to superiors.

Finally, the extent to which a decision-making process may be understood as a bargaining situation in which players “pull” and “haul” to promote their organizational interests, with the net result that governmental decisions do not reflect the intentions of any player in particular, would seem to be quite small, except in those few cases where authority structures do not define a priori who will have the final say. The ExComm, for example, engaged in no “bargaining” of any kind; never did one player assent to X only on condition

63. The clearest example of this is the “Cordier Maneuver,” Kennedy’s decision to lay the groundwork through the UN for a public trade of Soviet missiles in Cuba for American Jupiter missiles in Turkey. See Welch and Blight, “The Eleventh Hour of the Cuban Missile Crisis,” pp. 12–18.
64. Allison as much as acknowledges this himself: “Arguments in the ExCom for and against the nonmilitary tracks involved difficult estimates, interpretations, and matters of judgment. Indeed, in retrospect, an analyst weighing all the available arguments could decide either way. But, as Sorensen’s record of these events reveals, the rapid abandonment of the nonmilitary path resulted less from the balance of argument than from the intra-governmental balance of power. ‘The President had rejected this course from the outset.’ . . . The coalition that had formed behind the President’s initial preference [an air strike] gave him reason to pause. Who supported the air strike—the Chiefs, McCone, Rusk, Nitze, and Acheson—counted as much as how they supported it. This entente cordiale was not composed of the President’s natural allies.” ED, pp. 202–204; citing Theodore Sorensen, Kennedy (New York: Harper and Row, 1965), p. 683.
of receiving $Y$ as a *quid pro quo*. This was because authority was not evenly distributed among the members of the group; the president held all of it. The “pulling and hauling” that went on took the form of normal debate in which players argued for and against various options; the name of the game was persuasion, and the only player who had to be persuaded was the president (cf. *ED*, p. 200).

Since many decision-making situations involve hierarchical distributions of authority, the process by which decisions are made should not normally be expected to result in a choice unintended by any player in particular.\textsuperscript{65} During the Cuban missile crisis, the decisions of the ExComm or the Soviet Presidium may certainly be said to have reflected the intentions of President Kennedy and Chairman Khrushchev respectively, although many actions of the organizations responsible for implementing those decisions clearly did not. That they failed to do so was not the result of bargaining or pulling and hauling, but of insubordination, incompetence, honest mistakes, technical difficulties, and even on occasion the uncritical execution of routines. None of these factors falls within the purview of Model III.

It cannot be denied that governments often make decisions that reflect bureaucratic interests, as Model III would have us expect. During the invasion of Grenada, for example, American military planners assigned a role to a battalion of Rangers for bureaucratic rather than military reasons: namely, to increase Congressional support for a third Ranger battalion (which was subsequently authorized in November 1984).\textsuperscript{66} In the case of the Iran hostage rescue mission, planners decided to allow Marine pilots to fly the helicopters primarily so that every service would have a role in the operation—a decision that “may have been the single greatest mistake of the planning staff.”\textsuperscript{67} Clearly, bureaucratic factors such as interservice rivalries often do have an effect on decision-making and implementation, and can degrade instrumentality.\textsuperscript{68} Sometimes this may be explained by the fact that top decision-makers are unaware of the details of implementation and are therefore effectively barred by ignorance from eliminating bureaucratically-induced irrationalities;

\textsuperscript{65} See Art, “Bureaucratic Politics and American Foreign Policy,” pp. 471, 474.

\textsuperscript{66} Gabriel, *Military Incompetence*, p. 179.

\textsuperscript{67} Ibid., p. 111.

\textsuperscript{68} In addition, parochial bureaucratic interests can affect broad policy directions. The interests of the various services, for example, were apparently among the most powerful determinants of the counterforce strategy. See Charles-Philippe David, *Debating Counterforce: A Conventional Approach in a Nuclear Age* (Boulder, Colo.: Westview Press, 1987), pp. 209–215.
sometimes it may reflect a set of preferences in which bureaucratic harmony is valued more highly than optimum efficiency. Understanding the role of bureaucratic interests can illuminate decision-making in such cases; but Model III does not capture either of these dynamics. The former is most fruitfully analyzed in terms of an organizational complexity paradigm of the kind sketched in the final section below, while the latter is most fruitfully analyzed as a special case of the rational actor model applied at both the inter- and intra-national levels of analysis.

