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ANALYZING SOVIET STRATEGIC ARMS DECISIONS

Karl F. Spielmann

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This paper addresses the basic question of why Soviet decisionmakers make the strategic arms decisions they do by examining the nature of those decisions, assessing the capabilities and limitations of such analyses, and suggesting ways to enhance their usefulness to policymakers. The importance of providing "answers" to policymakers in this highly complex and data-poor field generates a particular →

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need for analysts to maximize the use of available data and to be aware of the analytical assumptions they bring to the task. Therefore, it is suggested that multiple-approach analyses would be more useful than the reliance on a single analytic view. Three approaches that might be pursued in juxtaposition in examining individual Soviet strategic arms decisions are presented. These are the rational strategic actor approach, the pluralistic approach, and the national leadership approach. The first two decision-making approaches basically reflect two broad schools of thought on the Soviet-US strategic arms relationship that stress, alternatively, responsiveness to the international threat and internal bureaucratic and organizational processes as shapers of strategic arms programs. The third approach represents a middle ground between them that has not been emphasized heretofore. These three approaches are put forth without extensive elaboration or refinement to give an initial indication of the possibility and the utility of juxtaposing discrete sets of analytic assumptions in addressing the whys and wherefores of a particular Soviet strategic arms decision.

The paper examines key organizations, personalities and practices in the Soviet decision-making environment that would appear to support the different decision-making assumptions of these approaches. In conclusion, the paper presents the basic implications which these approaches hold for assessing the role of the international action-reaction phenomenon in Soviet strategic arms decisions. It suggests overall that Soviet responsiveness to US actions may be exceedingly difficult to pin down and that the best way to assess the nature and extent of this responsiveness in a given strategic arms program is to try to analyze that program from more than one decision-making perspective. Appendices attached to the study demonstrate how in the case of the first Soviet ICBM a multiple-approach analysis might at least be begun and suggest how further analytical tasks of this sort might best be undertaken.

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PREFACE

This paper was undertaken as a contribution to the study of the Soviet-US strategic arms relationship conducted by the Historian, Office of the Secretary of Defense. The overall study task was (a) to set forth a historical record of Soviet and US strategic programs and policies for the period from 1945 to May 1972 (the conclusion of SALT I), and (b) on the basis of that record, to evaluate various arms race hypotheses, particularly the action-reaction hypothesis. This paper was designed to contribute to that evaluation by probing the Soviet defense decision-making environment with a particular view to identifying and analyzing the possible impact of internal Soviet bureaucratic factors on Soviet strategic arms decisions.

It became evident in the course of the analysis for this paper that even with a much more extensive evaluation of the Soviet decision-making environment than was feasible with the study resources, the impact of bureaucratic factors was and is likely to remain uncertain. That the data to support any findings would be meager was apparent from the start. What the analysis brought into sharper focus was that the evidence could in fact be taken to support a variety of interpretations, depending critically on the analytical assumptions that one brought to it in the first place.

This paper therefore seeks to serve the purposes of the Soviet-US strategic arms history project not by trying to force the evidence to yield an answer or answers about the impact of bureaucratic factors, but rather by demonstrating that the evidence could support a variety of conclusions. As a

consequence, the paper suggests, the overall evaluation of the action-reaction phenomenon on the Soviet-US strategic relationship may have to be more tentative than we would like.

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EXECUTIVE SUMMARY

Do US strategic arms programs and policies prompt the Soviets to react with new or larger programs of their own, or does much of the stimulus for Soviet strategic arms efforts derive rather from internal sources, so that US action or inaction may have little reciprocal effect? To ask about the impact of the international action-reaction phenomenon on Soviet strategic arms decisions is to confront the basic question of why the Soviets make the strategic arms decisions they do.

A. BACKGROUND

In seeking to help policymakers answer the above questions, this paper examines the nature of analyses of Soviet strategic arms decisions, assesses the capabilities and limitations of such analyses, and suggests ways to enhance their usefulness to US policymakers. In trying tc explain why certain Soviet strategic arms decisions are made, the analyst is confronted, first of all, with the basic social science task of dealing with human behavior. Physical science judgments (for example, on a strategic system's performance characteristics) must be taken into account as well, but they are unlikely to absolve the analyst from dealing with the inherently soft data with which all social scientists must contend. The problem of assessing why the Soviets make the strategic arms decisions they do is further complicated by the fact that Soviet secrecy compels the analyst to rely on data that are sparse.

The importance of providing "answers" to policymakers in this highly complex and data-poor field generates a particular

need for analysts to maximize the use of available data and to be acutely aware of the analytical assumptions they bring to the task. Current analyses of Soviet strategic arms behavior do not appear to have exploited the opportunities to respond to this need as fully as possible. Clearly, case studies comparable to evaluations of US programs cannot be done. But without case studies, similarities and differences in Soviet decisions on strategic arms programs, both in a given period and over the years, are not likely to be properly appreciated.

Explanations that are routinely given about Soviet strategic arms programs implicitly rest on assumptions about the Soviet defense decision-making process. Only occasionally, however, are those assumptions treated explicitly so that they can be evaluated. Decision-making analyses can thus contribute to our understanding of Soviet strategic arms behavior by specifically addressing the assumptions about decision-making practices that underlie explanations we offer about why Soviet strategic arms decisions occur.

Finally, there has been little apparent effort to explain Soviet strategic arms behavior by applying different analytic approaches to a given weapons program. Adhering to a single approach in a data-poor field is particularly risky. By their very nature, analytic approaches encourage us to look for certain kinds of evidence and discourage us from looking at other kinds of evidence. The analyst may therefore overlook data that could affect his conclusions. Moreover, even if this problem could be overcome by broadening the assumptions of a single approach, sufficient evidence would probably still be lacking to really put those assumptions to the test. Starkly confronting one set of analytic assumptions with a contrary set is one way to help the analyst to avoid believing his assumptions to be correct simply because there is little contradictory evidence to challenge them.

To help meet the aforementioned analytic need, this paper advocates the analysis of Soviet strategic arms decisions: (a) on a case-by-case basis; (b) in decision-making terms; and (c) along multiple-approach lines. Judgments have to be made, and will be made, about the whys and wherefores of Soviet strategic arms programs in any event. But the best job is done for the policymaker only when the analyst is acutely aware of what he can legitimately say about a Soviet strategic arms program and what he cannot.

B. THREE DECISION-MAKING PERSPECTIVES

As a first step, the paper puts forth three approaches that might be usefully pursued in juxtaposition in examining individual Soviet strategic arms decisions. These are: (a) the rational strategic actor approach; (b) the pluralistic approach; and (c) the national leadership approach. The first two are particular readings of decision-making approaches that have been most prominently articulated by Graham T. Allison in his study of the Cuban missile crisis.[1] These decision-making approaches basically reflect two broad schools of thought on the Soviet-US strategic arms relationship that stress, alternatively, responsiveness to the international threat and internal bureaucratic and organizational processes as shapers of strategic arms programs.

The rational strategic actor approach is characterized by: (a) an emphasis on strategic calculation (in the strict military sense of the term); (b) a stress on peculiarly Soviet, as well as "universal," strategic values in shaping the calculation; and (c) a focus on centralized decision-making arrangements in the Soviet Union that could maximize the impact of this calculation on Soviet strategic arms decisions. The pluralistic

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[1] *Essence of Decision: Explaining the Cuban Missile Crisis* (Boston: Little, Brown, 1971).

approach combines notions of organizational processes and bureaucratic politics to emphasize the role of "interest group" pressure in shaping Soviet strategic arms programs. *The pluralistic approach views Soviet strategic arms programs as being particularly affected by the roles and relationships of: (a) the military services; (b) weapons designers; and (c) defense industrialists.*

The national leadership approach provides a middle ground between the rational strategic actor and pluralistic approaches by paying heed both to the basic monopoly of power in the possession of the Soviet leadership and to heterogeneous elements in the Soviet decision-making environment. *The national leadership approach focuses on top Soviet decisionmakers as leaders who are neither just strategic calculators nor individuals who might succumb to pressures from organizations or personnel beneath them. Rather, they are viewed, quite commonsensically, as leaders with considerable power who have a country to run as well as defense policies to pursue, and who, therefore, are likely to have particular personal concerns with regard to economic, political, ideological, and other matters (of domestic and international scope) that could influence their decisions on strategic arms issues.*

These three approaches are put forth without extensive elaboration or refinement to give an initial indication of the possibility and the utility of juxtaposing discrete sets of analytic assumptions in addressing a given problem--i.e., the whys and wherefores of a particular Soviet strategic arms program. *In accord with the basic assumptions of the study, none of the approaches is intended to stand on its own.*

C. THE SOVIET DEFENSE DECISION-MAKING ENVIRONMENT

Key organizations, personnel, and practices presently discernible in the Soviet defense decision-making setting would appear to support the basic decision-making assumptions

of the three approaches outlined above. The existence of the Supreme Defense Council, for example, an apparently key decision-making organ confined to a narrow circle of top political and military leaders, would seem to support the possibility of rational strategic actor decisionmaking. Five-year defense planning, an apparently important decision-making practice, would also seem to support rational strategic actor decisionmaking by lessening the chances that pluralistic pressures could be effectively brought to bear to prompt or shape strategic arms programs once a plan was under way.

By the same token, however, these features of the Soviet defense setting do not rule out the possibility of pluralistic strategic arms decisionmaking. This possibility, of course, must rest first of all on the very existence of large organizations below the top decision-making level (e.g., the armed services and the defense-industrial ministries) with presumed high stakes in particular strategic arms programs. In addition, pluralistic decisionmaking would seem to rest on the chances for lower level exploitation of divisiveness in the ranks of the Supreme Defense Council and on the fact that, before a defense plan is enacted, pulling and hauling over defense priorities could stimulate pluralistic pressures and facilitate their impact.

With respect to the decision-making premises of the national leadership approach, three basic features of the Soviet environment are germane. First, however narrow the membership of the Supreme Defense Council, most of its members presumably have other concerns as national leaders, concerns that could impact on their judgments on strategic arms programs and thus cause them to depart from strategic calculation (in the strict military sense) in making their decisions. Second, the nature of the Soviet economic system suggests that the need for defense planning is underpinned by the need to plan for the economy as a whole. Hence, consideration of priorities for a defense

plan would tend to coincide with consideration of priorities for an overall economic plan, which could bring a variety of personal concerns of the top leaders to the surface to shape defense priorities in ways other than what strategic calculation would indicate. Third, in terms of the top decisionmakers' ability to behave as something other than strategic calculators but without thereby succumbing to constituent pressure, the heterogeneity of lower level organizations and personnel in the Soviet defense setting comes into play. Divisiveness at lower levels may be exploited by the top leaders to thwart constituent pressure on strategic arms programs just as easily as (or more easily than) divisiveness in the leadership ranks can be exploited to facilitate pluralistic impact.

D. IMPLICATIONS

Differences among the three approaches, highlighted by the discernible key features of the Soviet decision-making setting, carry basic implications for current efforts to assess the impact of the international action-reaction phenomenon on Soviet strategic arms programs. *The approaches in general indicate that assessing the international action-reaction phenomenon (at least at present) may be much more complicated, and should be much more tentative, than the aforementioned two broad schools of thought on the Soviet-US strategic arms relationship have tended to imply.* For example, although the rational strategic actor approach is basically in line with the school of thought that stresses high responsiveness to adversary actions, the existence of five-year defense planning in the Soviet Union (which helps support that approach) indicates that such responsiveness may be quite limited once a given plan is under way. On the other hand, a pluralistically shaped Soviet strategic arms program which, according to the other school of thought, should not denote high responsiveness to a US action, may in fact do so. The difficulty of exerting

pluralistic pressure on behalf of a strategic arms program in the Soviet setting may make the chances for success greatest when the program's backers can make their case by citing the need to respond to some US strategic arms effort.

The national leadership approach in turn indicates that a Soviet reaction to some US action may be quite different from what either school of thought would lead one to expect, because of the impact of the personal concerns of the Soviet leaders on strategic arms programs. Personal leadership concerns of an ideological or politico-strategic nature, for instance, could heavily shape a Soviet strategic arms program to serve global (or even regional) political leverage goals. The program thus might well differ from (by exceeding, for example) what a Soviet rational strategic actor would do or what pluralistic pressures would bring about in response to some US action.

In sum, depending on the approach one finds most congenial in explaining a Soviet strategic arms decision, the action-reaction phenomenon may be given more or less emphasis. But no single approach is likely to have a monopoly on giving proper attention to this phenomenon. What is indicated above all, therefore, is that Soviet responses to US actions may be much more difficult to pin down than is commonly assumed and that the best way to gauge the role of the action-reaction phenomenon in a given Soviet strategic arms decision is to try to analyze that decision from more than one decision-making perspective.

The task that would appear to be called for will not be easy to accomplish and no miracles are to be expected from even the most diligent effort. No methodological breakthrough is likely to ensue. No windfall of new evidence can be hoped for. No decision-making analyses of the sort that might be done on the US side of the strategic equation are destined to emerge. But that is precisely why multiple-approach analyses need doing--to give us a bit more evidence to go on in

analyzing Soviet strategic arms decisions and, above all, to keep us properly appreciative of what we do and can know. The firm answers we would like to have are simply not in the cards. Social science inquiry cannot produce the kinds of answers that physical science inquiry will yield. And the answers that social science inquiry might produce with good and abundant data are also not possible. In dealing with the inevitable ambiguities of Soviet strategic arms behavior, the most that the analyst, and the policymaker in turn, can reasonably expect is to acquire a better understanding of what is relatively more uncertain and what is less. Even small progress in this direction would be worth the effort, considering the high stakes that are ultimately involved.

INTRODUCTION

INTRODUCTION

> *We just do not have an adequate explanatory model for the Soviet-American arms race.*[1]

Since World War II, the strategic arms relationship between the United States and the Soviet Union has been the principal fact of life in the international arena. For the Western policy-maker, new and legitimate concerns of international scope--energy, food, nuclear proliferation, terrorism--have been thrust to the fore in recent years. Yet the mutual antagonism of the two superpowers and their capability to destroy each other and the rest of the world as well make their strategic arms relationship an international security problem of enduring and overriding import.

One of the more disquieting aspects of the problem is that in many ways it is so little understood. It is readily apparent that the strategic nuclear arsenals of both the United States and the Soviet Union have in the main increased in quantity and quality in the postwar era. And it is quite evident that in the past decade or so the Soviets have made strenuous efforts to at least match the United States in strategic nuclear might. But the whys and wherefores of the Soviet-US strategic arms relationship are still dimly comprehended. It is hardly surprising therefore that the basic question of the future course of the relationship should generate frequent and heated debate.

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[1]Johan J. Holst, *Comparative U.S. and Soviet Deployments, Doctrines, and Arms Limitation,* Occasional Paper, Center for Policy Study (Illinois: University of Chicago Press, 1971), p. 19.

A. ASSESSING THE INTERNATIONAL ACTION-REACTION PHENOMENON

A particular question that has prompted much speculation but no firmly grounded answers is whether an action-reaction phenomenon affects the strategic nuclear relations of the two superpowers. For the policymaker concerned with devising policies that best serve the security interests of the United States, the most pertinent formulation of the question is this: Do actions on the US side of the strategic equation, particularly in strategic nuclear weapon programs, prompt the Soviets to react with new or larger programs of their own?

In seeking guidance for present policy deliberations or future reference, it would seem prudent to begin with the historical record. Only of late, however, has there been any determined effort to put this record together--to trace out in some detail Soviet and US strategic arms programs and policies in the postwar era.[2] "History" may never judge, but historians do. Interpreting the historical record, therefore, to determine whether and to what extent the action-reaction phenomenon has been operative in the Soviet-US strategic arms relationship requires specific attention to the assumptions that historians, or analysts in general, might bring to this body of evidence.

Colin Gray has characterized two broad schools of thought which, in viewing this historical record, would yield quite divergent assessments of the role of the international action-reaction phenomenon in the Soviet-US strategic arms relationship over the years. As he put it:

> For the past five years (at least), most politicians, bureaucrats and academics who have commented upon arms control have apparently adhered to the rather simpleminded proposition that to every arms race action, there must be a corresponding--in the sense of offsetting--reaction. Hence, the arms race "spiral" (a

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[2]See Office of the Secretary of Defense, Historian, *History of the Strategic Arms Competition, U.S.-USSR, 1945-1972* (forthcoming).

> very dubious metaphor) is expensive, perennial, and politically futile. Rational strategic men, playing a game in which they just block each other's shots, exist solely in the realm of strategic fiction.
>
> A rival proposition is gradually gathering strength. The newer proposition holds that the arms race behavior of the state-actors is determined not so much by the perception of threat, as by "the games that bureaucrats play." The range of models for the elucidation of this proposition is formidable indeed. At one extreme, analysts devise an action-reaction model wherein the principal actors are the U.S. Air Force, Navy and Army--competing with a somewhat astrategic budget ceiling, and with the Soviet Union performing an essential game legitimization function. More work needs to be done on the domestic processes that result in arms race actions, but it is important that the role of the dynamic external threat be not unduly degraded.[3]

Most Western analysts who have tried to evaluate the Soviet-US strategic arms relationship would be loath to concede that they have been either simpleminded or unappreciative of the Soviet threat or that they are confined to such unpalatable alternatives for future evaluations. Yet, whatever the elements of overstatement in Gray's description, he seems to be basically correct in identifying "rational actor" interpretations and "bureaucratic" interpretations as the two principal modes of analysis that have gained currency in recent years. And he also seems to be essentially correct in implying that, notwithstanding attention to variants, nuances and the like, a basic adherence to either broad school of thought is likely to produce certain assumptions about the nature and importance of the international action-reaction phenomenon that would not be encouraged by the other analytic perspective.

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[3]Colin Gray, "The Arms Race Is About Politics," *Foreign Policy*, No. 9 (Winter 1972-73), pp. 121-22.

B. THE NEED FOR MULTIPLE APPROACHES

A basic premise of this paper is that assessments of Soviet defense decisions, in general, and evaluations of the international action-reaction phenomenon in Soviet strategic arms decisions, in particular, could well benefit from (a) decision-making case studies of individual decisions (or sets of decisions), and (b) the use of multiple analytic approaches in conducting the case studies. Gray's characterization of the ways we have tended to think about the Soviet-US strategic arms relationship suggests that our understanding of both Soviet and US strategic behavior could be strengthened by avoiding a steadfast commitment to any single approach. But there is particular reason to believe that the use of multiple approaches in examining specific strategic arms decisions is especially necessary in looking at the Soviet side of the strategic equation.

1. The General Question of Soviet Intentions

The need for multiple approaches can perhaps best be appreciated if we bear in mind that the question of the role of the international action-reaction phenomenon in Soviet strategic arms decisions is but part, albeit a most important part, of the general question of why the Soviets develop, produce, and deploy weapons systems--of particular types, in particular numbers, at particular times. As important as it may be to know that the Soviets have a particular weapon in hand, or that that weapon is in the offing, an understanding of its significance for the United States (and, in fact, any basic estimate of likely future directions of Soviet weapon efforts in general) may also call for an evaluation of Soviet intentions.

The inherent difficulty of divining the purpose (or purposes) behind weapons systems could be circumvented by evaluating those systems on a worst-case basis and devising appropriate US countermeasures accordingly. Cost considerations, among

others, make it unlikely, however, that the problem could be finessed in this manner even for Soviet strategic systems that appear to be of great concern to the United States from a national security standpoint--much less for Soviet systems across the board. The question of priorities, both military and civilian, constrains the effective use of worst-case planning by the United States in dealing with new or emerging Soviet capabilities.

But even when a particular Soviet weapon system cannot be treated on essentially a worst-case basis, the difficulty of evaluating the significance of that system for the United States does not have to be overwhelming. The performance characteristics of the system, which in the main seem susceptible to "hard" quantification and calculation, would be an obvious help in assessing likely Soviet motives behind the system. Without discounting the possibility of Soviet blunder, a Soviet missile, for example, that was assessed to have a certain range capability, would probably not have been built by the Soviets for the purpose of striking targets beyond that range. At the same time, however, performance characteristics may yield only partial or ambiguous answers about Soviet intentions. Indeed, even assessing what capabilities these characteristics really represent may go beyond what "hard" quantification and calculation can tell us. For that assessment also calls for some judgment on the Soviet "perception" of these characteristics. This perception may or may not be unique but in any event cannot merely be assumed to be obvious on the basis of the technical data alone.

It is because the policymaker and in turn the analyst are confronted at this point with the need to deal with skimpy and soft data[4] that attention to Soviet defense decisionmaking and

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[4]This is not to imply, however, that information on technical characteristics would necessarily be all that abundant. Moreover, there can be considerable diversity with (continued)

the use of multiple analytic approaches are commended. Pressure to come up with answers regarding the significance of Soviet weapon efforts means that assumptions will be made about Soviet intentions in any event, at times with little regard for even minimal standards of scientific inquiry.

It is a situation fraught with irony. Analysts evaluating comparatively hard data on the technical aspects of Soviet weapons systems can be expected to appreciate that the physical sciences no longer abide by the mechanistic certainties of the Newtonian universe. Heisenberg, Einstein, and others have taught them better. However, with respect to the comparatively soft data on other aspects of those Soviet weapons systems, with which the social sciences should deal and regarding which an appreciation of "uncertainty" and "probability" is even more in order, the contingent nature of our understanding can easily be honored in the breach.

2. What Decision-making Analyses Can and Cannot Do

Attention to Soviet defense decisionmaking can help us keep our "social science" understanding of Soviet weapon efforts--and, especially, the strategic arms relationship--in proper perspective. Because of the importance that is attached to knowing what the Soviets are up to, it is tempting to oversell particular but nevertheless partial insights into Soviet behavior. But doing so can be a real disservice, since a worthwhile contribution to understanding the Soviets is more likely to be ignored than heeded if it is burdened with excessive claims.

Over the years, several different ways of looking at the Soviets have been particularly susceptible to this burden.

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regard to interpreting the technical data, even leaving "perception" considerations aside. The question of the Soviet Backfire's range capability, of key importance to SALT II, is a notable case in point.

It is one thing to acknowledge that the Soviet state is heir to certain longstanding Russian traditions and geopolitical concerns, and quite another to intimate that current Soviet behavior can somehow be comprehended as the product of some sort of Russian historical determinism. It is one thing to appreciate that the Communist ideology is likely to cause the Soviets to behave somewhat differently from the way a non-Communist Russian regime might behave, and quite another to regard the ideological pronouncements of Lenin (or any of his successors) as a master plan dictating Soviet actions. And it is one thing to pay heed to Soviet military doctrine as an indicator of peculiarly Soviet goals and practices in the military field, and quite another to treat this doctrine as an unambiguous guide to Soviet peacetime military procurements or behavior in the event of war.

Decision-making analyses can also be oversold and, as Gray has suggested, tempt one to believe that selfish organizational and bureaucratic interests hold the key to explaining US or Soviet strategic arms decisions. If one steps back a bit from the recent application of decision-making analyses as described by Gray, it should be apparent that "decisionmaking" comes close to being as value-neutral a notion as can be found in the social sciences. There is no more reason to regard decisionmaking as the exclusive province of one particular point of view about why decisions are made than there would be to use the term "government" solely in connection with authoritarian regimes. Only to the extent that "decisionmaking" implies that the actions one wishes to explain are "decisions," of some sort and at whatever level, does the term itself carry a substantial built-in bias.