SOLVING PUZZLES
The acid test of a paradigm is its ability to solve puzzles other paradigms prove incapable of handling. The most engaging chapter of *Essence of Decision* is Chapter 4, in which Allison applies Model II to a large number of puzzles that seem to resist a Model I analysis. A reconsideration of these puzzles, however, reveals the limited explanatory utility of routines, as Model II’s difficulties matching fact with theory might lead us to expect. Upon review, Allison’s Model II puzzles may be grouped into three categories: (type I) those that emerge from a straw-man Model I analysis; (type II) those that resist a Model I analysis but for which other equally plausible or preferable explanations are available; and (type III) those based on factual errors. Here I will provide one example of each; the reader will find a more thorough accounting in Table 1.

A straw-man Model I analysis (type I) is evident in the following puzzle: Why did the Soviets ship more than one missile to Cuba for each launcher under construction when the launchers themselves were “soft” and could not reasonably be expected to survive an American response long enough to fire a second salvo? Allison’s Model II explanation is that the Soviets routinely equipped their launchers with two missiles each, and normally made no attempt to harden them; the Soviet military merely followed its scripts for installing missile sites, and consequently wasted considerable effort shipping unnecessary missiles to Cuba (*ED*, pp. 108–109, 111). Recent information, however, suggests that the Soviets intended to supply extra missiles and warheads purely as spares to offset reliability problems.69 This was a fully rational provision. What therefore seems to be a puzzle from a Model I

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69. It appears that the Soviets actually planned to deploy 1.5 missiles and warheads per launcher, rather than two, although Allison’s factual error is inconsequential to the present point. See James G. Blight, Bruce J. Allyn, and David A. Welch, *Cuba on the Brink: Fidel Castro, The Missile Crisis, and the Collapse of Communism* (New York: Pantheon, forthcoming).
perspective if one makes a faulty assumption (namely, that extra missiles indicate an intention to have a refire capability) is easily resolved within Model I when we correct that assumption.

Certain aspects of Soviet and American behavior during the crisis, however, cannot be explained in rational-actor terms at all (type II). For example, even though the Soviets intended to deploy missiles to Cuba secretly, they failed to camouflage the missile sites until after the Americans announced their discovery. Allison’s Model II explanation is that Soviet standard operating procedures for installing medium-range ballistic missiles did not call for camouflage, and the construction crews in Cuba merely followed standard procedures (ED, p. 111). Yet the question of camouflage had been considered by Soviet planners, and the Soviet-Cuban agreement governing the deployment reportedly assigned responsibility for camouflage to the Soviets.70 Someone somewhere in the Soviet chain of command failed to pass the word. Why should we blame the routines for the failure, rather than (for example) a breakdown of communications or incompetence?71

The puzzle with which Allison opens Chapter 4 is an example of a puzzle based on a factual error (type III): Why did the State Department fail to follow through on President Kennedy’s order to remove the Jupiter missiles from Turkey? Allison’s answer is that the State Department, operating according to its own procedures and relying on its own judgment, decided that U.S.- Turkish harmony would not permit the withdrawal of weapons only recently deployed (ED, pp. 101, 141–143). But in fact President Kennedy had not issued an order to remove the Jupiter missiles from Turkey prior to the crisis; consequently, there is no puzzle to explain.72 Moreover, if there were such a puzzle, it would be a type II puzzle; if the State Department had failed to follow through on a presidential order, it would not have been a matter of routine, but an act of insubordination.