In trying to explain why certain Soviet strategic arms decisions occur we inevitably make some assumptions about Soviet decision-making practices, even if we do not explicitly treat them. If we argue, for example, that the Soviets have

pushed ahead with a particular weapon system to achieve a certain hard-target kill capability against the ICBM force of the United States, we are *ipso facto* arguing that the decision-making process (for that decision at any rate) was such that the consideration of the system's hard-target kill capability could emerge as a (or the) prime determinant of the Soviet decision. Since assumptions of this nature underlie any explanation of Soviet strategic arms decisions, decision-making analyses need not have a narrow compass. Indeed, to the extent that it seems to make sense to explain certain Soviet strategic arms decisions in terms of Russian historical aspirations, or Communist goals, or the requirements of Soviet military doctrine, or whatever, the various explanations of Soviet behavior that were prominent before "decisionmaking" became a lively topic might now be legitimately included within its purview.

Decision-making analyses can thus contribute to our understanding of Soviet strategic arms behavior by specifically addressing the assumptions about decision-making practices that underlie the explanations we routinely offer about why Soviet strategic arms decisions occur. These assumptions may be valid but then again they may not be. Explicit treatment of them would seem indispensable if we are to make some reasonable judgment on this score and, in turn, to gauge the utility of the explanations which rest on these assumptions. To make a contribution, however, decision-making analyses must focus on both the decision-making processes and the array of considerations that might go into these processes--such as strategic goals, organizational interests, and the like. Eventually perhaps, these decision-making analyses may yield two rough sets of correlations: (a) between certain kinds of decision-making processes and certain kinds of strategic arms decisions, and (b) between certain kinds of decision-making processes and certain kinds

of decision-making considerations.[5] In short, an extensive effort to apply decision-making analyses to Soviet strategic arms programs may, in due course, permit us to make some informed judgments as to the probability of a particular strategic arms decision having been determined by particular considerations.

None of this means, however, that even a thorough knowledge of how Soviet strategic arms decisions are made would enable us to firmly explain why they are made. We are probably very far from knowing how the process really works for even a single Soviet strategic arms decision--much less what the processes might be for many of these decisions. But, it is important to remember as well that it is not only the processes that matter but what goes into them. Insofar as such inherently soft topics as "goals," "interests," "preferences," and the like are the ingredients that are processed in the making of decisions, they will limit the firmness of our conclusions. And, both with respect to attaining knowledge about how Soviet strategic arms decisions are made and about the various ingredients that the decision-making processes have to deal with, the Soviet defense setting is not forthcoming with its evidence. Accordingly, even if we constructed the most sophisticated decision-making model, incorporating all the latest pertinent social science advances, it could not spin straw into gold. It could not provide more and better evidence than the Soviet defense environment will yield.

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[5]It would seem likely after all that all Soviet strategic arms decisions would not be made in exactly the same way--as a consequence of changes over time in the international context and the Soviet political context, as a consequence of differences in the technological levels of strategic arms programs, and so on. It would also seem likely that changes in decision-making processes would also affect the chances of strategic calculation, bureaucratic interests, and so forth, being brought to bear on decisions. Establishing correlations of these factors is bound to be a long and arduous task. But it is the kind of effort that seems unavoidable, if analyses of the workings of the Soviet defense setting are to be properly responsive to the needs of the Western policymaker. He is, after all, appropriately concerned not with these workings *per se* but with the kinds of decisions--the arms programs and defense policies--that result.

3. The Nature of the Data Should Determine Decision-making Approaches

The data constraints we confront in analyzing Soviet strategic arms decisions make the use of multiple decision-making approaches particularly imperative. The skimpiness and softness of the data should condition our concerns. Because the data are skimpy, we must avoid unnecessarily excluding any potentially useful evidence. It is in the nature of analytic approaches to emphasize certain kinds of evidence and to exclude (or, at the very least, slight) other kinds of evidence. In short, we should not compound the data problem.

The softness of the data means that the conclusions we draw from any single approach may often seem much firmer than they really are--both to the analyst and to the policymaker he informs. Lacking sufficient evidentiary correctives as a guide, the analyst must be particularly aware of the strengths and weaknesses of the assumptions he brings to the evidence. In setting forth a particular approach in a decision-making analysis, some explicit conceptualization of assumptions will take place--or at least it should, since without it one is not really articulating an approach at all. But even so, without being taken to task by contrary assumptions, in the course of analysis our appreciation of the tenuousness of our original assumptions can all too easily get lost.[6] Multiple approaches offer some help both in ensuring

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[6]In light of the above-noted point that conceptual elegance cannot make up for poor data, it may appear somewhat contradictory to argue that concepts should be called upon in a data-poor setting to serve in effect as surrogates for evidence in performing a "testing" function--i.e., to be used to challenge yet other concepts where the evidence is inadequate to the task. Strictly speaking, a contradiction is involved here but the very nature of analysis would seem to make it unavoidable, since the analyst after all has only concepts and data to work with. The alternative is to run the risk of becoming so comfortable with certain analytical assumptions that these assumptions wind up carrying an analysis largely on their own and without one's clear appreciation that they are in fact doing so. In that event, concepts really do substitute for evidence.

that certain kinds of evidence are not overlooked (or slighted) and in aiding us in maintaining our perspective about the firmness of the conclusions drawn from any single approach.

There are admittedly both basic weaknesses and basic strengths to be reckoned with in the very use of multiple approaches to Soviet defense decisionmaking. The principal weakness is that unless the analyst is to present the policymaker with a number of different "answers" to the same question, some final amelioration, weighting, or the like will have to be made. This is hardly a novel task, however, since presumably some sort of overall judgment has to be rendered when but a single approach is used.

Moreover, the particular answers yielded by different approaches in a given case may not be equally persuasive. When using multiple approaches it is to be expected that the utility and persuasiveness of the individual approaches employed will vary. One must, as has been noted, be sensitive to the differences in Soviet strategic arms decisions, in terms of the kinds of weapons to be analyzed, the domestic context and the international context at the time that the decisions are taken, and so on. Depending on these circumstances, one or more of the approaches used may prove inherently stronger than the others. Relatedly, whatever the presumed strengths of particular approaches to different Soviet strategic arms decisions, the data problem will also affect their usefulness. Multiple approaches are designed to keep us from overlooking certain kinds of data, that otherwise might be slighted. But in each decision-making case, it would seem likely that there would be significant differences in the quality and quantity of data that the individual approaches can work with. The point, however, is not to simply write off the attempt to use multiple approaches in the first place. In short, the task of arriving at an overall judgment when multiple approaches are used will not be overwhelming, but it will nevertheless

probably be a bigger one than a single approach presents simply because of the additional variables involved.

Multiple approaches have a particular strength that commends their use in preference to some new combined approach that would seek to lump a variety of assumptions together within a single analytic framework. As will be discussed later, the discrete approaches that can be used to examine Soviet defense decisionmaking each stress important factors, such as "strategic calculation" or "bureaucratic motive," the distinctiveness of which is likely to be compromised by merely combining them. It would be difficult to prevent the new "unified theory," for example, from having on the whole either a basic "strategic calculation" or a "bureaucratic motive" bias. Hence, other factors may well be taken into account but only sufficiently so to assure skeptics that the analyst had been broad-minded.

4. Multiple Approaches and the Action-Reaction Phenomenon

A presumptive case can be made for the use of multiple approaches in assessing the impact of the international action-reaction phenomenon on Soviet strategic arms decisionmaking. Evaluating whether, how, and to what extent US strategic arms programs affect Soviet programs is part of the larger question of why the Soviets develop, produce, and deploy particular weapons systems, in particular numbers, at particular times. If the policymaker could count on being able to deal with Soviet programs on a worst-case basis, both now and in the future, the need to get some fix on Soviet motives and the need to understand, in particular, the impact of US programs on the Soviets would be perhaps less pressing. Similarly, if the policymaker, and in turn the analyst, could rely on the performance characteristics of Soviet weapons, and especially the technical characteristics of strategic arms, to tell the story about Soviet intentions, the task of assessment might basically involve arriving at the relative certainties that the physical sciences make possible.

In many instances, however, acting on a worst-case basis or relying on "hard" technical data may not suffice to meet the policymaker's requirements. Because there is legitimate concern about the dangers and the costs with which new Soviet weapon systems might confront us, it becomes particularly important to know, in the strategic arms field, whether, how, and to what extent US actions prompt Soviet reactions. And, unfortunately, to a considerable extent the answers to these questions must be based on the meager and soft data on the Soviet side with which the social sciences have to deal.

It is the importance and the nature of a determination of the international action-reaction phenomenon in Soviet strategic arms efforts, therefore, that at bottom commend the use of multiple approaches in individual decision-making cases. Since decision-making analyses using multiple approaches cannot force the Soviets to provide us with more and better data, these analyses are not going to perform miracles for the analyst or the policymaker. What they can do is to help ensure that available data are not overlooked and that our sensitivity to the assumptions we bring to the data is heightened.[7]

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[7]It might be noted here that underlying the social science nature of the problem of explaining Soviet strategic arms behavior is the even more fundamental philosophical nature of the problem--which involves the relationship between the "known" and the "unknown" and how the latter affects our judgments about the former. Most rigorously treated by the great German philosopher Kant as a perennial philosophical issue, it is exemplified here in our efforts to deal with the "unknown" of how the Soviets actually decide on a given strategic arms program. We will probably never know how in even a single case. But we do *know* that this unknown matters and that we cannot therefore simply ignore it and make judgments about Soviet intentions by relying only on what we regard as known--e.g., weapons characteristics. Performing decision-making analyses of Soviet strategic arms programs, despite the fact that we may not be able to carry them very far, can at least perform the useful function of helping us to better appreciate how much we do not know.

Insofar as the question of the significance of Soviet strategic arms programs is of pressing concern to US policymakers, surely this speaks to a need that is general, real, and not insignificant. Assumptions will be made in any event--about long-term Soviet international ambitions, about specific Soviet ambitions in the case of a particular weapon system, about how the relevant Soviet decision or decisions come about, and so on. To the extent feasible, it is incumbent on the analyst to be conscious of his assumptions and subject them to constant challenge. In fact, by making and keeping his assumptions explicit, he may be able to perform the equally important service of offering the policymaker more and better criteria to assess his findings.

C. STUDY PLAN

This study only commences what is a very large task. A substantial appreciation of the strengths and weaknesses of our assumptions about how Soviet strategic arms decisions are made and what we really can know about the role of the international action-reaction phenomenon in shaping Soviet strategic arms decisions suggests the need for a series of case studies in which multiple approaches are used. Evidence should be gathered in the first place with the guidance of those approaches; the approaches should be modified and refined as the accumulated evidence suggests; a taxonomy of decisions (under the broad rubric of strategic arms decisions) should be developed on the basis of several cases, and so on.[8] With this

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[8]The taxonomy should make it apparent that there are strategic arms decisions and strategic arms decisions. No single case can be regarded as truly representative of Soviet strategic arms decision-making practices. In order to determine what practices are unique to particular circumstances and what practices are general and constant over time, classification of strategic arms decisions might proceed, *after an array of cases is in hand,* according to such broad categories as: Technological Level, Soviet Domestic Political and Economic Context, and (continued)

taxonomy in hand, we might then begin to offer some informed judgments regarding the likely impact of particular Soviet motives (and in turn US actions as one of those motives) in determining particular strategic arms decisions--as suggested above. We can hardly hope, however, and it is not the intention of this study to suggest, that, even with a monumental research effort using all available data, decision-making case studies of the kind that might be done on the US side of the strategic equation can ever be done on the Soviet side.

1. The Preliminary Nature of the Study

What this study reasonably hopes to accomplish is to offer some preliminary guidance for interpreting the historical record of the Soviet-US strategic arms relationship. It specifically seeks to call attention to the basic assumptions about the Soviet defense decision-making environment that flow from particular approaches and the general implications that those assumptions in turn hold for assessing the impact of the action-reaction phenomenon on Soviet strategic arms programs.

International Context. For example, a strategic arms program involving substantially new technologies might reveal quite different decision-making practices than one that was essentially a modification of an existing weapon system wherein off-the-shelf components could be used. Similarly, certain practices might differ according to the particular kind of weapon system, e.g., aircraft versus missiles. Decision-making practices would also be likely to change to some degree according to the regime in power. They might, for example, reflect the change from Khrushchev's basic penchant for personal involvement in many policy areas to his successors' apparently greater willingness, on the whole, to leave more to the discretion of "experts" in various fields. (This broad difference in leadership styles is well noted in Jerry Hough, "The Soviet Succession," *Washington Post*, April 17, 1977.) And some weapons systems, judged likely to have a substantial impact on the strategic balance at a particular time, might very well be characterized by extensive top-level deliberation, while others of apparently marginal importance may be treated as line-item entries calling for little real scrutiny by the top decisionmakers. All of these differences and more would be germane to a full-scale evaluation of Soviet strategic arms decisionmaking and, in turn, of an assessment of the role of the international action-reaction phenomenon in Soviet decisions.

Part One of the study puts forth three approaches (labeled rational strategic actor, pluralistic, and national leadership) that are quite distinct in their decision-making assumptions and that when used together would seem to be particularly helpful in trying to explain Soviet strategic arms decisions. Part Two evaluates certain prominent organizations, personalities, and practices in the Soviet defense decision-making environment to see whether, in fact, presently discernible Soviet "realities" at least basically support the use of the three approaches. Part Three presents the broad implications that the approaches hold for current efforts to assess the role of the international action-reaction phenomenon in Soviet strategic arms decisions. Appendix A of the study contains a multiple-approach analysis of the SS-6 decision(s) to illustrate how such analyses might enrich our understanding of Soviet strategic arms decisions and possibly other defense efforts as well. Appendix B suggests organizational procedures for conducting future analyses along multiple approach lines.

2. Coverage of Approaches

The selection and treatment of approaches in Part One are conditioned by a concern to emphasize approaches that would seem to be particularly useful in highlighting certain features of Soviet defense, and especially strategic arms, decisionmaking. Two of the approaches reflect the two broad schools of thought about the strategic arms race that Gray has identified. Unless Gray is way off the mark, these approaches can hardly be regarded as novel. Indeed, since it is in Graham Allison's pioneering study of the Cuban missile crisis that Gray's two schools of thought are perhaps best (or at least most prominently) conceptualized, the approaches are presented as particular readings of Allison's approaches--viz., the rational strategic actor approach as a specific formulation of Allison's rational actor model; the pluralistic approach as a specific

formulation of Allison's organizational process and bureaucratic politics models.[9]

To the extent that the two approaches have any novel elements, they lie in the effort to adjust Allison's categories to better illuminate decisions that are (a) defense in nature and (b) Soviet in nature. As they stand, Allison's models are basically drawn from US decision-making experience. They are intended to apply to foreign policy as well as defense decisionmaking. And their utility has essentially been demonstrated in what is surely an unusual decision-making situation--namely, the crisis precipitated by the emplacement of Soviet missiles in Cuba.

In addition to the approaches drawn from Allison's analyses, a third approach is presented--the national leadership decision-making approach. This is a new approach, at least insofar as the treatment of Soviet strategic arms decisionmaking is concerned. It calls attention to aspects of Soviet strategic arms decisionmaking that have not been adequately reflected in the two broad schools of thought on the strategic arms race and that are not given emphasis in the particular readings of Allison's notions.

The reader should be alerted that as a "new" approach relatively more attention is given to it than to the others in the discussion to follow. The emphasis is a consequence of the requirement to demonstrate that there indeed is a place for this approach in the repertoire of interpretations of Soviet strategic arms decisions. This emphasis, however, should not be construed as an advocacy for the national leadership approach as the preferred analytical perspective. Just as with the other approaches, the national leadership approach is not

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[9] *Essence of Decision: Explaining the Cuban Missile Crisis* (Boston: Little, Brown, 1971). In addition to drawing on Allison's specific approaches, this study owes this work a large and obvious debt for its basic demonstration of the feasibility and utility of applying multiple approaches.

designed to stand on its own. It omits or slights considerations that should be taken into account.

As stressed above, multiple approaches, in contrast to some unified approach, would seem to stand a better chance of giving particular decision-making factors due consideration. This means that, in the interest of emphasizing pertinent distinctions, the approaches used will be deprived of the subtlety that would give them at least a seeming respectability (or plausibility) when used individually.[10] What they lack in this regard, however, should be more than compensated in their use together as a means to achieve, more than any single approach, an approximation of the diversity and complexity of Soviet strategic arms decisionmaking.

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[10]By the standards of the decision-making analyses that have been applied to US domestic, foreign policy and defense decisions, the approaches used in this study are quite crude. Moreover, by the standards that have recently begun to be applied to decision-making analyses of the Soviet domestic scene, these approaches may also seem unsophisticated. Even if the approaches put forth in this study were presented for use on an individual basis, however, it would seem prudent to keep them relatively simple and straightforward. Since analysis of Soviet strategic arms decisions has not been characterized thus far by an extensive effort to confront the data in decision-making terms, it is doubtful that any decision-making approaches that might be used for this analysis can be appropriately refined at this point. Approaches can only be adequately refined--and given some validity--when they are made to live up to their name by actually "approaching" something. The basic task therefore is not to concentrate on refining approaches in a vacuum--which may be more misleading than helpful--but to assemble a few simple analytical tools and then try to use them.

Part One

THREE DECISION-MAKING PERSPECTIVES

I

PERSPECTIVE I: RATIONAL STRATEGIC ACTOR DECISIONMAKING

The rational strategic actor approach to analyzing decisionmaking is a particular reading of Graham Allison's rational actor model. As Allison sees it, most analysts of foreign and defense policies over the years have used a rational actor approach even if they have not explicitly conceptualized it. He regards the approach thus as the classical model of foreign and defense policy evaluation, a model widely shared by analysts who otherwise might be quite at odds in their analytic assumptions.

Surveying a number of different studies, Allison writes:

> What is striking about these examples from the literature of foreign policy and international relations are the similarities among analysts of different styles when they are called upon to produce explanations. Each assumes that what must be explained is an action, i.e., behavior that reflects purpose or intention. Each assumes that the actor is a national government. Each assumes that the action is chosen as a calculated solution to a strategic problem. For each, explanation consists of showing what goal the government was pursuing when it acted and how the action was a reasonable choice, given the nation's objective. The cluster of assumptions characterizes the Rational Actor Model.[1]

In brief, Allison's rational actor model assumes that events in the international arena are the purposive acts of nations behaving as unitary decision-making and decision-implementing entities. When a Soviet action--such as a diplomatic maneuver or a weapon deployment--is observed by the analyst, for example, the key question the analyst frames for himself is: what

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[1]Graham T. Allison, *Essence of Decision: Explaining the Cuban Missile Crisis* (Boston: Little, Brown, 1971), p. 13. For a full discussion of the model, see pp. 10-66.

purpose or purposes are the Soviets pursuing in making this move? What do they reasonably hope to accomplish? Little attention, however, is given to the possibility that (a) the action was more inadvertent than purposive, (b) that it was the consequence of biased or inept implementation of a decision or set of decisions, or (c) that the original decision was the product of compromise, affected by values other than strategic values, by pulling and hauling within the governmental framework and the like. That the rational actor approach does not bring such considerations readily to mind does not mean the approach is of little value. What it means is that the approach might be usefully supplemented by approaches that pay deliberate attention to those considerations.

For the present, however, the task is to modify the rational actor approach to help it perform better the job it already does quite well. Rather than burden the approach with considerations that would blur its focus, it makes sense to sharpen its focus by emphasizing what seems pertinent to a rational actor evaluation of Soviet strategic arms decisions.

A. THE RATIONAL ACTOR AS STRATEGIC CALCULATOR

Modifying the rational actor approach requires, first, stressing the importance of strategic calculation in the strict military sense in Soviet strategic arms decisions. Allison's approach focuses on strategic values that are rather broadly defined to include nonmilitary concerns--for example, political influence in the international arena. Such nonmilitary factors are significant and should be taken into account, but not at the expense of military concerns--at least not in analyzing strategic arms decisions from a rational actor perspective.[2]

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[2]As will be discussed later, these broader political-strategic considerations can perhaps be better taken into account within the confines of a separate approach--the national leadership approach. And their relationship to strategic considerations in the strict military sense will not be lost, so long as both a rational strategic actor and national leadership approach are used together in a multiple-approach analysis.

Allison's selection of the Cuban missile crisis as a case study in itself points up the need for focusing on strategic calculation in the strict military sense. In that case, vital national security concerns were at stake, and strategic calculation presumably figured importantly in the decision. If one were to extrapolate from that case in evaluating all Soviet strategic arms decisions, however, one could easily overstate the role of strategic calculation in general.

It cannot be justifiably assumed that, in strategic arms decisions (not to say other defense decisions) of less moment from a national security standpoint, strategic values would predominate in the calculations of the Soviets. Insofar as the term strategic is viewed in a broad sense to encompass both military and political values a proper determination of the strategic "weight" of a Soviet decision is hard to make. Specifically identifying Soviet strategic values as military values can help in this regard by encouraging the analyst to view Soviet decisions according to a single common standard. Focusing on the military utility of a Soviet weapon system, its performance characteristics, and the like can facilitate the making of distinctions between those systems that the Soviets would be likely to view as particularly important in improving their strategic standing and those they would not. And on that basis, some judgment might be rendered as to the role of strategic calculation in shaping the decision. Even a system judged to be of considerable strategic weight would of course not automatically imply that strategic calculation determined the Soviet decision but surely the chances seem greater than for a system of apparently marginal strategic importance.

B. EMPHASIZING SOVIET STRATEGIC VALUES

As with its treatment of the term "strategic," Allison's rational actor approach also invites ambiguous use of the term "rationality." Does the term strategic rationality mean that

there are ubiquitous strategic values that make possible a common standard of rational behavior? Or are strategic values shaped sufficiently by certain national characteristics such that what may be irrational to an American strategist is rational in Soviet eyes (and vice versa)? Allison presents a variant of the rational actor model that would take into account different standards of strategic rationality,[3] but for the most part his rational actor analysis of the Cuban missile crisis assumes common Soviet-US standards.

Just as it could be misleading to assume that Soviet strategists would think exactly like American strategists, it could be equally misleading to regard Soviet strategic rationality as unique. Undoubtedly there is some mix of the common and the peculiar to be reckoned with, which probably would differ over time and from decision to decision. What is necessary, however, is to avoid inadvertently weighting the scales either on the side of a strategic rationality common to Soviets and Americans alike or on the side of Soviet uniqueness.

As at least a first step in giving more attention to peculiarly Soviet strategic values, the rational strategic actor perspective encourages the use of Soviet doctrinal pronouncements pertinent to the decision to be explained.[4] At the same time, doctrine cannot be confidently regarded as the "key" that will unlock the mysteries of Soviet strategic arms decisions.

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[3] *Essence of Decision*, pp. 36-38.

[4] Soviet military doctrine has by no means been neglected by Western students of the Soviet military scene--as the several excellent studies by Raymond Garthoff, Thomas Wolfe, Herbert Dinerstein, William and Harriet Scott, Matthew Gallagher, and others over the years will attest. Attention to this doctrine would help analysts avoid succumbing to what has come to be known as the danger of "mirror-imaging," i.e., reading the Soviets in American terms. But in avoiding this danger, one should not lose sight of the equal danger of what might be called "historical mirror-imaging," which amounts to treating the Soviets in the nuclear age as but slightly altered reflections of the Russians of old--whether they be soldiers, statesmen or whatever. Zhukov was neither a MacArthur nor a Kutuzov; Khrushchev was neither a Truman nor one of the tsars.

The relationship between military doctrine and capabilities is by no means clear cut.[5] In some instances, professed doctrine may well reflect a shared perception on the part of Soviet military thinkers and top decisionmakers of the "rational" requirement for some weapon system to accomplish a certain task. In other instances, the doctrine may be mainly a rationalization to justify a decision that was prompted by other considerations, for example, the parochial interests of a particular armed service.[6] In this respect, Soviet doctrine should also properly be taken into account in a decision-making approach--such as the pluralistic perspective considered below--in which inter-service rivalries are emphasized. But in any event, Soviet doctrine would seem indispensable for any effort to progress beyond evaluating Soviet strategic behavior simply in American terms.

C. FOCUSING ON DECISIONMAKING

In pointing to the problems in utilizing Soviet doctrine as a means to discern Soviet strategic values, a further modification

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[5]The many uncertainties encountered in trying to establish a relationship between doctrine and capabilities are incisively examined on the US side of the strategic equation in Graham T. Allison and Frederick A. Morris, "Armaments and Arms Control: Exploring the Determinants of Military Weapons," *Daedalus*, 194:3 (Summer 1975), pp. 99-129. Emphasizing, in particular, time lags between the acquisition of capabilities and the formulation of doctrines, the authors underscore the difficulty of explaining the "whys" of a weapons program--e.g., the purposes for which a weapon was developed (so far as they can be discerned) may not be the purpose(s) for which the weapon was eventually deployed, and so on. Distinctions of this sort are for the most part not explored in this paper in order to keep the approaches and their differences as straightforward as possible. However, further refinements of these approaches should take them into account.

[6]See Benjamin S. Lambeth, "The Sources of Soviet Military Doctrine," in Frank B. Horton, et al., eds., *Comparative Defense Policy* (Baltimore: Johns Hopkins Press, 1974), pp. 200-16.

of the rational actor model is suggested. Until articulated by Allison, the rational actor approach did not call attention to decisionmaking, *per se*.

If one accepts Allison's evaluation of the widespread use of this model in the past, then it is understandable that there was little questioning of its utility and, in turn, of its assumptions about how decisions are made. It may have seemed important for analysts to devote their attention mainly (or even exclusively) to discerning plausible strategic motives to explain decisions, rather than asking what decision-making arrangements would make rational actor behavior possible. In any event, whatever the use of this model in the past, it has been those (like Allison) who have recently challenged the approach who have made decisionmaking a live topic.

If the rational actor approach is to be used effectively to explain Soviet strategic arms decisions, the Soviet defense decision-making environment must be taken into account. Even if one were to try to focus solely on this approach to explain a Soviet strategic arms decision, attention to Soviet defense decisionmaking would appear necessary. For example, in order to judge whether peculiarly Soviet strategic values prompted a particular decision, recourse to Soviet doctrine would seem useful. But one could be misled about what the doctrine really represented on its face. To argue that it exemplified a perception of an objective military requirement rather than an *ad hoc* rationalization of certain parochial interests would require an assessment of the decision-making setting to determine if the latter could have come into play.

In general, what this means is that it is important to substantiate rational actor interpretations of Soviet defense decisions with explicit attention to the decision-making environment in order to meet alternative interpretations on their own grounds. If a rational actor interpretation is to be convincing it should (a) meet the "traditional" requirement of explaining

a Soviet defense decision on strategic grounds; and (b) meet the additional requirement (raised by new approaches) of explaining how the Soviet defense decision-making setup would make such a decision possible.

The organizations, personalities, and practices that make up the Soviet decision-making environment will be examined in Part II, and hence the decision-making assumptions of the rational strategic actor approach need only be briefly noted here. Two key assumptions would seem to underpin Soviet rational strategic actor behavior. The first is that Soviet strategic arms decisions are the product of centralized decision-making authority. It is possible that decisions that serve an "objective" Soviet strategic requirement could emerge from a situation in which pluralistic elements (services, designers, defense industrialists) are able to exert pressure or influence. But to concede such pressure (with all the selfish motives it connotes) generally is to seriously call into question the central premise of the rational strategic actor approach--that strategic calculation provides the dominant motive for Soviet defense decisions.

The viability of the rational strategic actor approach also rests on an assumption that the central decisionmakers behave, in the main, as strategic calculators. Granting that the central decisionmakers could let considerations of a domestic or foreign policy nature affect their calculations, even without their being pressured by parochial interests, would also undercut the premises of the rational strategic actor approach.

On the whole, the assumption of centralized decision-making authority seems the stronger of the two. Whatever the changes in the Soviet system in the postwar era, there is little serious doubt that basic decision-making power is essentially held in the hands of at most a few men at the top. Consequently, the Soviet Union's totalitarianism would generally sustain the assumption of centralized decision-making authority in strategic arms decisions. The second assumption would be easily sustained

if the top decisionmakers could be counted on to behave as if they were professional strategists on the Soviet General Staff--capable of rising above parochial service interests, deeply familiar with the military intricacies and implications of Soviet weapon systems and defense policies, and predisposed to make defense decisions accordingly. But we know that, by and large, over the years the top Soviet decisionmakers have not been professional strategists. And, in contrast to top US decisionmakers, they also have not had available the services of a sizable contingent of civilian defense strategists.[7] Rational actor approaches must be sensitive therefore to the problem of allowing for the "strategic education" of the top Soviet decisionmakers by military professionals without opening the door to the impact of pluralistic pressures from them.

It is only possible to note here that one of the most difficult theoretical problems in applying decision-making analyses is distinguishing between "pressure" and "advice." Advice from military professionals would seem to be indispensable if Soviet leaders are to be adequately apprised of the significance of a given Soviet strategic arms program and hence make

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[7]This characteristic of the Soviet decision-making environment should be appreciated but it is easy to overstate its significance. Remarks made by the top-ranking Soviet military delegate to SALT (to the effect that the US team should not reveal information on Soviet military matters to the Soviet civilian delegates) doubtless are the kinds of things that can encourage such overstatement. (Cf. John Newhouse, *Cold Down: The Story of SALT* [New York: Holt, Rinehart and Winston, 1973], p. 56.) But, as shall be noted, there are a number of civilians in the Soviet Union who, while not strategists by profession, have a considerable body of expertise on strategic arms programs--e.g., weapons designers and defense-industrialists--that the top leaders may draw on to check the views of military professionals. And of late there have also been some signs that the Soviets are trying to develop a token force of strategists, at least outside the precincts of the Ministry of Defense, if not perhaps strictly civilian (i.e., in the Institute for US and Canadian Studies and the Institute of World Economics and International Relations).

a rational strategic decision on that program. In that regard, the professionals may be said to "influence" the decision by dint of their advice, but the decision cannot, strictly speaking, be attributed to their pressure. Such access would, however, seem to facilitate the possible application of pressure, if the professionals so choose--and if they can get away with it. Since it is conceivable that they could exert pressure and still not reflect parochial interests that might skew the decision, even pressure in this instance would not necessarily be contrary to the premises of the rational strategic actor approach. These considerations represent areas where further refinements of this approach would seem useful, but they cannot be fully explored within the study's purview.

D. OVERALL FEATURES OF THE APPROACH

Transforming Allison's rational actor approach into a rational strategic actor perspective imposes new burdens on the analyst. It calls for focusing on strategic calculation in the strict military sense of the term. In evaluating strategic arms programs, this means emphasizing the specific military utility of the strategic weapon in question, in light of its performance characteristics, both strengths and weaknesses. It requires specific attention to what may be peculiarly "Soviet" in the strategic rationality underlying Soviet defense decisions. And it imposes the burden of explaining how rational strategic actor decisions are made in the Soviet decision-making environment.

If it could be demonstrated that the rational strategic actor approach had nothing substantial to offer an analyst, obviously none of these burdens would be worth taking on. But the approach does have an important contribution to make, whatever its problems and shortcomings. Without it (or without something like it), it would be all too easy to portray the Soviet Union in defense terms as a state in which strategic concerns counted for little.

II

PERSPECTIVE II: PLURALISTIC DECISIONMAKING

In a book on comparative political development published in the late 1960s, Barrington Moore made the intriguing observation that most such studies tended to overstate the role of intellectuals in influencing the course of history simply because the authors of those studies were themselves intellectuals.[1] So too, strategic analysts may be predisposed to assume that decisions of some strategic significance would be made by top decisionmakers mainly on strategic grounds. In this respect, Allison's rational actor model may be an overstatement but probably not a caricature of a widely held point of view. In any event, in presenting this model Allison has sought to demonstrate that there is room for explanations of defense and foreign policy decisions constructed on quite different premises.

A. DEVELOPMENTS IN STRATEGIC ANALYSIS AND SOVIETOLOGY

The search for alternative explanations of foreign and defense policy decisions has not been without its element of irony, especially where strategic analysis in general and sovietology intersect. On the one hand, the totalitarian model, which has been the most widely accepted model of Soviet politics over the years, was designed to point up the peculiar features of the Soviet form of rule as distinct from Western democratic political systems. Yet, as noted earlier, because of its stress on the monopoly of decision-making power in the hands of

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[1]Barrington Moore, *Social Origins of Dictatorship and Democracy: Lord and Peasant in the Making of the Modern World* (Boston: Beacon Press, 1966), p. 480.

one or at most a few leaders, the totalitarian model appears generally supportive of the notion of the Soviet Union behaving as a rational actor in making foreign and defense policy decisions. But by the same token, the distinctive features that the totalitarian model is supposed to highlight are submerged if it is assumed that, as a rational actor, the Soviet Union would act as a nontotalitarian state (e.g., the United States) would act.

On the other hand, in part because the Soviet Union at times has acted in ways that appear to defy explanation by US standards of rationality, the rational actor model has come to be regarded by Allison (and others) as particularly inadequate to explain Soviet behavior. As a corrective, efforts have been made to find an explanation for "aberrant" Soviet defense and foreign policy actions in the impact of interest groups on Soviet decisions, the effect of the standard operating procedures of Soviet organizations on the implementation of those decisions, and the like. The irony is that, no less than the treatment of rational actor behavior on the international stage, the conceptual tools employed here clearly have their origins in the workshops of Western pluralistic democracies. As such, those tools are not easily used to explain why the Soviet Union has seemed to act peculiarly on occasion without threatening to distort beyond recognition that which, above all, makes the Soviet Union peculiar--namely, its basic totalitarian attributes.

The danger of distortion is probably less apparent now than it perhaps should be. The totalitarian attributes of the Soviet system as a whole have themselves become blurred. No serious student of the Soviet political system has gone so far as to deny that the Soviet Union is a one-party state and that it has a planned and not a market economy. But the exact nature, extent, and effectiveness of central direction of the lives of Soviet citizens have increasingly become issues for debate among sovietologists.

The capability of the totalitarian model to accommodate the elements of heterogeneity and change that have been discerned in the Soviet political system, especially since Stalin's day, has been challenged on several fronts. Studies have provided examples of individuals other than the top Soviet political leadership apparently having some impact on decisions that are made.[2] Examples have also been given of individuals apparently frustrating or impeding the implementation of top-level decisions.[3] And yet other studies have shown that there are grounds for assuming that individuals in a variety of occupations do achieve some collective identity and have an implicit interest at least in trying to get the regime to pursue policies that are especially favorable to them.[4] In general, these studies demonstrate that the classical

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[2]See the discussion of Khrushchev's education reform of 1958 in Joel Schwartz and William R. Keech, "Group Influence on the Policy Process in the Soviet Union," *American Political Science Review*, v. LXII (September 1968). See also the discussion of policy impact on the part of interest groups in the Stalingrad Oblast in Philip D. Stewart, *Political Power in the Soviet Union* (Indianapolis: Bobbs-Merrill, 1968).

[3]A discussion of such resistance with respect to policy implementation, as well as an assertion of lower level decision-making impact, in the repeal of Khrushchev's production education program can be found in Philip D. Stewart, "Soviet Interest Groups and the Policy Process," *World Politics*, v. XXII (October 1969).

Resistance at lower levels of the Soviet administrative hierarchy to the implementation of top-level decisions and efforts to circumvent such decisions have long been noted, in particular in the Soviet civilian economy--even in the Stalin era when the totalitarian model was accepted by most Western students of Soviet affairs. Continuity and change in regard to such resistance over the years can be discerned by reading in tandem Joseph Berliner's pioneering study, *Factory and Manager in the USSR* (Cambridge, Mass.: Harvard University Press, 1957) and his recent opus, *The Innovation Decision in Soviet Industry* (Cambridge, Mass.: The MIT Press, 1976).

[4]For a survey of certain representative "interest groups," see H. Gordon Skilling and Franklin Griffiths, *Interest Groups in Soviet Politics* (New Jersey: Princeton University Press, 1971).

totalitarian model of Soviet politics does leave something to be desired. Moreover, the most venturesome of them--in terms of specifically using pluralistic decision-making concepts--have convincingly argued that certain Soviet decisions, at least in the domestic sphere, can be explained in pluralistic terms.[5]

The new developments in sovietology reflected here suggest that efforts to explain Soviet strategic arms decisions from a pluralistic decision-making standpoint should not simply be written off--as there would have been a strong temptation to do if such efforts had been made while Stalin was still in charge.[6] By the same token, it is critically important for analysts to remember where the burden of proof really lies. The totalitarian image of Soviet politics has been tarnished, not shattered.[7] Accordingly, in using a pluralistic approach to explain Soviet strategic arms decisions, one must take heed of at least certain gross differences that continue to obtain between Soviet society and the Western democracies in which these pluralistic notions are rooted. And it is equally necessary to be attentive to at least certain gross differences between the Soviet defense

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[5]The articles by Schwartz and Keech and Philip Stewart, cited above, on the decisions to inaugurate and then repeal production education in the Khrushchev era are perhaps the best examples.

[6]Yet Sidney Ploss' point is well taken: "Even during the era of Stalin there was room inside the framework of Soviet dictatorship for senior bureaucratic groupings to compete for influence and to argue for policy alternatives." "New Politics in Russia," *Survey*, 19:4 (Autumn 1973), p. 35.

[7]In what is perhaps the best extant critique of pluralistic analysis of the Soviet scene, William E. Odom has argued that: "The most persuasive argument for the totalitarian model is to try to imagine the study of Soviet politics without it. We understand contemporary Soviet politics more by the ways in which it departs from the totalitarian model than we do through new models." "A Dissenting View on the Group Approach to Soviet Politics," *World Politics*, 28:4 (July 1976), p. 567.

decision-making environment and the Soviet civilian setting in which this approach has thus far been most successfully applied.

B. APPLYING ALLISON'S PLURALISTIC DECISION-MAKING MODELS TO SOVIET STRATEGIC ARMS DECISIONS

Perspective II utilizes as its central analytic construct the concept of interest groups. In the strictest sense of the word, interest groups in Western societies are "associations" that are formed in the private sphere to exert pressure on public policy. But Western scholars who have most effectively applied interest-group analysis to Soviet politics have basically used the term in a broader sense to apply to groups within government with particular interests to advance. (and "government" in the Soviet Union, it is well to remember, has a very wide compass indeed.) Perspective II employs the term interest group in the latter sense in order to identify and analyze the various components of the Soviet defense bureaucracy whose interests may affect the development, production, and deployment of strategic weapon systems.[8]

In identifying Perspective II as a pluralistic decision-making approach, it is recognized that the rubric is a broad one. Allison, for example, presents two alternatives to his

[8]It is quite true, as William Odom maintains, that the concept of interest groups loses some of its distinctiveness in being applied in this fashion. But it is still open to question whether treating the Soviet government as a collection of interest groups (in the broad sense of the term) is somehow sharply distinguishable from, and woefully inferior to, analyzing the Soviet government as an arena of bureaucratic politics. As is discussed below, there are distinctions to be made between the pulling and hauling of people who head up governmental organizations (i.e., bureaucratic politics, as Allison defines it) and the broad organizational interests (i.e., "group" interests) of the particular agencies, committees, ministries, and so on, that those people head. But until we have seriously come to grips with the data to illuminate these differences as they bear on Soviet strategic arms decisions, it seems premature for present purposes to insist on a methodological purity that keeps these decision-making notions at odds and in so doing overrides the basic pluralistic bias they hold in common.

rational actor model in explaining the Cuban missile crisis, both of which qualify as pluralistic decision-making models. Briefly put, one model, the organizational process paradigm, views the actors in international politics not as monolithic "nations" or "governments" but as "constellations of loosely allied organizations on top of which government leaders sit."[9] Events in the international arena are treated, accordingly, not as purposive acts of, say, the United States or the Soviet Union, but as outputs of various US or Soviet governmental organizations, constraining the choices that the top decision-makers can make, shaping the decisions that are made by dint of their role in implementing them, and so on.

The other model, the governmental (or bureaucratic) politics model, also is pluralistic in that it views actions in the international arena as the result of bargaining among many "players" in a government--"players who focus not on a single strategic issue but on many diverse intra-national problems as well; players who act in terms of no consistent set of strategic objectives but rather according to various conceptions of national, organizational, and personal goals; players who make government decisions not by a single, rational choice but by the pulling and hauling that is politics."[10]

The essential difference between Allison's two pluralistic models appears to be the following. The organizational process model emphasizes the overall "interests" of particular governmental organizations and especially the significance of the standard operating procedures of those organizations in shaping the implementation of decisions. The governmental politics model stresses the importance of individuals who head up the

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[9]Graham T. Allison, *Essence of Decision: Explaining the Cuban Missile Crisis* (Boston: Little, Brown, 1971), pp. 79-80. For a full discussion, see pp. 67-144.

[10]Ibid., p. 144. For a full discussion, see pp. 144-244.

governmental organizations and recognizes that the impact of their organizations on decisions will depend heavily on the personal bargaining skills of those individuals, their personal ties to other powerful individuals, their personal interests, and so on.

Using the broad definition of interest groups alone, as its basic analytic construct, Perspective II, however, combines the key elements of Allison's two pluralistic decision-making models. Choosing between the two would probably tend to distort the nature and extent of the pluralistic elements in the Soviet defense decision-making setting. Without taking into account the insights of the organizational process model, the organizational interests that underlie top-level bargaining and that could exert constituent pressure on the bargainers would not be adequately brought out.[11] Ignoring the elements of the bureaucratic politics model would mean undercutting the significance of the personality factor in particular and of top-level bargaining in general in translating organizational interests into an impact on policy.

Choosing between Allison's two models might make more sense if either could be exploited as fully as they might be in analyzing decisionmaking in a Western setting. However, the use of these models is likely to be circumscribed in the Soviet defense environment. For example, the organizational process model (the one pluralistic model that Allison attempts to apply with some rigor to the Soviet side in his Cuban missile crisis case study[12]) certainly makes a worthwhile point in stressing

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[11]Allison stresses the impact of constituent pressure on these players or bargainers notwithstanding other considerations that define their roles. As will be described in Chapter III, it is on this crucial point that the national leadership approach parts company with Allison's bureaucratic politics model.

[12]Allison, *Essence of Decision*, pp. 113-17.

the distinction between decisionmaking and decision implementation. But Soviet secrecy makes it hard to determine whether what is observed by Western analysts with respect to a strategic arms program is the product of (a) an original high-level decision carried out to the letter, (b) a subsequent decision that has altered the original, or (c) how appropriate organizations have implemented the decision or decisions.

C. ESSENTIAL PLURALISTIC DECISION-MAKING ELEMENTS

Allison's Cuban missile crisis study is the most visible example of a temptation to which one can easily succumb in applying pluralistic analyses to Soviet strategic arms decisions. In treating the Soviet side of the strategic equation in the Cuban missile crisis (according to his organizational process model), he focuses principally on identifying service interests, examining the significance of interservice rivalries and the like. But there are other pluralistic elements to be taken into account, for example, branches within a service that might precipitate intra-service rivalries, weapons designers and their interests and rivalries in affecting weapons decisions,[13] and

[13] See, for example, Arthur Alexander, *R&D in Soviet Aviation*, R-589-PR (Santa Monica, Calif.: The RAND Corporation, 1970); *Weapons Acquisition in the Soviet Union, United States and France*, P-4989 (Santa Monica, Calif.: The RAND Corporation, 1973); and *Armor Development in the Soviet Union and the United States* (Santa Monica, Calif.: The RAND Corporation, 1976).

The role of designers, for example, would seem to be important in gauging the impact of a "technological imperative" in prompting Soviet strategic arms' decisions. In general, the pluralistic approach reflects the school of thought on the Soviet-US arms race, described by Gray, that focuses on internal self-generating stimuli for weapon efforts (in contrast to responsiveness to adversary actions). The technological imperative implies that the urge to exploit technological possibilities is one such stimulus.

importantly, the ministers of the defense industrial ministries.[14] These personnel and organizational elements, charged as they are with producing Soviet weapons, warrant more than perfunctory treatment in attempting pluralistic analyses of Soviet strategic arms decisionmaking.[15]

Finally, as with the discussion of the rational strategic actor approach, certain pertinent refinements that might be made on the present approach bear mention. Apparently nonrational (or irrational) decisions do not necessarily equate with pluralistic impact. First of all, as noted earlier, we should take into account the fact that what may seem aberrant from a US perspective may be simply the result of peculiarly Soviet strategic values informing the deliberations of top Soviet decisionmakers--acting without being pressured by parochial interests. In addition (as will be discussed in Chapter III), Soviet leaders could depart from a "rational" strategic course of action (by Soviet or US standards) because of other military or civilian preferences they might have--again without succumbing to constituent pressure.

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[14]See Karl F. Spielmann, "Defense Industrialists in the USSR," *Problems of Communism*, 25:5 (September-October 1976), pp. 52-69. The evolution of the defense industrial ministries is discussed in "The Soviet Defense Industry as a Pressure Group," in M. MccGwire, K. Booth, and J. McDonnell, eds., *Soviet Naval Policy: Objectives and Constraints* (New York: Praeger Publishers, 1975), pp. 87-122.

[15]Anomalies in the Soviet force posture over the years would seem to make it particularly tempting to focus on the significance of service interests in influencing certain weapons programs. David Holloway argues that one should look beyond parochial service interests, traditions, and the like to explain such anomalies. For example, he draws attention to pricing factors in the defense industries, which in the past at least may have created strong disincentives to stop the production of "obsolete" weaponry. Whether such factors should be considered more important than service pressures or not is an open question. But these factors should at least not be ignored. See David Holloway, "Technology and Political Decision in Soviet Armaments Policy," *Journal of Peace Research*, no. 4 (1974), pp. 257-79.

On the other side of the coin, "rational" strategic behavior in a strategic arms decision could on occasion result from the exertion of pluralistic pressure. Competing pluralistic pressures with respect to some weapon system could bring about an equilibrium in which the excesses of the principal protagonists were curbed--compelling them to settle for, say, the kind and level of deployment for the weapon system that would be the same as a Soviet rational strategic actor decision would produce. Pluralistic elements could also contribute to a rational strategic decision by exerting influence through the information or advice they provide. As with professional strategists on the Soviet General Staff (or other personnel in the upper reaches of the Ministry of Defense in general), who can be said to influence strategic arms decisions by dint of the "education" they provide the top political decisionmakers, so too service, designer, or defense-industrial proponents and opponents of a strategic arms program can provide this service. Simply by arguing for or against the program in question they may alert the leaders to important ramifications of the system (e.g., technical strengths and weaknesses and potential uses) that ultimately contribute to a strategically "rational" decision on the program that otherwise might not have been made. This is not, strictly speaking, the same as exerting pluralistic pressure, which should imply some element of compulsion.

Distinctions in these matters can, of course, become very fine-grained. And any future refinements on the pluralistic approach should ultimately take them into account. For present purposes, however, these refinements cannot be given proper attention. Just as it seems prudent, for heuristic purposes, to identify "rational" strategic arms decisions (i.e., by US and/or Soviet standards) essentially with rational strategic actor decisionmaking, it is prudent to identify pluralistic decisionmaking as a type of decisionmaking that basically yields decisions which depart from what strict strategic calculation would indicate.