Standing in marked contrast to Chapter 4 is Allison’s Chapter 6, in which he persuasively argues that the behavior of both Kennedy and Khrushchev

70. Blight and Welch, On the Brink, p. 335.
71. Allison himself notes that “some of the anomalies in the Soviet build-up must be traced to errors and blunders of specific individuals in the Soviet Union” (ED, p. 109); this would seem to be one of them.
reflected their sensitivity to the awesome responsibility they shared for resolving the crisis peacefully. This is a thesis that has been strongly confirmed by evidence and testimony that have come to light since *Essence of Decision* was written. It is interesting to note that the responsibilities they felt were in large measure to humanity as a whole, not solely to their respective national interests, nor to their personal political fortunes. Thus Khrushchev agreed to a settlement that avoided war at the cost of considerable damage to his (and his country’s) prestige, while Kennedy for his part was apparently prepared to resort to a public trade of Jupiter missiles in Turkey for Soviet missiles in Cuba in order to avoid a war. Such a trade might well have damaged NATO irreparably and triggered a firestorm of controversy in the United States, threatening Kennedy’s political career. While this does not necessarily contradict Model III theory, sustaining a Model III analysis in this case would seem to require the inference that, at least in the case of national leaders, the interests and preferences that attach to bureaucratic positions may be cosmopolitan in nature (see ED, pp. 211–212). This would seem to doom the project of inferring interests and preferences from bureaucratic positions, and thus of determining correlations, in all but the most mundane cases.

The most interesting feature of Allison’s discussion in Chapter 6, however, is the fact that it makes no attempt to solve puzzles in Model III terms at all. Perhaps this should not be surprising, given the ambiguity of Model III theory and the evident lack of fit between fact and theory in the case of the Cuban missile crisis, where few players stood where they sat, where the decision-making processes contained no “bargaining,” where pulling and hauling was limited to the realm of persuasion and debate, and where the president and Khrushchev held all the cards in their respective “games.” What Chapter 6 does contain, however, is an account of the ways in which decisions unfolded with particular reference to the identification of players, the description of their interests and preferences, and an assessment of their influence. In short, it offers a glimpse into decision-making at the intra-governmental level of analysis. And this is precisely the field in which

73. “This nuclear crisis seems to have magnified both rulers’ conceptions of the consequences of nuclear war, and each man’s awareness of his responsibility for these consequences.” ED, p. 212.
75. Welch and Blight, “The Eleventh Hour of the Cuban Missile Crisis,” pp. 12–18; cf. ED, p. 195.
bureaucratic politics has germinated and borne fruit. The overwhelming majority of studies invoking the bureaucratic politics paradigm as their particular “conceptual lens” have as their objective the elucidation of the ways in which different players and organizations actually interact in a given circumstance. Indeed, in response to criticisms about the poor performance of Model III theory, advocates and practitioners of bureaucratic analysis typically resort to a call for “better theories” tailored for specific situations—for example, theories of Soviet decision-making, or theories of Soviet decision-making during the Brezhnev period, and so on. This is to identify the bureaucratic politics paradigm with the governmental level of analysis broadly understood; it is to forsake the quest for universally valid theoretical propositions and to embrace concrete description.

Concrete descriptions of bureaucratic politics have their value. They enable us to understand how and why governments make decisions in particular cases. But concrete descriptions by themselves do not constitute theoretical progress. To date it would appear that the bureaucratic politics paradigm, which more than twenty years ago promised to bring order and insight to an untidy field, has not lived up to expectations, because the project it heralded never got off the ground.