III

PERSPECTIVE III: NATIONAL LEADERSHIP DECISIONMAKING

Confronted with a choice, analysts inclined to either the rational strategic actor or pluralistic interpretation of Soviet decisionmaking might end up burlesquing the Soviet political system in defending their point of view against the other. Those of the "pluralistic" persuasion could do so by arguing as if the Soviet leadership did not possess a basic monopoly of power and strategic concerns counted for little. Those of the rational strategic actor school could do so by accepting uncritically a simplistic image of Soviet totalitarianism that denies the relevance, if not the very existence, of heterogeneous elements in the Soviet decision-making setting.

A. THE NEED FOR A THIRD DECISION-MAKING PERSPECTIVE

Combining the two approaches or using them in tandem still would not give appropriate attention to other elements in the Soviet decision-making environment that could have an impact on Soviet strategic arms decisions. Indeed, because both approaches largely exclude those elements and because they are basically at odds with each other, determined efforts to combine them could yield only a jerry-built analytic framework lacking logic and cohesion.

Without an additional point (or points) of view on Soviet defense decisionmaking, one would be basically encouraged to believe that Soviet strategic arms decisions would be shaped by considerations other than the strategic calculations of the top leadership only if other personalities and organizations could exert sufficient pressure to affect those decisions.

What is missing is a sensitivity to the multiple concerns that can reasonably be attributed to the national leadership--not only in the Soviet Union but in other states as well.

Is it necessary for a spokesman for the wheat farmers in the Midwest, for example, to exert pressure on behalf of that group before the president takes their interests into account in a decision on grain sales to the Soviet Union? Is it necessary for General Secretary Brezhnev to be pressured by Andropov on behalf of the KGB to hedge a Soviet agreement to greater human contacts between East and West because of the additional policing problems those contacts might pose in Eastern Europe and the Soviet Union? To the extent that such spokesmen do come forth, the special interests of their particular "group" would be more forcefully brought to the attention of the national leaders and have a greater chance of having an impact on the decisions. But it would be taking an exceedingly narrow view of the range of concerns that a national leader might confront in making a decision to suppose that he must be actively pressured or otherwise share power (e.g., by relying on the "advice" of particular groups) in order for such interests to be taken into account.

Viewed in this light, the notion of national leadership decisionmaking that is presented in this paper is hardly novel--or indeed confined to the strategic realm. An American president or a Soviet general secretary cannot be counted on simply to exclude all but strategic considerations when faced with the need to decide on a strategic arms program--considerations that might be proximate to the strategic concern (e.g., its implications for a particular armed service) or more tangential (e.g., its implications for the economy of a particular region of the country).

The necessity of giving specific attention to what all might agree is common sense is simply that, in this situation as in others, common sense can easily be honored in the breach.

It is not the point here, however, to argue whether this view of national leadership has been at least implicitly taken into account in earlier studies (as some might well contend in the case of analyses of US foreign and defense policy, or to some extent even in certain analyses of Soviet foreign policy decisionmaking).[1] Nor is it to argue that the need to give this idea specific and rigorous analytical attention has not been acknowledged heretofore.[2] Rather, the point to be made is that deliberately focusing on the notion of national leadership decisionmaking can aid in explaining at least certain Soviet strategic arms decisions, and from a theoretical point of view has an important and novel role to play by helping to bridge the gap between the decision-making assumptions underlying rational strategic actor and pluralistic interpretations of Soviet strategic arms decisions.

B. REFINING THE IMAGE OF SOVIET TOTALITARIANISM

The explanatory utility of the national leadership decisionmaking perspective can be tested only in a series of case studies

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[1]The notion may be at least partly reflected in the "synoptic model" in Jan Triska and David Finley, *Soviet Foreign Policy* (New York: MacMillan, 1968), p. 69. For a comprehensive review of this and other recent efforts to improve analysis of Soviet foreign policy, see Arnold L. Horelick, A. Ross Johnson, and John D. Steinbruner, *The Study of Soviet Foreign Policy: A Review of Decision-Theory-Related Approaches*, R-1334 (Santa Monica, Calif.: The RAND Corporation, 1973).

[2]This notion of national leadership decisionmaking may be fairly close to what Allison had in mind (with respect to his models) in arguing that: "But models that mix characteristics of the three are clearly possible. One of the more interesting and promising is a cross between Model I and Model III [i.e., rational actor and bureaucratic politics] ... focusing, in the case of the United States, on the President whose purposes nevertheless include more than mere strategic values and whose activities require sneakers as well as boots." Graham T. Allison, *Essence of Decision: Explaining the Cuban Missile Crisis* (Boston: Little, Brown, 1971), p. 277.

of particular Soviet strategic arms programs. For the present, therefore, it is pertinent to describe the general relationship of this perspective to Perspectives I and II.

1. Mid-range Decision-making Possibilities

In broad terms, the national leadership decision-making approach provides a middle ground between Perspectives I and II by paying heed both to the basic monopoly of power in the possession of the Soviet leaders and to the heterogeneous elements in the Soviet environment that the leaders might be expected to take into account in framing decisions and getting them implemented. What this approach basically seeks to do is to focus on Soviet leaders who are not just strategic calculators and not just individuals who might succumb to constituent pressures--but as leaders with considerable power who have a country to run as well as defense policies to pursue and who, therefore, may have particular concerns with regard to economic, political, and other matters (of both domestic and international scope) that could influence their judgments on defense decisions. In focusing on the leaders in this capacity, the point is to indicate that one can postulate some workable relationships between centralized decision-making power and institutional pluralism in the Soviet defense decision-making environment.

2. National Leadership Decisionmaking: A Hypothetical Case

An initial postulation of such workable relationships might be made by looking at a Soviet leadership situation--a power arrangement--that would on its face appear most supportive of the assumptions that ur erlie the rational strategic actor perspective. Just as it may be presumed that the more the Soviet political scene bears witness to a diffusion of power at the top, the more notions of pluralistic strategic arms decisionmaking would be supported, so too the more centralized power is in evidence, the more a rational strategic actor

interpretation should gain credibility. But even if one posits the utmost centralization of power, it can be shown that the basic assumptions of rational strategic actor decisionmaking are still not automatically supported.

A strict definition of national leadership decisionmaking--assuming this same centralization of power--would require, in the case of a decision on a particular strategic weapon system, that the decision be made by one man who had established himself clearly as *the* leader, with other Politburo members definitely subordinate to him. He would be thus in a position to act as the quintessential rational strategic actor and would have the power to make the decision solely on the basis of a strategic calculation of the weapons system's significance for the Soviet Union. However, he could also take other considerations into account while making the decision. Perhaps his decision would be affected by his personal preference for the service that would deploy it--a preference based, say, on his earlier career affiliation (e.g., as a military commissar) with that service.[3] Hence he may be inclined to decide for greater production and deployment of the weapons system in question than a "rational" strategic calculus on his part would warrant. His decision could also be shaped by other preferences he might have as a national leader. For example, he may well take into account what the implications of a large production run would be for his personally desired agricultural programs, insofar as the weapon system could conflict to some extent with production of agricultural equipment. In short, depending on his preferences, his decision could be for a weapons effort that was either greater or smaller than strict strategic calculation would suggest.

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[3]Neither here nor elsewhere in the paper is the term "preference" used in the sense of a mere whim on the part of a national leader. It is meant to indicate a serious personal concern, which in some way could be discerned in the leader's prior career or current behavior.

Although this decision-making scenario is greatly oversimplified, it helps to bring out two basic points. First, contrary to the rational strategic actor approach, a monopoly of decision-making power cannot be automatically translated into decisions calculated solely (or even predominantly) on strategic grounds. Second, contrary to a pluralistic decision-making approach, decisions that serve the interests of some personalities or groups (other than the interests that strict strategic calculation might serve) do not automatically signify that power has been shared in some significant way.[4]

Besides embodying the assumptions that analysts bring to a problem, approaches should suggest specific questions to be asked. Examples of the kinds of questions that the above reading of the national leadership decision-making perspective suggests are these. What personal preferences with respect to particular strategic weapons systems might the national leader have as a result of his earlier career affiliations? What are the ongoing domestic economic programs that he might have a personal interest in that could potentially affect his judgments on the weapons systems? What might be his particular political or ideological concerns in the international arena that could shape his weapons judgments?

To be sure, questions like the above have not been totally neglected in studies of the Soviet scene. There have been studies of the career connections between top Soviet leaders and military personalities--such as Khrushchev's ties to the so-called Stalingrad group of Soviet military leaders in World War II.[5] And, on a broader basis, there clearly has been no lack of Western efforts to probe the psyches of Soviet

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[4]Weapons decisions made on the basis of strategic calculation would serve some particular organizational interests in any event.

[5]See, for example, Roman Kolkowicz, *The Soviet Military and the Communist Party* (New Jersey: Princeton University Press, 1967).

leaders to discern their personal preferences, particularly Stalin.[6] Similarly, as indicated by the attention that has been paid to Khrushchev's personal concern with Soviet agricultural programs,[7] the particular economic, social, or political preferences of Soviet leaders have also been brought to light. However, such considerations have thus far not been treated in decision-making terms as comprising together a discrete set of variables that might be profitably used to examine Soviet strategic arms behavior.

It might be noted that the economic interests cited above could of course be taken into account in a pluralistic approach to Soviet strategic arms decisionmaking--not in terms of their reflection in the personal preferences of an "omnipotent" leader but as the interests that a particular civilian interest group would try to bring to bear on strategic arms decisions. Although it was not done earlier in laying out the pluralistic approach, one could adhere to the assumptions of pluralistic decision-making notions and at the same time widen the perspective to include civilian as well as military interest groups in evaluating a Soviet strategic arms decision.

The same cannot be said for a rational strategic actor approach, however. It seems impossible to argue that a Soviet strategic arms decision is made on the basis of strategic calculation and at the same time allow for the possible impact of civilian considerations. Implicit in the very assumptions of

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[6]Recent forays into "psychohistory" (e.g., Doris Kearns, *Lyndon Johnson and the American Dream* [New York: Harper & Row, 1976]) to explain the behavior of American presidents may be fairly novel, but broadly similar efforts have been standard fare for some time for scholars of the Soviet scene trying to understand Stalin's actions. For one of the best and most recent examples, see Adam B. Ulam, *Stalin: The Man and His Era* (New York: Viking Press, 1973).

[7]See, for example, Sidney Ploss, *Conflict and Decision-making in Soviet Russia: A Case Study of Agricultural Policy, 1953-1963* (New Jersey: Princeton University Press, 1965).

the rational strategic actor approach, therefore, is the contention that Soviet defense decisionmaking and civilian considerations are rigidly separated.

C. THE APPROACHES AS "IDEAL TYPES"

Before proceeding to the examination in Part II of the extent to which discernible Soviet decision-making "realities" in fact seem to support the assumptions underlying Perspectives I-III, a caveat should be entered. The approaches presented and the decision-making notions they contain are in the most basic sense of the word "ideal types." The latter have long been recognized as important social science tools and their utility today is no less than when the concept of "ideal types" was first articulated by Max Weber--at a time when the pertinent strategic relationships involved Imperial Germany, Tsarist Russia, and the like. "Ideal types" (as well as their more elaborate conceptual cousins, "models") lose their value only when we forget what they are--abstractions from (and hence necessarily exaggerations of) "reality"--and that we routinely use them. When we do forget, we can easily be encouraged to believe that what is an abstraction is in fact an objective and full description of the way things really are--whether with respect to how and why strategic arms decisions are made or with respect to some other social science topic.

The approaches in this paper, hence, at best focus on only part of the "truth," if they do that (since extensive testing of them remains to be done). They are not intended to stand on their own and for that very reason have been left in cruder form than otherwise might be advisable. The national leadership approach is clearly as deficient in offering a description of how and why Soviet strategic arms decisions occur as the other approaches. But placing it in tandem with the other approaches reminds us that each of the approaches leaves out important decision-making considerations. Fleshing out any one of these approaches with nuances, shadings, and the like, while excluding

the others, would not accomplish the same thing. Indeed, it would probably encourage us to believe that we know a lot more about the whys and wherefores of Soviet strategic arms decisions than we really do.

The "ideal" nature of the national leadership approach as presented above should be particularly stressed. Even Stalin did not conform to the image of the "omnipotent" national leader, much less an omniscient one. As with the other approaches, therefore, this approach only hints at a refinement that deserves to be explored in some detail--namely, that the national leader's "personal preferences" would be colored not only by his personal knowledge of some topic, but also by the information (advice) he receives from others. This would seem to leave some opening for at least the exertion of "influence" upon him. Just as a Soviet leader behaving as a rational strategic actor could be "influenced" by the advice he receives from, say, professional strategists on the General Staff, so too a Soviet national leader could be influenced (without being necessarily pressured) by those who keep him informed about nonstrategic matters that concern him.

In addition to excluding this refinement, the approach also emphasizes an "omnipotent" leader to point up the fact that even if one posits a leadership situation that makes the decisionmaker least susceptible to pluralistic pressure, rational strategic actor decision-making notions still do not exhaust the decision-making possibilities that remain. And if that is so, then it seems highly plausible that in a more "realistic" Soviet leadership situation, in which less "omnipotence" is in evidence, national leadership decision-making possibilities would be even greater--albeit with the chances of pluralistic decisionmaking also being enhanced.

Part Two

THE SOVIET DEFENSE DECISION-MAKING ENVIRONMENT

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The utility of each of the approaches presented in Part One has been presumed to rest on certain broad decision-making realities that can be found in the Soviet Union. It is appropriate next to take a more deliberate look at the Soviet decision-making environment to see whether and to what extent this presumption seems justified. In the discussion that follows, the assumptions of the national leadership approach will be the focus of attention, not because of any preference for that approach, but because, of the three approaches, it can be most usefully juxtaposed to the decision-making assumptions of the other two. Consistent with the preliminary nature of the study, the discussion does not purport to offer a comprehensive picture of the current Soviet defense decision-making setting much less a detailed account of the various changes in this setting in the postwar era.

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IV

THE BROADER CONTEXT OF SOVIET STRATEGIC ARMS DECISIONMAKING

If the national leadership decision-making perspective had to rely on the assumption of an omnipotent leader in the Soviet setting, it would hardly represent much of an advance over Perspectives I and II in doing justice to Soviet political realities. National leadership decision-making considerations can, however, be taken into account in a leadership situation in which power is shared by a few men at the top with perhaps one individual in the position of first among equals. Roughly speaking, this appears to be an accurate characterization of the current leadership situation in the Soviet Union. It also applies, if one allows for a shifting emphasis between the one individual and the other few men, to the leadership situation during the Khrushchev period.

A. THE SUPREME DEFENSE COUNCIL

The key question to be addressed is whether the current Soviet leadership situation is supportive of the notion inherent in the rational strategic actor approach of a rigid separation of defense decisionmaking from the broader Soviet political and economic context. A primary consideration that would seem to lend support to the notion of rigid separation is that the Soviets have apparently adopted certain institutional mechanisms to narrow the circle of top leaders who routinely concern themselves with defense decisions. Perhaps the major mechanism in this regard, in operation today, is what

Raymond Garthoff has referred to as the Supreme (or Higher) Defense Council.[1]

The name and composition of this body suggest that it is the principal arena for deliberations on strategic weapon system programs, defense policies, and the like prior to (or perhaps in some cases in lieu of) formal Politburo-level decisionmaking on these matters. Presumably intended to limit the scope and intensity of bargaining over defense programs and policies at the top political level, the council has at present only four Politburo members as its regular members--General Secretary Brezhnev (chairman of the council), Premier Kosygin, Supreme Soviet Presidium Chairman Podgorny, and Defense Minister Ustinov.[2]

If the membership of this body comprised individuals whose sole or even main concern was defense matters, it would go a long way toward supporting the notion that the Soviets can (and do) successfully separate civilian considerations from their strategic arms decisions and, in so doing, help to underpin the rational strategic actor approach. However, with the exception of Ustinov, all of the other Soviet leaders on the council have more than strategic concerns to engage their attention, whatever priority they attach to strategic arms matters in discharging their responsibilities as council members. It would thus seem appropriate to hedge any assumption that the strategic arms decisions taken in the council would be made solely on the basis of an agreed strategic calculation. In some cases, to be sure, the strategic significance of a particular decision (e.g., the go-ahead for a weapons system)

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[1]Raymond Garthoff, "SALT and the Soviet Military," *Problems of Communism*, 24:1 (January-February 1975), p. 29. The council, by the way, had precursors in the Stalin and Khrushchev periods.

[2]Ibid. Harriet Scott has recently suggested that A. P. Kirilenko and M. A. Suslov may also be members. Whether they are or not does not significantly affect the basic issues under discussion here. See Harriet Fast Scott, "The Soviet High Command," *Air Force Magazine*, March 1977, p. 53.

might well be such as to override any other considerations. But it cannot be flatly maintained that, say, Kosygin, with his oft-touted consumer goods concern, would never let his input into defense decisions be affected by this concern. And it cannot be merely assumed that the other council members are schizoid policymakers either.

In addition, ruling out the intrusion of civilian considerations would seem to require decisions taken in the council to be routinely and passively accepted by the rest of the Politburo members as *faits accomplis* when those decisions reach the Politburo. There is room for doubt on this score. Indeed, decisions that appear to have the greatest strategic significance may, paradoxically, be most likely to attract the attention of Politburo members who have civilian axes to grind--precisely because decisions of this sort may well carry a considerable claim on scarce resources.[3]

None of the foregoing is intended to suggest that the Soviet Union over the years has not placed a high priority on defense, to the possible detriment of the civilian economy. Widespread acceptance of the defense sector's priority status in the top Soviet leadership circles means only that civilian concerns have probably had a noticeable impact on fewer defense (and especially strategic arms) decisions and a milder impact on

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[3]It also cannot be excluded that these Politburo members might have personal contacts with individuals in the defense sector--contacts that would permit them to secure "independently" information necessary for knowledgeable criticism of decisions emerging from the precincts of the Defense Council. They might, for example, have personal contacts with key military personnel or one or more of the principal supervisors of the defense sector (besides D. F. Ustinov, L. V. Smirnov, chairman of the Military-Industrial Commission, and I. D. Serbin, head of the Defense Industry department of the Central Committee have recently served as supervisors for the top leadership); ministers and possibly deputy ministers of the defense industrial ministries; and key weapon designers. For a discussion of the possibility of such contacts, see Karl F. Spielmann, "Defense Industrialists in the USSR," *Problems of Communism*, 25:5 (September-October 1976), especially pp. 62 and 64.

those decisions they did affect. It does not mean, however, that the relevance of civilian concerns can be or should be disregarded in attempting to explain Soviet strategic arms decisions.[4]

B. CENTRAL PLANNING

That Soviet defense decisions are not made in a vacuum is reinforced by the very characteristic of the Soviet economy that has facilitated the maintenance of priority treatment for defense programs over the years--namely, central planning. Given the sizable resource claim that the defense sector places on the economy as a whole, it would be incredible if the Soviets did not make some effort to coordinate defense program planning with the overall economic plan--at least on an annual and five-year basis.[5]

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[4]This consideration is admittedly not easy to appreciate if one thinks of the Soviet economy as being simply a "war-mobilization economy." High priority for defense, however, hardly means that the Soviets regard other economic purposes as trivial. Moreover, as shall be discussed below, broader foreign policy concerns should be included under the "civilian" rubric. These concerns could skew defense programs away from what military professionals might advise on strategic grounds even while detracting from certain domestic economic programs.

[5]Five-year plans have been standard for the Soviets since the late twenties, with the notable exception in the postwar period of a seven-year plan that ran from 1959 through 1965. And the Soviets work up annual plans within the five-year plan. Given the lead-time problem, defense planning may also include plans of a longer duration. Coordination with the overall economic plan is, however, likely to make the annual and mid-term defense plans particularly important. The existence of these plans is noted in Maj. Gen. A. Baranenkov, "Financial Support to the Troops Under Annual Planning Conditions," *Rear Services and Supply of the Armed Forces*, no. 10 (1972), pp. 57-61; and Col. Gen. V. Dutov, "Improving Economic Operations in the Army and Navy," *Communist of the Armed Forces*, no. 2 (January 1972), p. 34.

As the Soviets keep discovering in regard to agricultural production, however, all the relevant economic inputs and outputs cannot be precisely predicted and incorporated in these plans (especially the five-year plans). Just as weather can alter agricultural plans, so too presumably a momentous event in the international arena, an unexpected US deployment decision, or a technological breakthrough by the Soviets themselves could disrupt any five-year defense plan calculations.[6] Nevertheless, if the effort to provide a five-year plan for the economy as a whole is not to be negated, at least some rough prediction must be made of the size and nature of the resource demands the defense sector will place on the economy within the planning period.

The probable existence of Soviet efforts to coordinate defense planning with the overall economic plan is also supported on institutional grounds. A recent study identifies a first deputy chairman of the State Planning Committee (Gosplan) as a former defense industries manager, which suggests that a special office within Gosplan may be charged

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[6]One should be cautious, in any event, in assuming that Soviet five-year defense plans would be as detailed and as "set in concrete" as the popular image of the Soviet overall economic plan would suggest defense plans might be. Gregory Grossman has recently argued that these overall economic plans for the five-year period may have been much more amorphous than the Soviets have let on. "In the postwar period, these plans have customarily been reported by quite brief and ostensibly tentative documents, such as the present 'Basic Directions' [i.e., for the 1976-1980 plan] ... and only in the case of the Ninth FYP [i.e., for 1971-1975] ... were they followed by the publication of a more or less comprehensive, book-length document. There is some reason to believe that in most or all cases before 1972 no final version was published simply because no agreed-upon comprehensive plan was completed, although this fact was never publicly admitted." Gregory Grossman, "The Brezhnev Era: An Economy at Middle Age," *Problems of Communism*, 25:2 (March-April 1976), p. 25.

with integrating defense planning into the central economic plan.[7]

It would be tempting to construe these indicators of mid-range central planning for defense programs as supportive of the notion that the Soviet leadership is better able than it would otherwise be to make Soviet strategic arms decisions as a rational strategic actor. To the extent that the plan constrains the possibilities for interest groups within the defense sector to push programs that have not been planned for, the case for the Soviet Union behaving as a rational strategic actor is probably strengthened. Yet at the same time, the existence of Soviet five-year defense planning means basically not that the possibility of interest-group activity is largely excluded but that it would be most likely to occur at particular times in the planning cycle--most particularly in the months immediately prior to the formal acceptance of the next five-year plan, when priorities and prospective programs would be under heavy consideration.

From the standpoint of the national leadership perspective, the (or at least a) key rationale for having a five-year defense plan argues against the premises of the rational strategic actor approach. If defense planning is a necessary part of planning for the economy as a whole, it can hardly be contended that there is a rigid separation of defense decisionmaking from civilian economic concerns. As with the pluralistic approach, however, the impingement of civilian considerations on strategic arms programs--with the Soviet leaders acting as national leaders--would appear most likely at particular intervals.

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[7]Cf. David Holloway, "Technology and Political Decision in Soviet Armaments Policy," *Journal of Peace Research*, no. 4 (1974), p. 260.

C. RELATIONSHIPS OF THE THREE APPROACHES

Viewed with the assumptions of the national leadership decision-making perspective in mind, some of the key institutions and practices that can be discerned in the Soviet defense decision-making setup are misperceived if they are seen simply as creating or sustaining a rigid separation between civilian considerations and defense decisions. To be sure, the rational strategic actor approach is probably nearer the mark than the pluralistic approach in reflecting the basic realities of these institutions and practices.

The notion of national leadership decisionmaking, however, makes allowance for aspects of these Soviet institutions and practices that the rational strategic actor approach tends to discount. The national leadership decision-making perspective thus parts company with the rational strategic actor approach by taking into account heterogeneous elements in the Soviet decision-making setting. At the same time, it also maintains some distance from the premises of pluralistic approaches in that it does not equate the impact of various heterogeneous elements with pluralistic pressure. For example, Kosygin could bring his concern for Soviet consumer goods industries to his deliberation of a particular defense decision without having been subjected to pressure, say, from N. N. Tarasov of the Ministry of Light Industry--or any other individual or organization closely identified with consumer goods "interests." Similarly, to confine the impact of heterogeneous elements to the defense sector itself, Ustinov may have a personal bias toward a particular service or defense industry or designer that could color his consideration of the strategic worth of a given weapon system proposal--again, a situation in which particular "interests" might be served without their having, in some way, actually exerted pressure in the making of the decision.

Nevertheless, it must be conceded that, in contrast to the assumption of the existence of an omnipotent leader, such as was made in the strict definition of national leadership decisionmaking, the leadership situation exemplified in the above examples is clearly less at odds with the assumptions of the pluralistic decision-making approach.[8] As discussed earlier, the national leadership decision-making approach is intended to flesh out some of the decision-making possibilities that lie between those typified in rational strategic actor and pluralistic approaches. Viewed in this light, a strict definition of national leadership decisionmaking, assuming an "omnipotent" leader, probably comes closest to sharing the assumptions that make the strongest case for rational strategic actor decisionmaking--although even here, as we have seen, there are key differences between these approaches. The corollary of course is that the farther one goes from the assumption of an omnipotent leader, the closer one comes to the pluralistic end of the decision-making spectrum.

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[8]Allison, for example, assumes that this oligarchic political situation well reflects the assumptions of his bureaucratic politics model. He does not, however, take note of such phenomena as the role of the Defense Council and defense planning which, as postulated, probably narrow the scope and frequency of top-level bargaining in defense decisions. And he assumes the importance of constituent pressure on individual top leaders, which (if one takes a national leadership perspective into account) would by no means fully explain the impact of pluralistic elements on defense decisions. See Graham T. Allison, *Essence of Decision: Explaining the Cuban Crisis* (Boston: Little, Brown, 1971), pp. 182-83.

V

THE DUAL ROLE OF PLURALISTIC ELEMENTS

The discussion in Chapter IV indicates that the national leadership decision-making approach has a contribution to make in offering explanations of Soviet defense decisions that a rational strategic actor approach would not make. But, it may well be asked, where does the relevance of the national leadership approach leave off in this leadership situation and the relevance of pluralistic approaches begin? Or, to put it another way, what realities of this leadership situation does a national leadership approach take into account that the pluralistic approach does not?

The national leadership approach acknowledges the possible impact of leadership "interests" on strategic arms decisions that would be taken into account by the pluralistic approach only if it could be shown that this impact resulted from the actual exertion of pressure (or even influence) on the leadership by some lower level individuals or groups. However, since it cannot be ruled out that such interests would become manifest (or at least would be strengthened) as a consequence of the pressure of these individuals or groups, it is important to assess the extent to which the Soviet strategic arms decision-making setting appears to lend itself to pluralistic pressures within the overall context of an oligarchic political system.

A. SOVIET "POWER STRUGGLES"

For present purposes, it is perhaps sufficient to note that, in broad terms, responsiveness by the top leaders to pressures from below is probably most likely in situations in which there are sharp divisions in the ranks of the top leaders and those

leaders seek to use the support of particular Soviet institutions to wage their internecine battles--e.g., the governmental apparatus, the party apparatus, the military, and the secret police. This is the stuff of which the famous Soviet "power struggles" over the years have been made.

Khrushchev's political career probably brought these power struggles into clearest relief in the postwar era as he turned for support first to one "group" and then to another to try to secure and maintain his ascendancy over the other Soviet leaders. Initially, he relied on the party apparatus as a whole to do battle with Malenkov, whose power base was in the governmental apparatus. Subsequently, he relied on regional party secretaries to undercut the economic role of the governmental apparatus and further weaken Malenkov and certain other key rivals. He was able to turn to the Soviet military in the person of Zhukov when the major showdown with those rivals came. He then apparently counted on the support of the Stalingrad group of Soviet military leaders in ousting Zhukov as minister of defense.

Khrushchev's success in the power struggles in the Kremlin in the 1950s is usually taken as a prime example of how Soviet leaders can and do cynically manipulate issues and policies to outflank their political opponents.[1] Khrushchev, for example, initially censured Malenkov's "soft-line" in foreign and defense affairs and then later endorsed some of Malenkov's key positions (e.g., on the destructiveness of nuclear war) when Malenkov had been subdued. Combined with the evidence of Khrushchev's adroitness in utilizing one "group" and then another to further his political career, this image of Soviet cynicism with respect to policy differences can create the impression that the top Soviet leaders are in fact little concerned with, or seriously beholden

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[1]For a classic study in this vein, which stresses the primacy of power considerations over genuine policy concerns in Soviet power struggles, see Roger Pethybridge, *A Key to Soviet Politics: The Crisis of the Anti-Party Group* (New York: Praeger Publishers, 1962).

to, lower level groups with particular interests to advance. Even if this image were correct on the whole, however, it seems bound to be misleading in its particulars. Can it really be asserted that, say, at some point in Khrushchev's rise, when he looked to the support of the members of a given group, he would not have been susceptible to pressure from them on certain issues in which they were especially interested?

Such bitter political infighting is not an endemic Soviet condition, however. The current Soviet leadership, for example, seems to have agreed at some point that constant and vicious jockeying for power at the top can be profoundly destabilizing and detrimental to the interests of the regime as a whole. Differences among these leaders have been visible to Western observers, to be sure. Ousters from the top leadership ranks have been brought about by such differences (e.g., Yegorychev and Shelepin to name but two). And Brezhnev has maneuvered to make himself clearly first among equals. But withal, an obvious commitment to the preservation of collective leadership has muted the kind of infighting that would seem to offer the greatest opportunity for successful pressure from below.

In sum, as a first cut at the question of whether the Soviet political system lends itself to interest-group pressures on strategic arms decisions, it is important to avoid a generalization (even for the post-Stalin era) that betrays an insensitivity to differences in the nature and intensity of political jockeying in the top leadership circles over time.[2] If the decision in question occurs when such jockeying is particularly virulent, there would seem to be some chance that pressures from below have been heeded in making it. At other times, a decision that appears to violate what a rational

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[2]Allison's bureaucratic politics model, for example, does not pay appropriate heed to these differences. He asserts that "the dominant feature of bureaucratic politics in the Soviet Union is the continuous 'struggle for power.'" Graham T. Allison, *Essence of Decision: Explaining the Cuban Crisis* (Boston: Little, Brown, 1971), p. 182.

strategic calculus would dictate may be more supportive of the assumptions of national leadership decisionmaking--with the leaders being swayed by certain personal preferences.

B. PLURALISTIC ELEMENTS IN THE DEFENSE SECTOR

The basic considerations presented above rest on a premise that the pluralistic approach to Soviet defense decisionmaking does not readily concede, i.e., that Soviet defense decisions should not be arbitrarily separated from the broader context of Soviet politics. Since, however, the pluralistic interpretation could--without doing violence to its primary assumptions--take this broader context into account, the differences with the national leadership perspective are not fundamental on this score, although there still would be notable differences in how this broader political context would be treated.

For present purposes, the differences between the pluralistic interpretation and the national leadership approach that really matter lie in the treatment of heterogeneous elements within the defense setting. If the existence of the Supreme Defense Council and the phenomenon of five-year defense planning constitutes the strong suit for a rational strategic actor point of view, the strong suit of the pluralistic point of view is simply the existence of a number of organizations in the defen sector that can be presumed to have particular strategic arms interests and considerable resources to promote them.

A pluralistic interpretation can cite, for example, the Ministry of Defense, whose minister is a member of the Supreme Defense Council (and a Politburo member), as an organization that should be capable of pressuring the top leaders to pursue policies favorable to the military in general versus policies that would favor civilian interests. At, strictly speaking, an even higher level of aggregation of defense interests, the Military Industrial Commission (VPK) would seem to provide a key forum for the expression of the combined interests of the

professional military and the defense industrial ministries as a whole.[3] As Raymond Garthoff has described it, this body "handles coordination between the Defense Ministry, ministries concerned with military production, and Academy of Sciences institutes engaged in military research and development."[4]

It is also pertinent to take into account organizations with a presumably more intense interest in specific weapons and defense policies. In this regard, one can cite the five military services under the Ministry of Defense and the eight defense industrial ministries (wherein weapon designers reside) that develop and produce weapons for the services.[5] Insofar as certain ministries tend to concentrate on weapons for certain services (e.g., the Ministry of the Shipbuilding Industry for the Navy; the Ministry of General Machinebuilding for the Strategic Rocket Forces) a *prima facie* case could be made that these services and defense-industrial ministries combine efforts to shape particular weapons decisions.

Merely identifying such weapons systems interest groups does not suffice to prove that they are actually capable of pressuring the top leadership. But contrary arguments that

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[3]On Soviet organization charts, the VPK would occupy a formal position above governmental ministries, including the Ministry of Defense.

[4]See Raymond Garthoff, "SALT and the Soviet Military," *Problems of Communism*, 24:1 (January-February 1975). It should be noted that from the regime's perspective the VPK would be viewed not merely as a forum in which pressure from below could be exerted on the regime, but as a mechanism to exert top-level control. Depending on the decision, it probably could serve either purpose.

[5]The services are Strategic Rocket Forces, Ground Forces, National Aerospace Defense Forces, Air Forces, and Navy. The current defense-industrial ministries are: Defense Industry, General Machinebuilding, Medium Machinebuilding, Radio Industry, Electronics Industry, Machinebuilding, Aviation Industry, and Shipbuilding. (It is possible that a ninth ministry has existed since April 1974--the Ministry of Communications Equipment Production. The evidence to this effect is, however, quite skimpy.) For a discussion of these ministries and their weapon responsibilities, see Karl F. Spielmann, "Defense Industrialists in the USSR," *Problems of Communism*, 25:5 (September-October 1976), p. 54.

rest consciously or unconsciously on the premises of the rational strategic actor approach are probably even less convincing. The very existence of the Supreme Defense Council probably constitutes the strongest counterargument. But even here, as we have seen, it cannot be ruled out that, even with its limited membership, the council would bear witness to top-level divisiveness, which lower level groups could hope to exploit. The existence of five-year defense planning is probably the second strongest counter-argument. But again, such planning may inhibit the successful exertion of lower level pressure within a given plan period but would certainly not rule it out as the plan is being shaped.

Another tack that it is tempting to take to deny the impact of lower level pressures on top decisionmakers is to cite the special efforts that the Soviet leadership has made to exert tight control over defense production. There is no doubt that the Soviet leadership has tried valiantly to impose its will on the defense production effort over the years as a corollary to the according of high priority to that effort. At least until his recent promotion to the post of Minister of Defense, D. F. Ustinov served as the leadership's principal watchdog in this regard.[6] And he has been aided in this role by L. V. Smirnov, chairman of the Military Industrial Commission (VPK), and I. D. Serbin, chairman of the Defense Industry department of the Central Committee.

The effectiveness of the defense supervisors is easy to overstate, however. As studies of weapon systems decisionmaking

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[6]It is unclear at present whether Ustinov's appointment as Minister of Defense on April 29, 1976, has in fact deprived him of a continuing role in overseeing defense production efforts. Ustinov's life-long involvement in administering weapons programs suggests that, in some fashion, his supervisory interest and activity may persist. However, he no longer is listed as a Central Committee secretary and a new secretary, Ya. P. Ryabov (formerly head of the Sverdlovsk Oblast party committee), has been named and may have taken Ustinov's old job. Ryabov's recent address to the Soviet defense "society" (DOSAAF) congress suggests he has some defense responsibility. See Foreign Broadcast Information Service, *Soviet Union*, February 1, 1977, p. V1.

in the United States have demonstrated, the enormous technical complexities of modern weapons systems impose commensurate management burdens.[7] One should not lose sight of the fact that, whatever the peculiarities of their management approaches (and no matter how personally knowledgeable and diligent a person like Ustinov might be), the Soviets have probably not found a formula for avoiding some slack in top-level supervision of defense programs--especially when a variety of technologically complex weapons systems is in the works simultaneously. Nor can it be assumed that Ustinov, Smirnov, and Serbin have maintained a solid front against the importunities of weapon designers, defense industrial ministers, or service personnel. Indeed, while it can be presumed that these supervisors have basically agreed and worked well together, each has probably had substantial management resources at his individual disposal and (Ustinov's recent appointment aside) each has had a considerable tenure in his particular post. It would not be surprising therefore if these supervisors have been at odds on occasion and that such divisions have been apparent to the organizations and personnel they were supposed to supervise. In sum, it is not very convincing to base the case against the impact of pluralistic pressures on Soviet strategic arms decisions on an image of the top leaders and their principal agents behaving as if they were monolithic in their interests and superhuman in their capabilities.[8]

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[7]See, for example, Harvey M. Sapolsky, *The Polaris System Development: Bureaucratic and Programmatic Success in Government* (Cambridge, Mass.: Harvard University Press, 1972).

[8]This image is, of course, not confined to the defense sector. It is part and parcel of widely held assumptions about the special qualities and capabilities that members of the Communist Party possess and that make it possible for the Soviet leaders to maintain the upper hand in controlling a vast and complex society. This view is epitomized in the following statement: "The distinguishing characteristic of a party member is that he can be counted on to subvert the sub-unit's self-interest." (See William E. Odom, "A Dissenting View on the Group Approach to Soviet Politics," *World* (continued)

One does not have to accept this image, however, to keep the possibilities for pluralistic defense decisionmaking within reasonable bounds.

Both rational strategic actor and pluralistic approaches pay little attention to other features of the Soviet defense decision-making environment that are germane to an assessment of the impact of pluralistic pressures on Soviet strategic arms decisions. The existence of heterogeneous elements in the Soviet defense setting not only underpins the possibility for effective pluralistic pressure on strategic arms decisions, it may also help to impede it. This aspect of Soviet defense decisionmaking is slighted by the rational strategic actor approach, because its assumptions deemphasize the significance of pluralistic elements in general, and by the pluralistic approach, because it runs counter to the presumption of pluralistic impact. The national leadership decision-making perspective however, with its emphasis on both the power of the top leaders and the relevance of heterogeneous elements, is quite congenial to the notion of pluralism in the service of central direction.

Paying heed to the broader realities of the Soviet defense setting in this case does not mean denying the relevance of those features of this setting that are given attention in the other approaches. It does mean that there are decision-making implications to be taken into account that put the assumptions

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Politics, 28:4 [July 1976], p. 554.) The Soviets, to be sure, may be closer to achieving this subversion among party members who are only party functionaries in contrast to party members who are also scientists, economic managers, professional soldiers, and so on. But even among the functionaries, the image of a "new Soviet man" should not be blithely accepted. No doubt the leadership has aspired to create party members who are immune to selfish interests and entirely devoted to serving the "national" interests of the Soviet state as a whole (as the leaders supposedly define them). But it is surely giving the Soviets too much credit to assume that, in this case as in others, what they aspire to they automatically achieve.

of these other approaches in a wider perspective necessary to reflect more closely how the Soviet political system probably really operates.

In arguing the case for effective pluralistic pressure in shaping Soviet strategic arms decisions, there is an understandable tendency to focus on interest groups that represent a relatively high level of interest aggregation--e.g., the military services. At that level of aggregation, the presumption can fairly well be sustained that considerable resources can be mustered by the group to make an impact on the Soviet leaders. In this regard, the case would seem to be even better made, if the combined interests of a service and a defense-industrial ministry (acting as the principal producer for the service) were emphasized. If one probes deeper into this environment, however, questions are prompted about such things as (a) the intensity of a given military service's interest in a particular strategic weapons system decision, (b) the intensity of a given defense industrial ministry's interest in the decision, and (c) the congruence of service and defense-industrial ministry interests. On the service side, service-level interest in plumping for a particular weapon system cannot be automatically presumed to be considerable just because the service would have custody of the weapon. The service as a whole may have the resources to promote the system actively if it so desires, but the service's commitment could be much less than that of a particular branch within the service. Pulling and hauling within a service over weapon system priorities may be virulent. Within the Ground Forces, for example, armor partisans and artillery partisans could find themselves at bitter odds in instances in which some choice has to be made between the particular weapon systems each desires. Similar differences would seem likely between, say, interceptor and SAM advocates in the PVO and between bomber and fighter proponents in the Air Forces.

It is entirely possible that service-level backing would be forthcoming that would be as strong as a program's original supporters might wish. But it cannot be presumed out of hand. This does not mean that a service would inevitably be confronted with a difficult choice between competing weapons systems. There may be many cases in which no such choice has to be made. But if attention is paid to heterogeneous elements in the defense sector below the service level, it seems possible to argue that the interest of a service in promoting a given strategic weapon system may be less than a pluralistic approach might take for granted.

If one can err by assuming that service commitment to a weapon system is of an intensity that might be more likely found below the service level, a similar error is possible on the defense-industrial side of the equation. In that environment, commitment to a particular weapon program may be quite strong at the design-shop level--with a designer's interest in a given weapon system probably most closely approximating the intensity of interest likely to be shown at or below the service level. There have been cases of weapons designers successfully lobbying for a particular weapon system by gaining the ear of a top political leader.[9] But such efforts may exemplify personal impact on the part of the designers (rather than group pressure) at best. And indeed, it may be that the "success" of such efforts is more a reflection of the personal preference(s) of the leader than an indication of the persuasive powers of the designer.[10]

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[9]See, for example, A. S. Yakovlev, *Tsel' Zhizni: Zapiski Aviakonstruktora* [The target of life: notes of an aircraft designer], trans., FTD-HT-23-956-67 (US Air Force Foreign Technology Division), especially p. 395.

[10]Note that in such cases the national leadership approach would have a contribution to make in explaining the decision in any event. While one could never be sure exactly where leadership preference left off and lower level impact began, the emphasis on the preferences of the top leaders in the national leadership approach calls attention to a factor that must (continued)

But what about the organizational resources the designer might muster to bring pressure to bear on the top leaders? A look at the production responsibilities of the defense-industrial ministries suggests that in many instances the support for a weapon system at the ministry level may be considerably less than a particular designer's commitment to it. In situations in which designers have to compete for the production of a new aircraft, for example, the minister of the Aviation Industry could count on producing the aircraft in his ministry no matter who won the competition. This competition might be for an aircraft for a particular service, say, the PVO. But the Ministry of the Aviation Industry also develops and produces aircraft for other services--the Air Forces and the Navy (Naval Aviation). In situations in which there may be a choice between going ahead with a new aircraft program for one of these services or the other (or the PVO), ministry-level concern with the outcome would seem to be less than that of either the designers or the services involved. In other words, one cannot presume that the interest in promoting a particular weapon system is as strong at the defense-industrial ministry level as it would be at the design-shop level or that there would be an inevitable congruence of interests between the service that would deploy a new weapon system and the defense-industrial ministry that would produce it.[12] Indeed, the possibility

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be taken into account in making even a rough judgment one way or the other. Otherwise, in weapon system decisions regarding which the lobbying efforts of, say, a designer were in evidence, one would be inclined simply to assume successful pressure or influence.

[12]Note that while a defense-industrial ministry would not be likely to snub an important service customer, these ministries have a bargaining leverage that would seem to be generally greater than defense producers in the United States. The PVO (National Aerospace Defense Forces) has no alternative but to deal with the Ministry of the Aviation Industry to secure a desired interceptor. The Strategic Rocket Forces has similarly no alternative but to deal with the Ministry of General Machinebuilding for certain major categories of missile systems, and so on.

should not be excluded that, on occasion, a defense-industrial minister might try to block a new program.[13]

C. BASIC LIMITS ON PLURALISTIC IMPACT

For present purposes, this brief survey should suffice to indicate how in many instances the existence of heterogeneous elements in the Soviet defense sector might work to maintain centralized decision-making authority. To be sure, the Defense Council, five-year defense planning, and the basic diligence of the leadership's defense supervisors--which help to support the rational strategic actor approach--no doubt make a significant contribution to this end as well. But unless one takes into account what heterogeneity in the defense sector may accomplish in its own right, this contribution can easily get overstated to the point where unrealistic claims make a pluralistic approach seem credible by default.

Lower level pressures on strategic arms decisions may be limited in two broad and complementary ways. First, the life might go out of the promotional effort for a weapon system simply in moving from the lowest levels of the military and defense industrial hierarchies, where the most interest in a program might be found, to the top. Accordingly, the top leaders may only occasionally be confronted with strong pressures for a weapon system from an interest group that represents a sufficient aggregation of interests to matter politically.

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[13]This might come about for a variety of reasons: the minister may have a personal antipathy toward the designer; the minister may view the program as a particular burden from a management standpoint (for example, involving unwanted dependencies on other ministries); or the minister may see the program as challenging the continued production of certain "old" systems that may yield the ministry a better economic return. The first point is at least hinted at in Yakovlev, *Tsel' Zhizni*, p. 398. On the second point, see Spielmann, "Defense Industrialists in the USSR"; on the last point, see David Holloway, "Technology and Political Decision in Soviet Armaments Policy," *Journal of Peace Research*, no. 4 (1974).

Second, in light of the differences in the kinds of interests in the defense environment, the top leaders, either directly or, what is more likely, through the defense supervisors, may be able in many instances to frustrate the coalescence of support for particular programs.

The presumed ability of the defense supervisors (acting as the principal agents for the top leaders) to operate within this environment without necessarily "going through channels," as it were, is probably of key importance here. The opportunities this may present for defense sector personnel (at various levels) to establish direct contact with the supervisors should not automatically be regarded as a pluralistic decision-making asset. Such contacts may enable these personnel to override or circumvent expected opposition at, say, the next formal level in their bureaucracy. But if the defense supervisors are directly accessible to designers, service personnel and the like, so that differences among the supervisors can be exploited and the backing of at least one of them secured for some pet weapons program, those individuals are hardly less accessible to the defense supervisors so that pet programs can be frustrated by the supervisors. In short, this communications capability can be just as easily a debit as an asset for pluralistic decisionmaking.

In general, the presumed wide-ranging access of the defense supervisors to personnel and organizations would seem likely to facilitate the top leadership's ability to exploit differences between and within services, defense-industrial ministries, design shops, and so on. Appreciation of the relevance of such differences suggests that the Soviet leaders and their principal agents do not have to be monolithic in their outlook and superhuman to boot, as a rational strategic actor approach would encourage one to believe, to stay on top of this situation much of the time. It also suggests that a pluralistic approach, while denying the monolithic nature of the Soviet regime, cannot

confidently proceed on the tacit assumption that interest groups of potential political significance would themselves be monolithic.

In sum, this survey of some of the major features of the Soviet decision-making environment indicates that there are grounds for utilizing each of the three approaches that have been put forth. The national leadership approach calls attention to elements that both help underpin the other approaches and limit them. The premises of a rational strategic actor approach are basically supported by the existence of the Defense Council and mid-term defense planning--and by the role that pluralistic elements may play in helping to sustain centralized decision-making. The premises of a pluralistic approach are basically supported by the existence of such consequential organizations as the armed services and the defense-industrial ministries--and by the limits to the role of the Defense Council and defense planning in fostering centralized decisions. And the premises of a national leadership approach are supported by the fact that the Defense Council and defense planning do not restrict the Soviet leaders to treating strategic arms decisions in a vacuum *and* that pluralistic elements in the defense setting can be used to frustrate lower level pressure on the leadership. The Soviet decision-making environment therefore makes it possible for the Soviet leaders to make decisions on other than "strategic" grounds but without necessarily succumbing to constituent pressure in doing so.