Conclusions

Considerable care must be taken in drawing conclusions from the above discussion, because it is easily misconstrued. For example, casting doubt upon the accomplishments of the organizational process and bureaucratic politics paradigms does not impugn Allison’s twin projects of bringing greater rigor to the study of international politics and attempting to move beyond traditional rational-actor analysis, both of which have been duly hailed. Nor does it call into question the validity of developing analytic paradigms that focus attention at the intra-governmental level of analysis. Instead, it merely suggests that the particular paradigms Allison developed

in his early work may not be the best possible candidates. A corollary of this conclusion is that, for the time being, those who seek useful general propositions about international politics should think twice about abandoning rational actor analysis, which is comparatively well-developed, and whose advantages in clarity, parsimony, and operationalization are obvious. Indeed, astute observers quickly noted how well rational-actor analysis held up in *Essence of Decision* itself.\(^7^9\) Perhaps this should have been expected, given Allison’s methodologically-commendable choice to develop his alternative paradigms with reference to a case where Model I could be expected to perform particularly well.\(^8^0\)

However, Model I’s usefulness should not be permitted to obscure the fact that rationality is constrained in various important ways by factors that are either determined or strongly influenced by organizational or bureaucratic considerations. The Cuban missile crisis provides several thought-provoking illustrations. One such factor is intra-governmental failures of communication. The ExComm, for example, deemed the status of the Soviet missiles in Cuba to be a crucial consideration in their deliberations. If the missiles were operational, many of its members believed, then the risks of a launch from Cuba either during or in response to an American air strike would have been unacceptably high. This strongly inclined many of them against the air strike option.\(^8^1\) The main source of their concern was uncertainty as to whether Soviets warheads had arrived in Cuba. At each day’s intelligence briefing, the president’s first question was, “What about the warheads? Are they there or not?”\(^8^2\) There was no evidence of Soviet warheads in Cuba; but the CIA continued to report increasing numbers of Soviet missiles as “operational.” The term “operational” had a technical meaning in the intelligence commu-

80. “In the context of ultimate danger to the nation, a small group of men, unhitched from the bureaucracy, weighed the options and decided. Such central, high-level, crisis decisions would seem to be the type of outcome for which Model I analysis is most suited. Model II and Model III are forced to compete on Model I’s home ground.” *ED*, pp. 8–9. One might well counter, however, that the unusual urgency of the Cuban missile crisis should have increased decision-makers’ reliance on organizational routines, restricted their ability to improvise, and bolstered organizational bargaining leverage (because of the premium on interorganizational harmony in times of acute national danger). In short, it is possible to argue that in the Cuban missile crisis, Model I had to compete on Model II and Model III’s home ground, not vice versa.
nity (that the missiles could be fired, but not, as the ExComm thought, that they were armed with warheads), and the CIA was using the term correctly in its briefs. But the ExComm did not understand what it meant. The fact that different organizations speak different languages clearly constrained decision-making in this instance. In fact, the CIA had information to suggest that warheads were in transit, aboard the freighter Poltava, and that the shipment was interdicted by the quarantine. The CIA appears never to have communicated this important information to the ExComm. Had communications with the White House been clearer, the CIA could have flagged this information and rushed it through the system.

The danger of a launch-under-attack from Cuba—warheads or no warheads—was, in any case, negligible, and information existed that would have enabled military planners to demonstrate this fact to the ExComm. But here again a communications failure prevented the ExComm from appreciating this. The president asked the Air Force if they could guarantee that an air strike would destroy all of the Soviet missiles in Cuba; he did not ask if an air strike could prevent a launch-under-attack, for which destroying the missiles was unnecessary and disrupting firing procedures sufficient. General Sweeney, commander-in-chief of the Tactical Air Command, properly said no. The president lacked the military expertise to ask the right question; Sweeney, who was not a party to the ExComm's deliberations, answered the question the president had asked, not the one he would have asked had he known more about first-generation liquid-fueled ballistic missiles. In modern governments, organizations and roles are highly differentiated by function and expertise. This differentiation may prevent useful information that is actually in the system from reaching the people who need it in order to make a fully-informed decision.

84. Garthoff, Reflections, p. 38.
85. For a detailed argument, see Blight and Welch, On the Brink, pp. 209–212.
86. Important asymmetries in knowledge between governments may also be explained by inter-organizational information flows and communications failure within governments. For example, the Jupiter missiles in Turkey actually became operational in April 1962, and the first Jupiter launch position was formally transferred to the Turks on October 22. The president and his advisers were unaware of these events, because they were details of implementation stemming from decisions made years before—during the Eisenhower administration. However, Khrushchev may well have been aware of both events, and they could have played an important role in shaping his behavior before and during the crisis. See Garthoff, Reflections, p. 60.
Another important constraint in the Cuban missile crisis was the sheer complexity of the apparatus both Kennedy and Khrushchev were attempting to manipulate, with limited success. As I noted above, direct control of organizational behavior is possible where decision-makers know what to worry about and how to go about controlling it. But no leader of a modern power is capable of monitoring and controlling the activities of even a small portion of the people and organizations over which he or she has nominal authority. The danger is not necessarily one of blind adherence to routines, although this is among the possible dangers; I noted cases where the breakdown of routines posed serious threats to successful crisis management, as well as one case where a clear-thinking subordinate brought potentially perilous aspects of routines to the attention of national leaders who otherwise would have been unaware of them. But organizational complexity represents a constraint on rational action because it generates noise and results in behavior of which national leaders are unaware, which they cannot control, and which they do not intend.87

Still other constraints flow from the ways in which organizations process and store information. For example, the Committee on Overhead Reconnaissance (COMOR) paid strict attention to the details of U-2 flights over Cuba, but paid virtually no attention to U-2s on polar flights, one of which strayed into Soviet air space at the height of the crisis as the result of a navigational error. Another U-2 on a similar mission had accidentally flown into Soviet airspace as recently as August 30, 1962.88 But for some reason, that fact did not register on October 27. Poor organizational memory, the inability to assimilate past experience to present circumstances in constructive ways, or inadequate resources prevented COMOR from drawing the conclusion that it would be prudent to cancel all unnecessary polar air-sampling missions at this time of acute national danger.

Considerations such as these suggest that it may well be useful to develop a paradigm that concentrates the analyst's attention on the effects of organizational complexity and that permits the formulation and testing of a body

87. Some of those actions may be the result of pernicious ambiguities in the roles and responsibilities of organizations and their personnel. The U-2 shoot-down of October 27 provides a clear demonstration of Model I's lack of realism; but neither routines nor bureaucratic politics played a role. The real culprit in this case, it seems, was the dangerous ambiguity of the standing orders under which Soviet anti-aircraft forces in Cuba operated in a context resembling war fever. See Blight and Welch, On the Brink, p. 339.
of theory that specifies (for example) relationships between language-congruity (the degree to which the meanings that two organizations attach to words match) and the ability of two organizations to communicate or cooperate effectively, between the number of organizations implicated in a decision and the degree to which their behavior reflects the intentions and serves the purposes of national leaders, and between the attention leaders pay to details of implementation and the degree to which organizational behavior reflects their intent. Allison’s efforts may well be credited with drawing to our attention the fact that there is room for creative theory-building at the intra-governmental level of analysis, even though routines and the diversity of bureaucratic interests are not the only interesting elements of intra-governmental decision-making processes, nor are they necessarily the most salient aspects of the undeniably important fact that governments are not unitary rational actors.

It remains to be seen whether the most fruitful challengers to Model I will prove to be paradigms concentrating the analyst’s attention at the intra-governmental level of analysis, or on cultural, societal, cognitive, or affective factors—or perhaps some combination of these. In time, it may be possible to reach stronger conclusions about the relative performance of various approaches to the study of foreign-policy decision-making than seem possible at the moment; alternative paradigms have had comparatively little chance to stake their claims. It should be clear, however, that certain judgments