As has been pointed out, the peculiar circumstances in which a given decision (or set of decisions) takes place may offer clues as to which approach is likely to be nearest the mark in explaining the decision. A strategic arms decision of considerable significance from a national security standpoint and which bears the marks of mid-term defense planning could suggest that a rational strategic actor approach might be most useful. A decision having significant implications for service roles and

missions and which occurs at a time of bitter infighting in the top leadership circles could indicate that a pluralistic interpretation might be particularly strong. A decision that is not readily explicable on strategic grounds but that has no great roles and missions implications and takes place at a time of relative harmony in the leadership circles could be well explained in national leadership terms.

One must be wary, nonetheless, of regarding any such clues as sure guides to the selection of an approach. No matter how plausible any one approach may seem on its own, its plausibility can only be assured if it convincingly rules out the likelihood of other interpretations. And this cannot be done unless a substantial effort is made to utilize these approaches as well. Moreover, in doing so, it may well be found that, in certain cases, the most plausible explanation is really the combined product of all of them.

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Part Three

IMPLICATIONS

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SOVIET STRATEGIC ARMS DECISION-MAKING ANALYSES AND THE ACTION-REACTION PHENOMENON

For policymakers concerned with the Soviet strategic threat, knowledge of the operations of the Soviet defense decision-making environment can hardly be regarded as an end in itself. What ultimately matters of course are the Soviet strategic arms that emerge from this environment and not how the decisions are made that result in these weapons. Given the policymaker's priorities, it is tempting to discount the significance of decision-making analyses. To do so, however, would be to take a very narrow view of what constitutes the Soviet threat and what is necessary to assess it. The threat after all is comprised of both Soviet intentions and Soviet capabilities. Since deciding on appropriate measures to deal with the threat may often call for some appreciation of the purposes behind the weapon systems that the United States has to contend with, decision-making analyses have a role to play. Indeed, in this respect, decision-making analyses are particularly relevant to the policymaker's concerns regarding the possible impact of US arms programs on Soviet strategic behavior.

A. CAPABILITIES AND INTENTIONS

Colin Gray has maintained that "The details of who supported the arguments of the Strategic Rocket Forces' spokesmen and why, is far less significant than the fact that the Soviet Union will very soon have a large force of SS-19s deployed."[1]

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[1]Colin Gray, *The Soviet-American Arms Race* (Westmead, Eng.: D.C. Heath, 1976), p. 30.

Strictly speaking, this point of view is eminently reasonable. But on broader grounds, one can acknowledge the supreme salience of Soviet strategic capabilities without branding all other aspects of the Soviet threat as trivial. Indeed, the motives behind those capabilities matter also. For more than a decade the Soviets have manifested a concern with the Chinese threat that seems based at least as much on the hostile intentions they attribute to the Chinese (or on their skepticism regarding Chinese sanity) as on a sober assessment of Chinese strategic capabilities. Similarly, while it is inconceivable that strategic capabilities such as the Soviets possess would ever be lightly regarded by US policymakers, no matter who possessed them, surely their special significance derives from the antagonism the Soviet Union has shown toward the United States since World War II. If, however, this basic Soviet antagonism is taken for granted, it may seem possible to regard capabilities and intentions as somehow neatly separable. It would be simpler thus to focus on capabilities alone because, presumably, they really matter and they submit readily to "hard" evaluation.

Even a cursory look at one of the more recent capability acquisitions by the Soviets, however, suggests that confronting the question of Soviet intentions cannot be easily avoided and that it is not a trivial question. It has been argued, for example, that the Soviets now possess strike instruments (e.g., ICBMs and SLBMs) in sufficient quantity and quality for exercising limited strike options.[2] But the strike instruments themselves do not unambiguously indicate that the Soviets are seriously considering including plans for limited nuclear

[2] *Report of Secretary of Defense James R. Schlesinger to the Congress on the FY 1976 and Transition Budgets, FY 1977 Authorization Request and FY 1976-1980 Defense Programs,* February 5, 1976 (Washington, D.C.: Government Printing Office), p. II-2. Incidentally, one should bear in mind that in certain major respects Soviet "capabilities" are not solely in the hands of the Soviets to determine. For example, the hard-target kill "capability" of a Soviet ICBM is a matter of the characteristics of the missile as well as the characteristics of potential targets.

options in their overall strategic planning. The characteristics of the weapons could conform to the long-held (or long-touted) Soviet belief in the necessity to prepare for fighting--and winning--an all-out nuclear war.[3] Accordingly, that these weapons represent a limited-options capability may be unintentional. They would still reflect a threat, to be sure, but not a genuine limited nuclear options threat.

It is, however, obviously important for the United States to know what sort of threat (or threats) those strike instruments represent. As former Secretary of Defense Schlesinger has contended, the United States must seriously consider countermeasures to deal with this limited strike potential in any event, simply because the weapons could be used for limited strikes.[4] Yet in weighing the pros and cons of various US courses of action with respect to such countermeasures, the question of Soviet intent must loom large. If one is convinced that the Soviets' limited nuclear options capability is a sufficient indicator of their intent to plan (or that they have inaugurated plans) for exercising those options, then one need not worry that US actions might prompt the Soviets to commence such planning. On the other hand, if one is convinced that the Soviets are still hewing closely to professed doctrine (i.e., that nuclear war will be all out) in their strategic planning, then it is at least open to question whether US countermeasures (however prudent in the abstract) might become a self-fulfilling prophecy by helping to create a Soviet limited options threat.[5]

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[3]See Benjamin S. Lambeth, "The Evolving Soviet Strategic Threat," *Current History*, 69:409 (October 1975).

[4]*Report of Secretary of Defense James R. Schlesinger*, February 5, 1976.

[5]Some might argue, however, that prompting the Soviets to consider options planning would not necessarily be a bad thing. Should the Soviets, for example, launch limited strikes *ad hoc* fashion in a crisis situation, their lack of planning for further limited follow-on strikes could leave them no alternative to a limited US response but "capitulation" or escalation to all-out nuclear war.

The point that matters here is that intentions and capabilities cannot be easily disentangled in terms of the hard choices that policymakers often have to make. The significance that is attached to particular capabilities that the Soviets have in hand (or that are discernible as being in the offing) at a given time will probably depend, to a considerable degree, on assumptions that are made either consciously or unconsciously about the Soviet motives behind those capabilities. And even if the general assumption regarding basic Soviet antagonism toward the United States is sustained, it hardly gives the policymaker very much to go on, as is illustrated above, in deciding on an appropriate course of action. Moreover, estimating future Soviet capabilities that the United States will have to deal with is very much a matter of determining the Soviet intent to achieve those capabilities.

Thus, since it may prove important for policymakers to know more than that the Soviet Union is about to acquire or has acquired a particular capability, analyzing Soviet strategic arms decisionmaking may be a worthwhile enterprise. No easy or simple answers are likely to be forthcoming, but at least in considering the significance of Soviet capabilities it can help one to progress beyond making general or unconscious assumptions about the Soviet intentions behind those capabilities. Progress in this regard is especially important--as indicated by the limited nuclear options example--when the policymaker has particular reason to consider whether and how US actions will affect Soviet behavior.

B. DECISION-MAKING ANALYSES AND THE ROLE OF THE ACTION-REACTION PHENOMENON

Against the backdrop of the preceding discussion, it bears emphasizing that whatever general brief can be made on behalf of adding the national leadership approach to the repertoire of interpretations of Soviet strategic arms decisionmaking, the

approach does not hold out the promise of stripping away the difficulties of gauging the impact of the action-reaction phenomenon on Soviet strategic arms decisions. Indeed, in some ways it may add to those difficulties or at least make them more apparent.

To what extent do actions by the United States prompt Soviet reactions in strategic arms policies and weapons programs? The answer will presumably vary from case to case. But it will also presumably vary according to the mode of analysis employed in a particular case. At first glance, in roughly conforming to one of the two broad schools of thought on the strategic arms race described earlier, a rational strategic actor approach would generally emphasize the role of the international action-reaction phenomenon in shaping Soviet strategic arms decisions. A pluralistic interpretation, on the other hand, would appear to generally deemphasize it.

The apparent differences between these approaches rest on assumptions about the locus of decision-making power and the motives (or perceptions) that might reasonably be attributed to the relevant "decisionmakers." Assuming that decision-making power would be held tightly in the hands of one or a few top leaders and that decisions would be made with a keen perception of strategic realities, the rational strategic actor approach suggests that Soviet strategic arms decisions would be highly sensitive to actions of the USSR's principal strategic rival.[6]

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[6]Throughout this discussion, the action-reaction phenomenon is considered in terms of Soviet reaction to US action. This expression of the phenomenon is presumably of most interest to US policymakers concerned with the whys and wherefores of Soviet defense decisions, since it is important to know whether and to what extent the decisions they make could affect Soviet behavior. Those concerned with the motives behind US behavior would be equally interested in US reaction to Soviet action. And finally, one might note that another expression of the action-reaction phenomenon that should be legitimately considered is in the relations between the Soviet Union and its "other" major strategic rival, the People's Republic of China.

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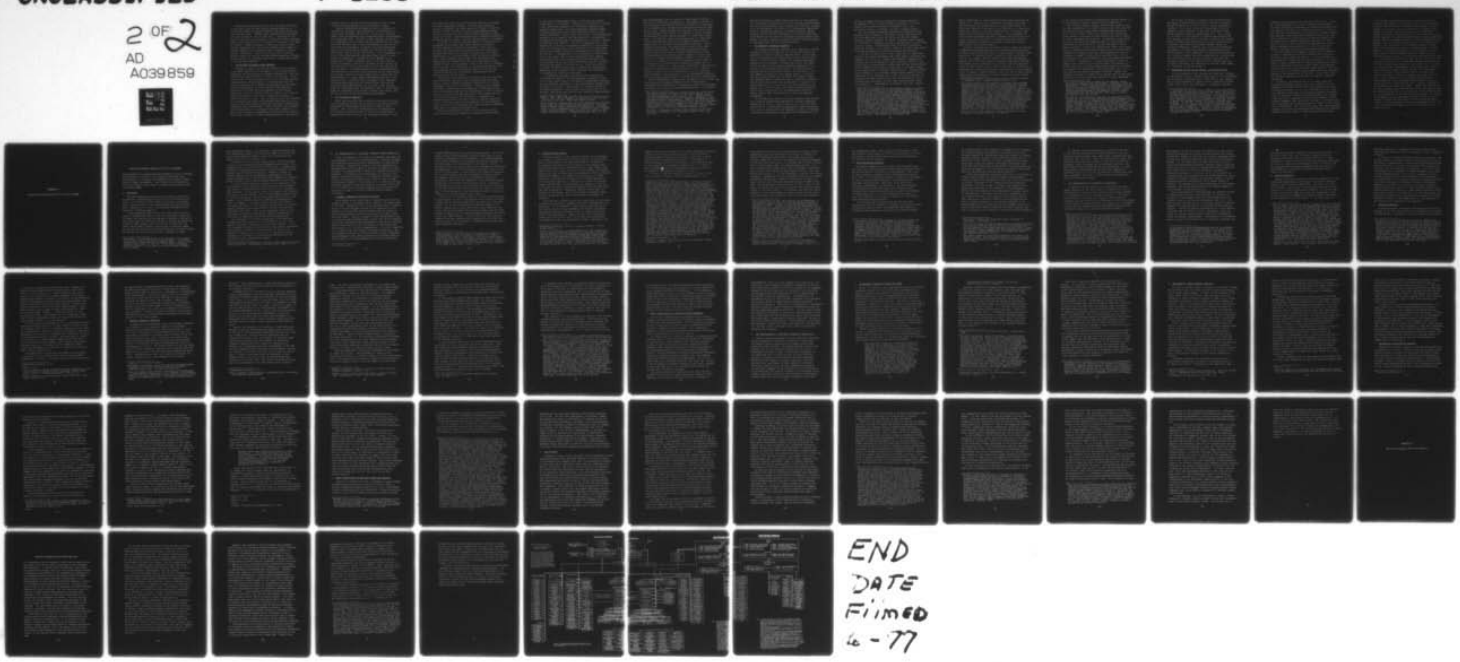

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Pluralistic interpretations, on the other hand, are based on the notion that relevant decision-making power may be effectively shared by organizations and individuals below the top political level. Because these organizations and individuals are presumed to seek to shape defense decisions out of motives that are only incidental to "objective" Soviet strategic needs, their sensitivity to US actions is not likely to be high. Of course, it might be argued, it cannot be ruled out that a decision shaped by such lower level influence would appear to Western observers as a reasonable Soviet response to some US action. Moreover, it cannot be ruled out that a US action would be taken into account by those pushing parochial interests if only because it could help them "sell" a weapon system idea to the top decisionmakers.

1. The Rational Strategic Actor Approach

Although in general the rational strategic actor approach would appear supportive of the impact of the action-reaction phenomenon and the pluralistic approach unsupportive, there are complicating considerations to be taken into account. In the first place, if one pays heed to the role of five-year defense planning, which seems important to help make the case for rational strategic actor defense decisionmaking in the Soviet Union, responsiveness to US actions would seem inhibited. Obviously, US actions that were regarded as particularly significant and that occurred within a planning cycle could be taken into account if the Soviet leaders were willing to disrupt the plan to do so. But, in general, given the existence of a five-year plan, high responsiveness would seem to be confined to the period when the next plan was being considered and priorities were being decided. Thus, US actions that occurred within this period (i.e., anywhere from several months to a year or more before the inauguration of the next plan) would be most likely to impact on Soviet defense decisions. Earlier US

actions could, of course, elicit a response as well at this time but the response would, by definition, be tardy.

Another complicating consideration which is inherent in the rational strategic actor approach is the difficulty of defining the strategic values (i.e., in the strict military sense) that are appropriate for estimating Soviet responsiveness in a particular case. Insofar as these strategic values may be a combination of the common and the peculiar that could vary over time and from case to case, determining the role of the action-reaction phenomenon is likely to be more complicated than if it could be flatly assumed that the Soviets shared US strategic values or that they did not. As a consequence, the role of the action-reaction phenomenon might easily be overstated or understated. Placing too much emphasis on the peculiarity of Soviet strategic values in a given instance could, for example, lead one to conclude that the Soviets had not responded to some US action when in fact they had done so (or vice versa). A similar possibility for misgauging Soviet responsiveness could result from overstressing the significance of strategic values the Soviets might hold in common with the United States. In short, while acknowledging the need to be sensitive both to peculiar Soviet strategic values and those the Soviets may share with the United States, the rational strategic actor approach does not and cannot offer any sure guide for determining what the particular "mix" of these values might be in shaping a given Soviet strategic arms effort, and in turn the role of the action-reaction phenomenon.

2. The Pluralistic Approach

Soviet decisions that can be plausibly explained on pluralistic grounds may reflect the operation of the action-reaction phenomenon in a more genuine way than one would at first suspect. That lower level organizations or individuals may use evidence of some US action to "sell" their particular program should not be written off as merely incidental to the

more basic fact that the pertinent Soviet decision was shaped by narrow bureaucratic motives. To serve their purposes, services, designers, and others might be inclined to bend the evidence to make the case for their desired weapons program. But does this mean that the action-reaction phenomenon really counts for little? Soviet decisions may be shaped by pluralistic pressures and yet reflect a genuine responsiveness to US actions.

It is easy to overstate the selfishness of motive and the narrowness of perception that might characterize defense decisions shaped by pluralistic pressures. Even if it is conceded that those with the greatest stakes in a particular decision would have that interest no matter what the "real" significance of a US action might be for the Soviets strategically, they presumably have to deal with individuals and organizations at higher levels who at best may have a weaker selfish interest in the decision. Thus, there may be a limiting factor at work. The probability of success may be greatest for those programs that are promoted by means of a serious and convincing concern for the strategic implications for the Soviet Union of the US action.

This does not mean that Soviet decisions that resulted from such pluralistic pressures would invariably make good sense from an overall strategic standpoint (whether by US or Soviet standards). But if it is reasonable to suppose that programs would have a better chance of being sold to officials at the top of the military and political hierarchies if those officials could be convinced they made good sense, then chances are that (a) decisions that were in fact made as a consequence of pluralistic pressures could well reflect a genuine responsiveness to US actions, and (b) those decisions in many instances might not be all that different from those the Soviet leadership might make as a rational strategic actor.

There is nothing here to rule out the possibility that Soviet decisions may be shaped by pluralistic pressures when

no particular US deployment effort or action in the international arena is in evidence. Indeed, this possibility is crucial to the underlying assumption of a pluralistic approach that weapons programs tend to be self-generating, prompted largely by internal pressures rather than competition with an international adversary. This includes the notion of the technological imperative or, as Herbert York has described it in assessing US weapons decisionmaking, the phenomenon of, in effect, running an arms race with oneself.[7] Even if the enemy has not in fact demonstrated a specific technological capability in some weapon area, one's own discovery of the feasibility of an achievement in that area prompts efforts to push ahead in the expectation that he will. A determination of the operation of this phenomenon on the Soviet side over the years would first require pinpointing those cases in which a Soviet technological lead was discerned and in which the United States came in a decided second or had chosen not to race at all. Only then would it be prudent to make an evaluation of whether the technological imperative led to specific Soviet strategic arms decisions as a consequence of pluralistic pressures.

A pluralistic approach seems particularly congenial to reflecting the impact of the technological imperative because it is at the lower levels of the defense establishment hierarchy that the greatest sensitivity to new technological possibilities is likely to be found. This pertains to research scientists and weapon designers, in particular, and key personnel in the services (affiliated with service-level technical organizations[8])

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[7]Herbert York, "ABM, MIRV, and the Arms Race," *Science*, July 17, 1970, p. 257. For an expansion on these views, see also *Race to Oblivion* (New York: Simon and Schuster, 1970).

[8]These technical organizations have been specifically identified in at least the Ground Forces and the Air Forces. See John Milsom, *Russian Tanks, 1900-1970* (Harrisburg, Pa.: Stackpole, 1971), p. 80; and Raymond Garthoff, "Soviet Air Power: Organization and Staff Work" in Asher Lee, ed., *The Soviet Air and Rocket Forces* (New York: Praeger Publishers, 1959), p. 181.

with whom designers can be expected to have regular contacts. Even given a reasonable presumption of enthusiasm on the part of these personnel for pushing forward the frontiers of technology in some weapons area, mitigating considerations should be taken into account. Memoir material--and analyses done on the basis of that material--have tended, for example, to stress the basic conservatism of Soviet weapons designers at least until recent years.[9] In addition, weapon system ideas that are technologically adventurous may meet with considerable opposition at higher levels in the defense establishment hierarchy. Defense-industrial ministers, for example, may be particularly wary, because of the prospect that developing and producing such weapons could involve them in unwanted dependencies on other defense-industrial ministries and the Academy of Sciences and in general increase their management burdens.[10] By the same token, it is unlikely that the top leadership would be kept in the dark about a technologically adventurous program until a promotional effort for it had achieved considerable organizational momentum. Through their defense supervisors (i.e., Ustinov, Smirnov, Serbin, and their subordinates), the top leadership would probably be apprised early on of technologically promising weapons prospects discovered in the design shops and laboratories.

These considerations suggest that the impact of the peculiar action-reaction phenomenon embodied in the "technological imperative" may be difficult to determine in terms of its probable reflection in a specific decision-making approach. A pluralistic

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[9]See Arthur Alexander, *Weapons Acquisition in the Soviet Union, the United States, and France*, P-4989 (Santa Monica, Calif.: The RAND Corporation, 1973), esp. pp. 8-11. Memoir material has focused attention on the roles played by designers in the defense scientific establishment. However, the attitudes and potential clout of research scientists also should be considered. These scientists may, for example, be less wary than the designers about technological dynamism, given the latter's direct responsibility to turn out practicable weapons systems.

[10]See Karl F. Spielmann, "Defense Industrialists in the USSR," *Problems of Communism*, 25:5 (September-October 1976), esp. pp. 59-61.

approach could well be particularly sensitive to the operation of a technological imperative in Soviet strategic arms decisions. But the Soviet leadership could function as a rational strategic actor and accommodate the notion of a technological imperative as well. Having been apprised of certain promoting weapons prospects by their defense supervisors, the Soviet leadership could decide for the system's development and deployment on the grounds of strict strategic calculation without being pressured in any significant way by interested parties.

3. The National Leadership Approach

The national leadership approach can be expected to further complicate efforts to judge the role of the action-reaction phenomenon in Soviet strategic arms decisions. In the first place, in emphasizing the significance of the personal preferences of the top Soviet leaders, the national leadership approach is also amenable to taking into account the impact of the peculiar action-reaction phenomenon embodied in the notion of a technological imperative. As earlier noted, a designer may on his own make a case to one (or more) of the top leaders on behalf of a new weapons system. It may be that the personal biases of the leader (or leaders) toward the designer himself, toward the kind of system he is advocating or toward the service that would deploy it would be the determining factor in deciding to give the go ahead for the system. But, as also noted, this action-reaction phenomenon may be more in the nature of a self-generating force for weapon efforts than a manifestation of real international interaction.

At the same time, however, a Soviet strategic arms decision that could be convincingly explained on national leadership grounds could reflect a type of reaction to a US action that would tend to be overlooked or downgraded in other approaches. To be sure, a reaction that was largely the product of national leadership decisionmaking could share some characteristics of

rational strategic actor or pluralistic pressure decisions--for example, if the relevant personal preferences of the top leaders were basically military preferences (e.g., for a particular service, or designer, or kind of weapon system).

But the national leadership approach also makes particular allowance for the impact on decisions of other preferences by the top leaders that could lie outside the military domain. Acting as national leaders, the Soviet leadership could respond to a US action by shaping a strategic arms decision to serve broad political values. Considerations such as general prestige or political leverage in the world at large or in a particular region could impinge heavily on a Soviet strategic arms decision.

It is not the place here to try to identify the nonmilitary values of the Soviet leadership that might shape a strategic arms response to a US action. Leaders like Brezhnev, Kosygin, and Podgorny, who can be expected to have a general concern for the Soviet Union's international standing (and who are Supreme Defense Council members) would likely be attentive to the wider foreign policy implications of strategic arms decisions. Foreign Minister Andrei Gromyko is not a Supreme Defense Council member, but his membership in the Politburo since April 1973 would increase the chances that broad foreign policy concerns would affect Soviet strategic arms decisions, at least when those decisions reach the Politburo.[11] (Furthermore, as Garthoff has noted, Gromyko

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[11]Note also, at another level, the growing prominence in recent years of the Institute for US and Canadian Studies (IUSAC). Insofar as the initiation of SALT may have prompted such developments, SALT *per se* should be heavily scrutinized in terms of its potential effects on Soviet decision-making practices--e.g., perhaps in generally "politicizing" strategic arms decisions and in specifically making certain action-reaction "linkages" more manifest to the Soviets than they otherwise would have been. On the SALT experience in general, see: Center for Strategic and International Studies, Georgetown University, *Soviet Decision-Making, Strategic Policy and SALT*, ACDA/PAB-243 (Washington, D.C.: US Arms Control and Disarmament Agency, December 1974); and Thomas W. Wolfe, *The SALT Experience and Its Impact on U.S. and Soviet Strategic Policy and Decision-Making*, R-1686 (Santa Monica, Calif.: The RAND Corp., September 1975).

may be called upon to attend Supreme Defense Council meetings on occasion.[12]) Finally, such individuals as Mikhail Suslov and Boris Ponomarev, who presumably have a particular interest in ideological matters (both domestic and international), could also bring this concern to Politburo deliberations of strategic arms decisions and influence them accordingly. As a consequence of these various leadership concerns, strategic arms decisions could result that, while responsive to certain US actions, would be somewhat different from what the Soviet professional military might seek or US analysts expect.[13]

It may be objected that one does not have to adopt the national leadership decision-making approach to appreciate the importance of these broader political values in shaping Soviet strategic arms decisions. In examining Soviet concerns in SALT (particularly SALT I), for example, Western analysts have noted the apparent premium the Soviets have placed on achieving agreements that make them appear to be as powerful as (or perhaps even more powerful than) the United States in the eyes of the world.[14] Similarly, in examining the limited strike options possibilities of the emerging Soviet strategic offensive weapons, there has been at least implicit concern with the potential political leverage that might accrue

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[12]See Raymond Garthoff, "SALT and the Soviet Military," *Problems of Communism*, 24:1 (January-February 1975), p. 29.

[13]It would be going too far, however, to suggest that strategic arms decisions would be shaped by broader politico-strategic concerns heedless of basic military considerations. And of course, to the extent that such concerns worked to enhance the image of Soviet power in the eyes of potential adversaries, they themselves could well serve a military purpose of first priority--namely, deterrence. A recent article points up a general Soviet attentiveness to such "image" considerations in contrast to a more narrow US focus on combat effectiveness (in designing force structures besides strategic arms), implicitly raising questions about one of the widely-held articles of faith about the US-Soviet strategic arms relationship--i.e., the US stress on "deterrence" vis-à-vis the Soviet stress on "war-fighting." See Edward N. Luttwak, "Perceptions of Military Force and U.S. Defence Policy," *Survival*, January-February 1977, pp. 2-8.

[14]See Colin Gray, "The Arms Race Is About Politics," *Foreign Policy*, no. 9 (Winter 1972-73), pp. 117-29.

to the Soviets, particularly in dealing with Western Europe, by being perceived to have a limited options capability.[15]

The foregoing examples suggest that Western observers have not been insensitive to concerns that go beyond strict military calculation that may shape Soviet strategic arms decisions. Yet it is one thing to take these concerns into account and quite another to explain how those concerns can come to impact on Soviet strategic arms decisions. As presently construed at any rate, the pluralistic approach does not seem capable of indicating how broad political concerns can shape a Soviet defense decision. Even if one concedes that lower level promotion of a particular decision may require more than perfunctory treatment of strategic realities, such treatment would still probably be framed in fairly strict military terms. This is a consequence of the environment in which the promotional effort takes place. A designer or a service partisan for some new system is not likely to try to gain support from Ministry of Defense officials or defense-industrial ministers by stressing, for example, the significance a new system might have in increasing Soviet political leverage in Europe. Rather, the argument is likely to be made on the grounds that the new system would give the Soviet Union some specific military advantage.[16]

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[15] Such concern would seem to underlie, for example, former Secretary of Defense James Schlesinger's testimony on the implications of a Soviet limited nuclear options capability for US relations with its NATO partners. See Secretary of Defense James R. Schlesinger, Testimony before US Congress, Senate Foreign Relations Committee, Subcommittee on Arms Control, International Law and Organization, 93rd Cong., 2d sess., March-April 1974, esp. p. 197.

[16] It might be noted, however, that when the promotional effort reaches the top of the line, broader political-strategic considerations may well be stressed by military spokesmen to ensure better (or wider) receptivity by the top political leaders. Admiral Gorshkov's recent writings on the Soviet Navy are a good example of this attentiveness to "political" or broader foreign policy concerns. See Admiral Gorshkov, *Red Star Rising at Sea*, Theodore A. Neely, Jr., trans. (US Naval Institute, 1974) and *The Sea Power of the State* (Moscow, 1976).

In the case of rational strategic actor interpretations, the impact of broader Soviet political concerns in shaping defense decisions is also not likely to receive appropriate treatment. To be sure, since the calculations of the top leaders are made paramount in this mode of analysis these broader concerns could be conceded some role. But in doing so, it would be very difficult to maintain the primacy that this approach accords strict strategic calculation in shaping Soviet strategic arms decisions and the basic organizational assumptions upon which this primacy depends--namely the essential separation of defense and civilian decisionmaking. Accordingly, it seems that a national leadership decision-making approach, which emphasizes the decision-making power of the top Soviet leaders and their susceptibility to preferences that extend beyond the strictly military, would have the greatest sensitivity to broader political concerns and, what is equally important, the capability to indicate their impact in a logically consistent manner.[17]

4. Responding to the Soviet Threat: A Cautionary Note

In sum, depending on the approach one finds most congenial in explaining a Soviet strategic arms decision, the international action-reaction phenomenon may be given more or less emphasis. But no single approach is likely to have a monopoly on giving proper attention to this phenomenon. In general, rational

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[17] In narrowing the rational actor "model" to focus specifically on strategic calculation in the military sense, the role of broader politico-strategic values is, of course, deliberately circumscribed in the rational strategic actor approach. As has been argued earlier in setting out the rational strategic actor approach, this focus is intended to facilitate efforts to gauge the strategic "weight" of Soviet strategic arms programs. On the basis of the discussion presented above, it should also be apparent that there is another benefit that accrues from a separation of strategic values into military and nonmilitary categories: namely, it avoids the assumption that the same decision-making rationale would necessarily underpin the impact of both.

strategic actor approaches may give more attention to it than the other approaches, but a Soviet strategic arms decision that might plausibly be explained on pluralistic grounds could also register the impact of a discrete US action, as could a decision that was explicable on the basis of a national leadership approach. What this survey indicates above all is that Soviet responses to US actions may be much more difficult to pin down than is commonly assumed and that the best way to gauge the role of the action-reaction phenomenon in a given Soviet strategic arms decision is to try to analyze that decision from more than one decision-making perspective.

For the present, this suggests the need for considerable caution in evaluating the Soviet strategic threat and what the United States should do about it. On the one hand, by indicating that in many ways a Soviet reaction to a US action might be highly complex and not readily discernible even after the fact (much less predictable before hand), the foregoing analysis argues for a wary attitude toward assuming that a US action (e.g., in a strategic arms program) would not ultimately redound to the detriment of US security. On the other hand, the foregoing analysis equally does not support a contrary assumption.

In general, the implications of the study, given its basically preliminary nature, do not fall readily into the categories of "hard-line" or "soft-line" estimates of Soviet strategic intentions. To be sure, stressing the need to pay more analytical attention to the personal concerns or preferences of the Soviet leaders as national leaders, for example, could lead one to emphasize factors, such as Soviet civilian economic programs, that would seem contrary to the notion that Soviet strategic arms priorities would be likely to win through in the years ahead. But by the same token, this same analytical emphasis could wind up encouraging identification of leadership preferences, with respect to particular military services

or the broader international politico-strategic utility of strategic arms programs, for instance, that could make Soviet strategic arms priorities seem particularly strong. In this regard, to the extent that it is possible to identify Soviet "hawks" and "doves" (and the study as a whole implicitly suggests this may be much more difficult to do than we tend to assume) analysis of a particular arms decision might unexpectedly suggest that the "hawkish" concern to push the program would be greater in the top political circles than in the Ministry of Defense. The basic point to be stressed, however, is that while future analyses may improve our understanding of these matters it is decidedly premature at this juncture to expect Soviet defense decision-making analyses to offer any firm conclusions about present or future Soviet strategic intentions.

It is because the Soviets are what they are that it is both important and difficult to comprehend the whys and wherefores of their strategic arms decisions. We cannot live in the hope of a methodological breakthrough in this area no more than we can anticipate a sudden windfall of data. But then again, there is no room in this situation for us to simply rest content with what we know or to despair about what we do not know. Such progress as can be achieved in improving our understanding of Soviet strategic arms decisions, even if it falls far short of what we would like to attain, is hardly to be regarded as not worth the candle. Indeed, this may be one of those instances--and there may not be all that many--in which an intellectual pursuit in the best sense of the word can also be a public pursuit in the best sense of the word. For surely, in struggling to avoid entrapment by the concepts we use in trying to fathom the significance of Soviet strategic arms efforts, we can discharge an important responsibility not only to our intellectual integrity but to the security of the nation as well.

Appendix A

A MULTIPLE-APPROACH ANALYSIS OF THE SS-6 PROGRAM

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The application of multiple-approach analyses to Soviet strategic arms decisions is likely to be a large and difficult task. Nevertheless, it is neither so formidable nor lacking in importance to remain unattempted. What follows is an illustration of how one might at least begin to examine the decisions on the first Soviet ICBM.

A. BACKGROUND

The SS-6 program has been selected for analysis because of its intrinsic significance and its value for illustrative purposes. As the initial Soviet ICBM, the SS-6 was an important step in the evolution of the Soviet-US strategic arms relationship. Moreover, it is still a controversial program from the standpoint of Western analysis.[1]

It was expected by many in the late 1950s, after the SS-6 made its international debut (first in a successful Soviet test in August 1957 and then as the launcher of sputnik in October of that year), that the Soviets would seek to produce and deploy the system in large numbers, which led in turn to fears that the United States might confront a missile gap in the early 1960s. Yet the gap that eventually materialized favored the United States. The Soviets had in fact deployed only a "handful" of their

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[1]For example, how representative is the program of US estimates of the size of the Soviet threat over the years? (Cf. Albert Wohlstetter, "Racing Forward? Or Ambling Back?" *Survey*, 22:34 [Summer-Autumn 1976], pp. 169-70.) It is hardly consistent with the premises of this paper to offer any present judgment on this score.

first-generation ICBMs.[2] And according to many interpretations, they subsequently sought to create proxy ICBMs to close the gap by emplacing MRBMs and IRBMs in Cuba--thus precipitating the Cuban missile crisis in October 1962.

In addition to its intrinsic significance, the SS-6 program is useful as an illustrative multiple-approach case study. The program can by no means be probed in detail here. An appropriate "testing" of approaches would require extensive analysis and the probable use of classified materials. However, a survey of various elements of, and circumstances surrounding, the SS-6 program suggests that it may be particularly amenable to analysis along the lines of the three approaches examined in this study.

In using multiple-approach analysis, as was suggested in the introduction to this study, one approach may be more persuasive than others in explaining particular kinds of Soviet strategic arms decisions. It may well be found, for example, that strategic calculation was the dominant factor in determining some decision. In another, pluralistic pressure may emerge with relatively more weight. In yet another, national leadership preferences may carry the argument. In short, because of data constraints or the particular nature of the strategic arms decision in question, certain approaches are simply likely to be more fruitful and persuasive than others. But we can justifiably arrive at this conclusion only after we have given a number of approaches a fair trial in examining a particular decision-making case.

This treatment of the SS-6 program cannot offer anything approaching a firm conclusion as to whether all or any of the analytic approaches treated are valid in this instance. It is only intended to help make the case for using multiple approaches by indicating the kinds of questions that are likely to be ignored or slighted if one does not do so--questions that may ultimately be important to a satisfactory explanation of the decisions in this controversial program.

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[2]Arnold Horelick and Myron Rush, *Strategic Power and Soviet Foreign Policy* (Illinois: University of Chicago Press, 1965), p. 83.

B. THE CONTRIBUTION OF A RATIONAL STRATEGIC ACTOR PERSPECTIVE

Given its emphasis on the import of strategic calculation in the deliberations of Soviet decisionmakers, a rational strategic actor approach seems particularly appropriate in examining the SS-6 program. Whatever the value of the other approaches in shedding light on the program, it would be a mistake to slight the sorts of considerations to which this approach directs one's attention. As indicated in the discussion in Part One, this approach requires the analyst (a) to emphasize strategic calculation, in the military sense of the word, in order to gauge the strategic "weight" of the decision; (b) to take into account pertinent strategic values that might be peculiarly Soviet; and (c) to indicate how a rational strategic actor decision could plausibly be taken in the Soviet defense decision-making environment.

1. Strategic "Weight" of the SS-6 Decisions

With respect to the first task, it should be noted that the strategic value of the program can be viewed in the broad sense of the term. Indeed, the best extant "rational actor" interpretation of the SS-6 program focuses on the importance to the Soviets of its political utility--particularly in pursuit of Soviet foreign policy objectives in Berlin in the late 1950s and early 1960s.[3] And it is argued in this interpretation that it was this broader foreign policy concern that in fact prompted the Soviets (and particularly Khrushchev) to persist in publicly making claims about the pace and success of the program that later turned out to be gross exaggerations. As earlier suggested, it is possible that this broader "strategic" dimension of the SS-6 program could best be evaluated along national leadership decision-making lines, whereby attention is pointedly drawn to policy inputs by top decisionmakers that would extend beyond

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[3]Cf., ibid., *passim*.

strategic calculation in the strict military sense. But in any event, this political-strategic dimension should not be overlooked in evaluating the SS-6 decisions. The primary question the rational strategic actor approach should pose concerns the military value of the SS-6 effort to the Soviets. In the strategic context of the late 1950s, the development, production, and deployment of the SS-6 would seem a rational course for the Soviets to have taken. As the first Soviet ICBM, the decisions on it would probably have had considerable strategic weight. The program could well have been regarded as something of considerable value from the standpoint of the strategic balance between the United States and the Soviet Union. Presumably, an assumption along these lines underlay the belief in the West at the time that the Soviets were intent on creating a "missile gap" in their advantage; hence, Khrushchev's public claims with regard to the program seemed quite credible.[4]

Ironically, the strategic weight of the SS-6 decisions seems all the greater in view of the failure of the Soviets to create a bomber gap as had been predicted in the West but a few years earlier. It is quite plausible (and probably seemed so to Western analysts in the late 1950s) that a key reason why the Soviets did not push ahead with strategic bombers was that they planned to improve their strategic standing vis-à-vis the United States with ICBMs instead. In short, when the SS-6 program is viewed in rational strategic actor terms, with a focus on the military value of the decisions, a determined Soviet ICBM effort seems eminently reasonable.

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[4] "The possibility that the Soviet Union might be engaged in a crash program to build and deploy a large force of first-generation ICBMs was not rejected by the United States government until early 1960. Intelligence estimates of the Soviet ICBM program were reduced accordingly, but they still projected a far larger Soviet force for 1961 than was actually credited to the USSR in that year." Ibid., p. 36.

2. Soviet Military Values

As noted, inherent in the rational strategic actor approach is a focus on peculiar Soviet military values. In other words, while it would seem to have made good sense on the basis of US strategic rationality for the Soviets to have pushed ahead quickly with their first ICBM program, did it make equally good sense from a *Soviet* point of view? For the present, the general question can only be posed here; an assessment of Soviet strategic values with regard to the significance and utility of ICBMs would have to be made on the basis of an extensive evaluation of doctrine and practices, a sorting out of particular service biases, and the like. It would seem, for example, on the face of it, that the Soviet "artillery" emphasis over the years would have been congenial to a subsequent "rocket" stress when the SS-6 was in the offing. Yet, in his memoirs, Khrushchev makes a point of singling out Soviet artillerymen as opponents of missiles.[5]

Peculiar Soviet military values that should not be overlooked are those that pertain to command and control considerations in particular. It is tempting to view technical shortcomings in the SS-6 as the key obstacle impeding the Soviets from taking the apparent rational strategic course of pushing ahead with their first ICBM program. Indeed, in that event the rational course would have been to wait on, and then push ahead with, a presumably "better" second-generation ICBM.[6] Khrushchev, for

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[5]*Khrushchev Remembers: The Last Testament* (Boston: Little, Brown, 1974), p. 52.

[6]Horelick and Rush put this consideration into the broader context of Soviet estimates regarding US intentions at the time. Drawing attention to other weapon systems the Soviets pushed ahead with, notwithstanding technical problems, they argue that the Soviets might well have gone forward with the SS-6 if the risks of war with the United States had been appreciable in the late 1950s-early 1960s. They argue that the Soviets believed that risk to be very low; hence they were (continued)

example, notes in his memoirs that the SS-6, designed by Korolyov, could not "be fired at a moment's notice" and that another designer, Yangel, "tackled the problem of perfecting a rocket that could be launched on short notice."[7] According to a Western analysis, the SS-6's deficiency in this regard was due to "its reliance on nonstorable cryogenic fuels ... [which] makes launching [it] a long and awkward process during which it is especially vulnerable in conditions of war."[8]

It is not to deny the essential accuracy of these evaluations, however, to suggest that the significance of the

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prepared to wait for a "better" system. (*Strategic Power and Soviet Foreign Policy*, pp. 106-8.) This line of reasoning would have required the Soviets to display admirable *sang-froid* for a country having to live with a large intercontinental bomber gap at the time in the US favor. (By 1960, for example, the United States had roughly a 3:1 advantage in intercontinental bombers.) This would, however, not have been the first time that the Soviets had to live with a US edge in strategic arms (the US postwar nuclear advantage being a case in point). But it may well be asked, did the international climate change so drastically in the early 1960s to warrant a precipitate abandonment of this Soviet patience. Emplacing missiles in Cuba displayed a much greater degree of Soviet impatience than seems explicable in terms consistent with the Horelick and Rush line of reasoning. For a country that had been "conditioned" to live with a US strategic edge from time to time, surely an increase in international tensions in the early sixties (which the Soviets precipitated to a considerable degree, e.g., Berlin in August 1961) and an awareness of the growing missile gap in favor of the United States should have led to no more than a big push in the Soviet ICBM effort at that time. If one counters by arguing that Khrushchev wanted to catch up with the US "on the cheap" by the Cuban ploy, then attention is drawn to the salience of Soviet non-strategic priorities in the early 1960s. But surely these priorities were not all that less salient in the late 1950s, when a determined push in the SS-6 program was foregone. In short, Soviet "patience" in the late 1950s may have been one factor--and indeed an important factor--in inducing the Soviets to wait on a "better" missile system, but its significance should not be overstated.

[7] *Khrushchev Remembers*, p. 50.

[8] William H. Schauer, *The Politics of Space* (New York: Holmes and Meier, 1976), p. 13.

shortcomings of the SS-6 would have depended in part on Soviet command and control perspectives with respect to ICBMs.[9] As implied by Khrushchev, the Soviets were eager for a quick-reaction capability, which in turn implies a certain willingness to live with the risks (e.g., of accidental war if control should fail) of maintaining ICBMs in a high-readiness posture. Yet, as one Western analyst has noted, "Soviet strategic forces never went on alert, even during the Cuban missile crisis, until the mid-to-late sixties."[10] If this statement is correct, the Soviets evidenced a command and control conservatism that was not readily consistent with placing a premium on being able to launch "on short notice," even after they presumably acquired ICBMs in the 1960s that remedied the deficiencies of the SS-6. None of this means, of course, that the Soviets regarded the technical shortcomings of the SS-6 lightly. It only means that from the Soviet perspective those shortcomings on their own may not have been a compelling reason for deciding to deploy only a small number of

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[9]Other shortcomings as well were pointed out by Khrushchev in his memoirs, such as that the system had guidance problems and was "vulnerable" because it was soft-launched (*Khrushchev Remembers*, p. 48). In order to evaluate how formidable the Soviets actually regarded these shortcomings in the late 1950s, one would have to ask such questions as the following. Did the Soviets avoid those shortcomings in the "successor" system(s) to the SS-6? And if so, how quickly? In other words, was the successor system that much better than the SS-6 in respect to both accuracy and hard-launch capability that it made sense to avoid a sizable deployment of the SS-6 as even a stop-gap? Accuracy problems would presumably have detracted considerably from the use of the SS-6 as a counterforce weapon, but in the Soviet perspective, would they seriously have undermined the countervalue role of the SS-6--e.g., as a deterrent. Finally, could Khrushchev's emphasis on the shortcomings of the SS-6 in his memoirs be attributed to a need on his part to come up with a post-hoc rationalization for the failure to deploy the SS-6 in large numbers--a decision that he (and other Soviet leaders) took on quite other grounds at the time and for which he was subsequently criticized?

[10]Johan J. Holst, *Comparative U.S. and Soviet Deployments, Doctrines and Arms Limitation*, Occasional Paper, Center of Policy Study (Illinois: University of Chicago, 1971), p. 24.

first-generation ICBMs. Thus, while it is important to take the technical shortcomings of the SS-6 into account, it is also necessary to look at other factors that may have influenced the decisions on the program.[11]

3. Decision-making Practices

As earlier suggested, by and large, interpretations that have been more or less based on rational actor assumptions have not devoted explicit attention to decisionmaking. That focus has been adopted by interpretations challenging the rational actor view. It is important, however, to meet those challenges on their own ground, particularly so in analyzing Soviet strategic arms decisions. There are, as we have noted, particular arrangements and practices in the Soviet defense decision-making setting that would seem to make rational strategic actor behavior possible and also shape that behavior in significant ways. It is only possible here, however, to note the salience of one of the key features of this environment--mid-term defense planning.

It is notable that in August 1957 the SS-6 was first successfully tested[12] and that in September the sixth five-year economic plan was cut short and preparation was begun for launching a new seven-year plan, which was formally adopted

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[11]The apparent technical shortcomings in the SS-6 program are useful in pointing up the relationship between physical scientists and social scientists in evaluating Soviet strategic arms decisions. Clearly, physical scientists are needed to evaluate available data on technical characteristics. As suggested with regard to Soviet command and control perspectives, however, what the technical characteristics might mean to the Soviets may be quite different from what they might mean in the United States. That evaluation would seem to call for a social science contribution.

[12]Horelick and Rush, *Strategic Power and Soviet Foreign Policy*, p. 31.

at the Twenty-first Party Congress in February 1959.[13] Whether the broader economic implications of decisions on the SS-6 program prompted the leadership's moves with respect to overall economic planning scarcely a month after the August test is difficult to say. However, it seems reasonably likely in any event that, except for earlier development decisions, there would have been significant consideration of the production and eventual deployment of the first-generation ICBM in the period when the new seven-year plan was being debated.[14]

As has been suggested, decisions that occur in the period of defense plan preparation, which presumably coincides with overall economic plan preparation, would seem to be the likeliest to reflect the impact of the international action-reaction phenomenon. And the rational strategic actor approach would appear most sensitive to the operation of that phenomenon. Whether the SS-6 program in fact registered this impact cannot be ventured here. The point, however, is to emphasize that the rational strategic actor approach would clearly seem to have some value in calling attention to that possibility--not only by calling attention to the strategic "weight" of the SS-6 program (and the likelihood that the program, unlike some others, would have mandated extensive top-level scrutiny) but also in pointing up the relevance of mid-term defense planning.[15]

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[13] See Leon M. Herman, "The Seven-Year Haul," *Problems of Communism*, v. 8 (1959), p. 9.

[14] It cannot be ruled out that production and deployment decisions were in fact taken earlier and were stuck to subsequently. But the nature of the program and the setting in which it came to fruition strongly suggest that these decisions were either postponed as long as possible or that changes were made in the original decisions, or both.

[15] The Soviet "reaction" would not necessarily have been to US missile efforts. The "reaction" element in the SS-6 program might more plausibly have been to the growing bomber gap in the US favor.

If, indeed, certain key decisions on the SS-6 were taken at the time that priorities were being debated for the next overall mid-term economic plan, nonmilitary considerations may also have come into play. Since the Soviets did not adopt what would seem (at least at the time) to have been the rational strategic course by pushing the SS-6 program vigorously, and since from a Soviet command and control perspective, at least, the technical deficiencies may not have been regarded as a sufficient reason not to do so, nonmilitary considerations seem quite important. But first, other "military" considerations should be taken into account.