90. Steve Chan notes that studies of cognitive mapping, propaganda analysis, operational code, and “culture at a distance” suggest that decision-makers in different countries operate on the basis of distinctive belief systems that bear directly on their assessments and behavior. These belief systems tend to be both more durable and more comprehensive than particular issues, institutions, and leaders, and may therefore prove to be extremely useful in the quest for general theories of decision-making. In any case, rational-actor and bureaucratic approaches both require an understanding of decision-makers’ belief systems. Steve Chan, “Rationality, Bureaucratic Politics and Belief System: Explaining the Chinese Policy Debate, 1964–66,” Journal of Peace Research, Vol. 16, No. 4 (1979), p. 346, and citations therein. At the individual level of analysis, psychological approaches to decision-making shed considerable light on events such as the Cuban missile crisis. These include Irving Janis’s work on “groupthink,” the dynamics of small-group decision-making processes in Irving Janis, Groupthink: Psychological Studies of Policy Decisions (New York: Houghton Mifflin, 1982); the work of Robert Jervis, Richard Ned Lebow, and Janice Gross Stein on cognitive processes and misperceptions, in Robert Jervis, Perception and Misperception in International Politics (Princeton: Princeton University Press, 1976); Richard Ned Lebow, Between Peace and War: The Nature of International Crisis (Baltimore: Johns Hopkins, 1981); Robert Jervis, Richard Ned Lebow, and Janice Gross Stein, Psychology and Deterrence (Baltimore: Johns Hopkins, 1985); and James Blight’s phenomenological examination of the role of affect in James G. Blight, The Shattered Crystal Ball: Fear and Learning in the Cuban Missile Crisis (Totowa, N.J.: Rowman and Littlefield, 1990). Whether these approaches can or will yield testable, general
will always be inappropriate, such as the oft-heard criticism that the real forces behind international politics are systemic, and that students of decision-making processes “look at real or potential international crises from the wrong end of the telescope.” Ex cathedra condemnations of one paradigm from within another are epistemologically sterile, and have the unfortunate effect of obscuring the fact that light can be shed on the same object from many angles at once. The greater complexity and comparative difficulty of organizational, bureaucratic, or psychological approaches to international politics may well perpetuate the “theory gap” that currently favors systemic approaches built upon the foundations of rational-actor analysis, just as they perpetuate a similar gap between the natural and the social sciences. But Allison’s reasons for looking at old problems through new lenses are as valid now as they were more than two decades ago. And although this paper argues that mid-course corrections are in order, there is little doubt that twenty years from now, Essence of Decision will continue to be hailed as a critical turning point in the study of international politics.

propositions about foreign-policy decision-making remains to be seen, but each has identified an important type of constraint on ideally-rational action. Indeed, most of the interesting phenomena Allison discusses in his presentation of Model III easily fit under the rubric of one or more of these approaches, and may fruitfully be examined in terms of them. Zeev Maoz makes a credible case for a synthetic, multi-layered “bottom-up” approach, concentrating on the ways in which individual preferences and perceptions combine and interact to produce foreign policy outcomes. Maoz argues that bureaucratic dynamics are themselves susceptible to rational-actor, cybernetic, or cognitive analyses. Maoz, National Choices and International Processes (Cambridge: Cambridge University Press, 1990), includes a superb and comprehensive critical literature review.

Table 1. Organizational Routines and Behavioral Puzzles in the Cuban Missile Crisis (from ED, ch. 4).

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<td>Why did the State Department fail to follow through on JFK’s order to remove the Jupiter missiles from Turkey?</td>
<td>The State Department exercised its own judgment that the missiles should not be withdrawn.</td>
<td>Type III (based on factual error): JFK did not order the removal of Jupiter missiles from Turkey until after the crisis.¹</td>
</tr>
<tr>
<td>Why did the Soviet SAM network and radar system only begin to operate after construction on the Soviet missile sites had begun, increasing the likelihood that U.S. reconnaissance would discover the MRBMs and IRBMs?</td>
<td>Separate organizations within the Soviet military were charged with installing SAMs, radars, and MRBMs/IRBMs. Coordination was not a matter of routine.</td>
<td>Type I (based on straw-man Model I analysis) or Type II (alternative or preferable explanation available): The Soviets could have deployed air defenses and MRBMs sequentially if they had wanted to. Either they did not choose to do so, valuing speed over security, or unforeseen technical problems prevented it.</td>
</tr>
<tr>
<td>Why did the Soviets fail to camouflage the missiles until after the Americans discovered them?</td>
<td>Soviet standard operating procedures (SOPs) for installing MRBMs did not call for camouflage.</td>
<td>Type II: The Soviets originally intended to camouflage the missiles; a communications failure occurred somewhere in the chain of command. Incompetence, not routines, account for this failure. After the discovery of the missiles, camouflage retained some value (complicating U.S. monitoring, air strike planning, etc.).²</td>
</tr>
<tr>
<td>Why did the Soviets work on the missile sites only during the day until after they had been discovered?</td>
<td>Construction crews followed their routines, which did not call for construction at night.</td>
<td>Type I: Round-the-clock construction was unnecessary, because the deployment proceeded on schedule; lights added an extra layer of complexity to the operation; lights posed additional risks of discovery.</td>
</tr>
<tr>
<td>Why did the Soviets build SAM, MRBM, and IRBM sites in established patterns that enabled U.S. intelligence to identify the nature of the deployment?</td>
<td>Soviet missile sites are routinely built according to standard specifications.</td>
<td>Type I or Type II: Established SAM pattern provided optimal coverage. In any case, since the missile sites were supposed to be camouflaged, established patterns should have posed no unacceptable risk of discovery.</td>
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<tr>
<td>Why did the Soviets assemble the Il-28 trainers before the Il-28 bombers?</td>
<td>Trainers are routinely assembled before bombers.</td>
<td>Type I: The Il-28s were intended to play a coastal defense role against American infiltrations; they were never intended to be part of a Soviet nuclear deterrent. The Soviets (and Cubans) believed them to be extrinsic to the crisis. This fact also helps explain why securing the withdrawal of the Il-28s was such a difficult problem for the Soviets after the crisis.³</td>
</tr>
<tr>
<td>Why did the Soviets attempts to deploy MRBMs and IRBMs simultaneously?</td>
<td>When the order came down to “place missiles in Cuba,” the responsible organization—the Strategic Rocket Forces—chose the weapons mix it believed best fulfilled its organizational mission.</td>
<td>Type I: Nuclear missiles were meant to serve two main functions: to deter an American invasion and to redress the strategic nuclear imbalance. The chosen mix served both objectives adequately.⁴</td>
</tr>
<tr>
<td>Why did the Soviets ship two missiles for each launcher when the launchers were “soft” and could not reasonably be expected to survive more than one salvo?</td>
<td>Soviet launchers were routinely equipped with two missiles each, and no attempt was normally made to harden them.</td>
<td>Type I: Extra missiles and warheads were spares to offset reliability problems. The launchers were never intended to have a refire capability.⁵</td>
</tr>
<tr>
<td>Why did Soviet military personnel in Cuba take such pains to disguise their identities (e.g., by never wearing uniforms), yet displayed unit insignia in their barracks and otherwise behaved like soldiers (e.g., by forming in ranks of fours and moving in truck convoys)?</td>
<td>Standard procedures of Soviet military units.</td>
<td>Type II: Soviet troops were poorly briefed on concealment techniques. The fact that Soviet troops made some effort at concealment (e.g., by wearing civilian sport shirts) indicates that they were capable of transcending their routines (e.g., wearing uniforms). Incompetence seems to have prevented more thorough concealment.</td>
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Table 1. Continued

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<td>Why did the Soviets ship such a wide variety of equipment to Cuba, including tanks, SNAPPER missiles, FROG tactical rockets, etc.?</td>
<td>The equipment sent was standard issue for the units deployed.</td>
<td>Type I: The equipment sent was sent deliberately; the Soviets intended to deploy a full, battle-capable force in Cuba to defend the island against an American invasion.</td>
</tr>
<tr>
<td>Why did the Soviets attempt so many complicated operations simultaneously?</td>
<td>Each organization performed its actions according to its routines, without central control.</td>
<td>Type I: The Soviets sought to serve a range of goals, and placed a premium on speed. The simultaneous pursuit of several complicated actions was necessary, although not without its risks.</td>
</tr>
<tr>
<td>Why did American intelligence fail to discover the missiles before October 14?</td>
<td>The routines and procedures of the American intelligence community prevented earlier discovery.</td>
<td>Type I: Discovery of the missiles was a success, not a failure. In the absence of routines and procedures, the American intelligence community would not have discovered the missiles at all.</td>
</tr>
<tr>
<td>Why did the U.S. Air Force fail to examine and present to the ExComm a surgical air strike option in the first week of deliberations?</td>
<td>The Air Force planning unit took an existing air strike plan off the shelf and presented it to the ExComm. The existing plan was designed with a different objective in view (destroying Castro’s military capability).</td>
<td>Type II: The ExComm failed to communicate to the Air Force the purposes for which it was considering a surgical air strike, and did not insist clearly that the Air Force present a plan for one. Had the ExComm been clearer on what it wanted, the Air Force could have delivered; but it would still have argued against a small strike.</td>
</tr>
<tr>
<td>Why did the Air Force incorrectly estimate the prospects that an air strike would succeed in knocking out the Soviet missiles?</td>
<td>Air Force manuals indicated that SS-4 MRBMs were “mobile, ‘field-type’ missiles,” and concluded that they might be moved before U.S. planes could hit them.</td>
<td>Type III: The Air Force did not err when it refused to guarantee the Soviet missiles would be destroyed; this is an assessment that it would have made whether or not it believed the missiles to be mobile. In any event, what the ExComm really wanted to know was whether the Soviet missiles could be launched under attack; this was not communicated clearly to the Air Force.</td>
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<td>Why did the Navy fail to execute the president's order to draw the quarantine line closer to Cuba than 500 miles?</td>
<td>Institutionally-based resistance on the part of the Navy. (This does not appear to be related to any matter of organizational routine.)</td>
<td>Type III: The president did not order the quarantine line moved closer to Cuba until October 30, whereupon the Navy moved the line.7</td>
</tr>
<tr>
<td>Why did the SAC merely disperse force to civilian airports—some of which were within range of operational MRBMss in Cuba—especially in view of the &quot;no cities&quot; doctrine?</td>
<td>SAC merely executed its pre-programmed alert procedures.</td>
<td>Type I or Type II: SAC had more than a week to alter its dispersal program if it felt doing so was necessary, or if the ExComm had ordered it. SAC was confident of U.S. strategic nuclear superiority, and would not have seen the need to alter its dispersal program.8 This puzzle illustrates how organizations behave according to their own preferences in the absence of political direction, and also illustrates that political leaders have finite resources of knowledge and attention.</td>
</tr>
<tr>
<td>Why were American aircraft in Florida lined up wing-to-wing, increasing their vulnerability to attack, when the Air Force assured the president they were not?</td>
<td>The Air Force arranged aircraft on the apron in the standard pattern.</td>
<td>Type II: Either the order to keep the aircraft dispersed had not been transmitted to the air bases, or someone had overlooked issuing the order.</td>
</tr>
<tr>
<td>Why was a U.S. intelligence ship so close to the Cuban coast during the crisis?</td>
<td>The ship was engaged in routine surveillance.</td>
<td>Type II: Someone neglected to move the ship until Robert Kennedy noticed it. This puzzle illustrates both the role of organizational complexity and of the ability of decision-makers to intervene in standard procedures once they become aware of their potential consequences.</td>
</tr>
<tr>
<td>Why did an American U-2 stray into Soviet air space at the height of the crisis?</td>
<td>The aircraft was on a routine mission.</td>
<td>Type II: Had the U-2 correctly followed its routines, it would not have strayed off-course. Had the ExComm known about the mission, it could have canceled it. Illustrates the dangers when routines break down, and also illustrates the impact of organizational complexity.</td>
</tr>
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1. See note 72 in text.
5. See note 69 in the text.
6. See note 27 in the text.
8. See note 39 in the text.