C. THE CONTRIBUTION OF A PLURALISTIC PERSPECTIVE

As noted in the discussion of the pluralistic decision-making approach in Part One, there is a temptation to turn to this approach to explain Soviet decisions that appear aberrant or "irrational" from a US strategic perspective. The possibility should not be ruled out, however, that pluralistic pressures can also eventuate in a "rational" decision (according to US or Soviet strategic values), for example, as a consequence of some sort of equilibrium being established among competing "selfish" interests in a particular weapons program.[16]

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[16] How the activities of groups pushing parochial interests may contribute to decisions that seem eminently "rational" is a complex topic that has only been touched upon in this paper. The topic ultimately merits the detailed attention that such theorists as Robert Dahl and Charles Lindblom have paid to the positive role of multiple "interest" inputs into US domestic decisions. For the present, it is sufficient to emphasize that a decision on, say, the production and deployment of a particular weapon system may turn out to make good sense (in rational strategic actor terms) as a consequence of competing pressures that, for example, compel the advocate of the system to curb his aspirations. Parochial interests could also make a contribution to a decision by alerting top decisionmakers to ramifications of a weapon system that might otherwise not have occurred to them. The decision that results may therefore be a rational strategic actor decision, (continued)

Nevertheless, in the SS-6 case, the temptation to rely on the pluralistic approach is strong, precisely because the Soviets avoided what appears to have been the rational strategic course of action by eventually deploying the system only in minuscule numbers. On the other hand, one might well argue that as a system with considerable potential strategic weight, extensive top-level scrutiny of the SS-6 program would have occurred and would have acted to override or forestall the impact of pluralistic pressures. A decision (or set of decisions) on a program with only marginal strategic weight might more likely reflect the shaping influence of parochial pressures. Unless extensive top-level deliberation of all weapon systems is possible, the scrutiny may be only perfunctory for some weapon programs, thus permitting pluralistically shaped programs to "slip through" as line-item entries.

These considerations notwithstanding, the apparent failure of the rational strategic actor approach to "explain" the decision(s) taken suggests that the SS-6 program should be examined along pluralistic decision-making lines also. More particularly, the very nature of the weapon system in question suggests the applicability of a pluralistic decision-making analysis. The SS-6 program is representative of those defense decisions that are likely to have a substantial unsettling effect on various organizational and personal relationships within the defense establishment. Anticipation of considerable gains or fear of considerable loss of resources, prestige, and

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in the sense of being determined basically by the strategic calculation of the top decisionmakers, but it would be a product of parochial interests as well. The effect of the latter would be in the nature of advice (or, if you will, influence) but not, strictly speaking, pressure. It would not be surprising if many Soviet strategic arms decisions were of this sort, since at bottom they would seem to reflect a decision-making context in which the top leaders have considerable power but lack omniscience.

the like would probably stimulate interest-group activity. As the first Soviet ICBM, the SS-6 weapon system called into question established service roles and missions. It seems reasonable to expect therefore that certain decisions (affecting at least its production and deployment) were not removed from the pulling and hauling that presumably took place over the establishment of a new service arm--the Strategic Rocket Forces--by late 1959.[17]

1. Service Interests

Graham Allison has offered a pluralistic explanation of the limited SS-6 deployment by focusing on the service interests connected with the Soviet MRBM effort. His basic case rests on two points. First, since the SRF had not yet been set up, there was no strong organizational proponent for the new ICBM. Second, since Soviet MRBMs were under the jurisdiction of an existing service arm, MRBMs (and incipient IRBMs) were pushed to the detriment of the ICBM effort.[18] The result was the

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[17]The pulling and hauling is basically suggested by two considerations. First, even if one picks August 1957 (when the successful SS-6 test was held) as the earliest date that the Soviets became aware that they had to think seriously about the service jurisdiction of ICBMs, it still took a long time to sort out the question. Since it took more than two years (from this point) to establish a new service arm to accommodate the ICBM, service resistance to such a course of action seems likely. Second, after the SRF was set up, the Soviets (and, apparently, particularly Khrushchev) accorded it a primacy that was bound to disgruntle the traditional services. By the latter's reckoning, the emphasis given the SRF not only violated the "sacred" combined arms tradition of the Soviet military establishment, in principle, but also apparently led to some shifting of resources to their detriment--for example, the manpower cuts that ensued in 1960, following Khrushchev's "New Look" speech to the Supreme Soviet in January of that year. If the established services had any inkling in the late 1950s that the establishment of an SRF would have such implications, their resistance to it could hardly have been surprising.

[18]Graham T. Allison, *Essence of Decision: Explaining the Cuban Missile Crisis* (Boston: Little, Brown, 1971), pp. 114-15.

extensive deployment of M/IRBMs by the early 1960s, "three times European overkill," and the deployment of only a "handful" of SS-6s.

On its face, Allison's argument seems quite plausible. By itself, however, it neither tells the whole story, in terms of the kinds of considerations to which the other approaches might draw our attention, nor takes into account other pluralistic interests that would appear to be pertinent. As to the first, the strength of the arguments by M/IRBM proponents would seem to have depended heavily on the Soviets' evaluation of the strategic "weight" of the SS-6 program and their estimate of the significance of its technical problems--considerations that a rational strategic actor perspective helps to highlight. Moreover, an estimate of the role of the service pressures involved should also take into account designer interests and defense-industrial interests.[19] These other "interests" would seem quite relevant to an examination of the SS-6 program, and when they are entered into the pluralistic equation, a sturdy alliance on behalf of the M/IRBM effort (to the detriment of the SS-6) may not automatically be supported.

2. Designer Interests

As mentioned above, Khrushchev identified Korolyov as the designer of the SS-6, and Yangel as the designer of the successor ICBM which, in Khrushchev's view, overcame the deficiencies

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[19] An analysis of even the service interest in MRBMs should address the question of whether the overall service interest would have been strong, or whether only the branch within the service specifically charged with MRBM responsibility would have had a strong interest. As earlier pointed out, one should not automatically assume an intensity of interest in a weapon system at the service level that might only accurately reflect the point of view of part of that service. It is well to remember that MRBMs were also relatively new weapons, and they might not have been all that attractive to more traditional military types, even within the particular service that had formal jurisdiction over them.

of the SS-6.[20] Khrushchev further noted that: "Yangel also worked on medium-range ballistic missiles that could travel 2,000 to 4,000 kilometers."[21] Western analysts have called attention to the competition between designers in the Soviet defense establishment in general,[22] and, given the aforementioned missile responsibilities, such competition between Yangel and Korolyov would seem to have been quite natural. However, in a study of Korolyov's role in the Soviet space program, a somewhat different view is given of their relationship, at least in the early 1950s: "Yangel ... made every effort to work along with Korolyov. But Chalomei put up a determined opposition to their collaboration, with the result that the two men never worked together in the full sense."[23]

The accuracy of this description of the relationship between Korolyov and Yangel either in the early 1950s or later on when the designers were thrust into apparent competitive roles cannot be evaluated here. However, it would seem prudent to take this description into account in examining their respective incentives to push particular missile efforts. Moreover, while it would seem reasonable to equate Yangel's MRBM interest with that of the service branch pushing MRBMs, caution should be exercised. Although Yangel (as the designer of both MRBMs and ICBMs) would have presumably been some sort of competitor of Korolyov, where did his priorities lie.

If Yangel's major concern was with MRBMs, he would appear a natural ally of the "traditional" service arm with MRBM jurisdiction. However, if his major concern was with promoting

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[20] *Khrushchev Remembers*, p. 50.

[21] Ibid., p. 51.

[22] See, for example, Arthur Alexander, *Weapons Acquisition in the Soviet Union, the United States, and France*, P-4989 (Santa Monica, Calif.: The RAND Corporation, 1974), p. 10.

[23] Leonid Vladimirov, *The Russian Space Bluff* (New York: Dial Press, 1971), p. 47.

an improved ICBM to supersede Korolyov's SS-6, his interests may well have diverged from those of that service, which presumably viewed ICBMs in general as a challenge to its established roles and missions. On the other side of the coin, Korolyov's incentive to push the SS-6 as an ICBM may not have been as strong as one would at first tend to assume. Despite the fact that the SS-6 was eventually deployed only in minuscule numbers as the first Soviet ICBM, it was used extensively in the late 1950s and in the 1960s as the workhorse of the Soviet space program.[24] Korolyov's concern to promote the SS-6 as an ICBM may thus have been considerably attenuated by its bright prospects in the space program.

3. Defense-Industrial Interests

In addition to the interests of key Soviet weapon designers, the interests of other important members of the defense-industrial establishment must be taken into account.[25] It is not clear on the basis of available materials just what the ministerial jurisdiction of Soviet missile efforts in the late 1950s might have been. But it is known, for example, that ballistic missile programs have been basically the responsibility of the Ministry of General Machinebuilding since its establishment in 1965.[26] The missile efforts of the late 1950s and early 1960s, therefore, must have been conducted under the aegis of one or more of the existing defense-industrial ministries. Khrushchev notes that, with respect to missiles, "we started turning them out like sausages at our aircraft

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[24] Schauer, *The Politics of Space*.

[25] Alexander, for example, notes that the bulk of weapon design resources in the Soviet Union are held by the defense-industrial ministries. See *Weapons Acquisition*.

[26] See, for example, Andrew Sheren, "Structure and Organization of Defense-Related Industries," in US Congress, Joint Economic Committee, *Economic Performance and the Military Burden in the Soviet Union* (Washington, D.C.: Government Printing Office, 1970).

plants."[27] This suggests that at least some missile efforts at the time may have been under the authority of the Ministry of the Aviation Industry.[28]

Although there are few details to go on, various organizational considerations could hold important implications for an assessment of defense-industrial interests in the SS-6 program. First of all, it is curious, to say the least, that the Soviets established a service arm in late 1959 to accommodate the ICBM (the SRF) yet waited almost six years to reflect the advent of this new weapon system in the organizational arrangements in the defense-industrial sector. Surely there was some justification for a new ministry devoted primarily to ballistic missiles by the early 1960s at least, when Khrushchev was making the SRF the premier service and when, especially after the Cuban missile crisis, a Soviet missile buildup seemed in order.

Against this backdrop, the tardiness in establishing the Ministry of General Machinebuilding suggests that resistance on the part of existing defense-industrial ministries may have been encountered. The new ministry undoubtedly was not created out of whole cloth. For example, it must have taken missile resources away from the ministry (or ministries) originally charged with that production responsibility. Moreover, if as suggested above the establishment of the SRF, and the subsequent primacy accorded it by Khrushchev, ruffled the feathers of the other services, that too may have had an impact. Would it have made sense for Khrushchev to have antagonized both the services and the defense-industrial ministries at the same time? What these considerations might mean for an assessment of the SS-6 program is by no means

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[27] *Khrushchev Remembers*, p. 51.

[28] For a rundown of this ministry's responsibilities, see Sheren, "Structure and Organization."

clear. But that a pluralistic assessment of the program that excludes these considerations is deficient seems evident enough.

To speculate briefly in this regard, the SS-6 program may have stimulated a number of contrary concerns. For example, assuming an interest on the part of the existing defense-industrial ministry (or ministries) in retaining missile production responsibility, once it was secured, one could argue that the ministry with jurisdiction over the SS-6 would have been likely to push the SS-6 program. If, as Khrushchev hints, the Ministry of the Aviation Industry held this jurisdiction, a sizable SS-6 production effort could have been an attractive means of compensating for the failure of a large intercontinental bomber program to materialize (which belied the earlier Western bomber gap estimates). On the other side of the coin, the ministry presumably had already been compensated for this failure to some considerable extent by the authorization of a large medium-range bomber program. Roughly 1,100 of those bombers (the Badger) had been produced and gone into operation by mid-1959.[29] (And a follow-on medium bomber, the Blinder, was under development.[30]) The ministry's enthusiasm for pushing the SS-6 program may also have been tempered by the consideration that a large ICBM effort might call more quickly to the Soviet political leadership's attention the need for a separate ministry to conduct the Soviet ballistic missile effort.

There are additional complicating considerations that might be taken into account. Since Khrushchev's remark on the production of missiles in aircraft plants is the only substantial hint of the Ministry of the Aviation Industry's jurisdiction in the Soviet missile effort in the late 1950s, it is not clear

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[29]Robert A. Kilmarx, *A History of Soviet Air Power* (New York: Praeger Publishers, 1962), p. 253.

[30]Thomas W. Wolfe, *Soviet Power and Europe, 1945-1970* (Baltimore: Johns Hopkins Press, 1970), pp. 179-80ff.

whether the SS-6 program was in fact under that ministry, nor whether the MRBM effort and Yangel's successor ICBM program were also under it. But an assessment of defense-industrial interests requires consideration of jurisdictional relationships nonetheless.

If, for example, Yangel's MRBM program was under one ministry and Korolyov's ICBM program under another, one could argue that the respective ministries might have backed their resident missile designers. But even here, in light of the various distinctions noted earlier, a tidy congruence of designer and ministry "interests" cannot be merely assumed--much less an entente involving service elements as well. The picture could also change if the MRBM effort and Korolyov's SS-6 program were under the same ministry. Presumably the interests of the ministry and its top officials would have been best served if both MRBMs and ICBMs were vigorously pushed. But if a choice had to be made (as seems to have been the case), it is difficult to say which of the missile efforts the ministry might have decided to back. At the very least, on these grounds alone, the ministry's "interest" in either would seem less than that of the designers involved.

It also should be noted that the defense-industrial ministries were not really ministries for most of this time. They were affected by the extensive economic reorganization that was instituted in the spring of 1957, which created regional economic councils (*sovnarkhozy*) and eliminated or weakened the central economic ministries. Originally, perhaps, as the need for this reform was being debated, there may have been some thought of doing away with the defense-industrial ministries and transferring their responsibilities to the regional economic councils.[31] But when the reform went into effect, the defense-industrial ministries seemed to be excepted.

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[31] Cf. the speech by A. F. Zasyadko reprinted in *Izvestiya*, May 10, 1957, p. 4.

In December 1957, however, the defense-industrial ministries (with one exception) were "transformed" into state committees.[32] It is easy to overstate the significance of name changes in analyzing the Soviet bureaucracy, but in this instance the name change may well have signified real organizational rearrangements. Two of the state committees had the term "technology" added to their title--the State Committee for Aviation Technology and the State Committee for Defense Technology. This suggests that the defense-industrial ministries, or at least those two ministries, may have been given a mandate to focus on R&D and that some (or all) of their production responsibilities went to regional economic councils.[33]

With respect to the SS-6 program, the effects of the economic reorganization may have been significant. The Soviet missile effort as a whole may have been regarded as too important (and already burdened with enough other uncertainties, technical and otherwise) to be impinged upon directly by these broader organizational considerations. Yet it cannot be ruled out that

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[32]The exception was the Ministry of Medium Machinebuilding, the custodian of Soviet nuclear production efforts for the military.

[33]For a discussion of the jurisdictional question with regard to R&D and production as it pertained to the economic reorganization as a whole, see Alexander G. Korol, *Soviet Research and Development* (Cambridge, Mass.: The MIT Press, 1965), pp. 16-18.

That the ministries lost some responsibilities is also suggested by the transfer of certain key defense-industrial administrators to central administrative posts (most notably, D. F. Ustinov, current Defense minister, long-time defense sector overseer and, prior to December 1957, minister of the Defense Industry Ministry). The need for beefing up central direction of the defense effort at the time would have been strong, if it became necessary to coordinate the defense production effort carried out under the regional economic councils and smooth the basic R&D and production relationship between the state committees and these councils. For an excellent discussion of the job transfers of key officials and their implications, see John McDonnell, "The Soviet Defense Industry as a Pressure Group," in M. MccGwire, K. Booth, and J. McDonnell, eds., *Soviet Naval Policy: Objectives and Constraints* (New York: Praeger Publishers, 1975), pp. 98-101.

the perspectives of the relevant defense-industrial ministries (or, strictly speaking, after December 1957, state committees) on the program were affected nonetheless. If, for example, these "ministries" came to see their primary concern as defense technology, then the question of perfecting Yangel's "successor" system to the SS-6, rather than pushing ahead with SS-6 production, takes on a new dimension. In short, there may have been stronger interest from "ministry" types in the successor system because it was in the R&D stage and relatively weaker interest in the production fate of the SS-6.

4. Basic Significance of Pluralistic Decisionmaking

None of the considerations as presented here on service, designer, and defense-industrial "interests" should be regarded as more than that--considerations. After extensive examination, it may be found that very few of these considerations really mattered in shaping the SS-6 program. But a pluralistic approach to the SS-6 decisions requires that these (and likely other) considerations be taken into account.

One cannot focus on service or designer or defense-industrial interests alone to make a satisfactory pluralistic examination of the SS-6 case. The strength of the interests that were brought to bear (if they were) and the chance that those interests really mattered would seem to depend critically on the interrelationships of all the pertinent "interested" parties. Service, designer, and defense-industrial "pressures" could have coalesced to make a powerful case--for example, against heavy SS-6 production and deployment. But, on the other hand, they could have cancelled each other out. We have no way of making a reasonable estimate on this score, however, if we do not take all of the "interests" into account and subject them to extensive analysis.

Just as the pluralistic approach cannot yield fruitful answers if one's focus is narrow within the confines of this approach, so too what the approach can tell us depends on

considerations that it does not readily call attention to. As noted above, the strength of pluralistic pressures in the SS-6 case would seem to depend in the first instance on the strategic "weight" of the SS-6 system in the estimate of the top Soviet decisionmakers and their appreciation of the ramifications of the system's technical shortcomings. (Alternatively, the explanatory utility of these rational strategic actor considerations cannot really be gauged without taking pluralistic factors into account.) Similarly, the significance of pluralistic pressures would also seem to depend on considerations that the national leadership approach highlights. Did the Soviet leaders have personal preferences in defense or civilian matters in the late 1950s, when the SS-6 decisions were taken, that would have conflicted with or supported the various "interests" at work in the Soviet defense establishment? Did Khrushchev in particular have personal concerns that would have shaped the SS-6 decisions in a way that neither strategic calculation nor pluralistic pressures would explain?

D. THE CONTRIBUTION OF A NATIONAL LEADERSHIP PERSPECTIVE

Placing rational strategic actor and pluralistic decision-making assumptions in realistic perspective in the Soviet environment requires paying heed to a middle ground those approaches tend to slight. This means focusing on the Soviet leaders, not just as strategic calculators, not just as individuals who might succumb to constituent pressures, but as leaders who have a country to run, as well as defense policies to pursue, and who therefore may have particular preferences with regard to economic, political, and other concerns that could impact on their judgments on defense decisions. The use of the national leadership perspective is especially commended to help explain the SS-6 decisions on the grounds that the personal concerns of the principal Soviet leader, Khrushchev, seem to be quite visible in this period--concerns that could have affected his judgment on the SS-6.

1. Khrushchev's Standing in the Late 1950s

By way of offering a very rough balance sheet on the Soviet leadership situation in the period under consideration, it might be ventured that Khrushchev had probably pretty much passed through the period of maximum political jockeying in his political career, when he would seem to have been most susceptible to pressures from below. And this, it should be stressed, is important to take into account in assessing whether pluralistic pressures or leadership preferences may have had more weight in shaping the SS-6 program. Khrushchev had basically subdued his principal political rivals by this time (late 1957) by frustrating the efforts of the "anti-party group" to unseat him in June 1957. And by October 1957--one month into the preparations for the seven-year plan--he had presumably tightened his hold over the military establishment by ousting Marshal Zhukov as Minister of Defense.

Before examining Khrushchev's "personal" concerns, it is useful to underscore the point that the preferences of other Soviet leaders should not be ignored, and indeed Khrushchev himself may not have done so. Michel Tatu offers the following cautionary perspective on Khrushchev's standing:

> Khrushchev had indeed won a brilliant victory in June 1957 over a coalition of his main political adversaries, but the abcess was very slow in draining. It took the whole of 1958 to eliminate Bulganin, who lost the chairmanship of the Council of Ministers in March, his membership in the Party Presidium in September, and was officially implicated in the "anti-party group" only in November. Two other members of the "group," Pervukhin and Saburov, were implicated only at the Twenty-first Congress in January, 1959, and even then, as in June, 1957, Pervukhin kept his seat as alternate member of the Presidium and Saburov kept his Central Committee membership. The last of the "anti-party" men, Marshal Voroshilov, was still chief of state and member of the Presidium. Not until the

Twenty-second Congress in October, 1961 was he accused and forced to confess.[34]

Pervukhin and Saburov presumably had some personal preferences, at least with respect to defense matters, since they had both been defense-industrial ministers in the early 1950s.[35] Similarly, to name another "leader," Frol Kozlov (who was not implicated in the anti-party group maneuver), whose star was on the rise in the late 1950s and who emerged as Khrushchev's heir apparent in the early 1960s, also can be presumed to have had particular defense concerns. D. F. Ustinov, the principal defense sector overseer was affiliated with him.[36] And it is especially noteworthy that S. A. Afanasyev, who became minister of the ballistic missile Ministry of General Machinebuilding in 1965, had career connections to Kozlov. Kozlov's political power base was in the Leningrad party organization, and from 1958 to 1961, Afanasyev was chairman of the Leningrad Regional Economic Council.[37]

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[34]Michel Tatu, *Power in the Kremlin* (New York: Viking Press, 1969).

[35]The word "presumably" should be stressed. We cannot automatically assume that earlier career affiliations continued to shape their views. This speaks to a general problem one confronts in trying to identify the likely policy preferences of Soviet leaders. Do earlier career ties to particular individuals or organizations really matter? Do current job slots really permit firm identification of policy preferences? William Odom has argued that even the latter question cannot be answered with certainty--and that it may be useful to consider the possibility that, as party members, Soviet personalities may act contrary to what their particular organizational affiliation might indicate. Until such possibilities have been investigated in depth, however, it seems more reasonable to assume that, say, a minister of agriculture would be "'interested' in getting more machinery for agriculture" than that he would not. See William E. Odom, "A Dissenting View on the Group Approach to Soviet Politics," *World Politics*, 28:4 (July 1976), p. 554.

[36]Tatu, *Power in the Kremlin*, p. 137.

[37]*Prominent Personalities in the USSR* (Metuchen, N.J.: Scarecrow Press, 1968), p. 7.

This latter connection suggests an intriguing line of inquiry. It is prudent to avoid assuming that the "pork barrel phenomenon," which might shape defense programs to some degree in the United States (e.g., with respect to bases, installations, and the like being established in certain congressional districts), would similarly obtain in the Soviet Union. Soviet leaders, after all, are not known for their responsiveness to the electorate at large. Nevertheless, if there was ever a time in the postwar era when the phenomenon might have operated it was in the late 1950s--when the regional party secretaries had particular political clout and when they were, in effect, in charge of the regional economic councils in their respective areas of jurisdiction. One can only speculate at this point that, given the defense production responsibilities that certain of these economic councils might have had, regional economic concerns expressed by local party leaders (and certain top leaders as well) may have impinged on Soviet defense decisions--including those related to the SS-6.

In any event, what should be stressed at present is simply that Khrushchev's personal preferences probably mattered most in shaping the SS-6 decisions but that the preferences of other Soviet leaders may have mattered to some degree as well. Without extensive investigation, however, it is impossible to know whether they did, whether constituent pressure rather than personal preference affected the views of individual leaders, and whether, by dint of pressure or preference, those individuals would have pushed the SS-6 program or opposed it on behalf of other military or civilian concerns.[38]

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[38]Although we have confined the possible role of interest-group pressures in the SS-6 decision to the defense bailiwick, a pluralistic approach could logically extend to a consideration of civilian interest groups as well. And strictly speaking, such an analysis should be done to determine where pluralistic pressure might have begun and personal leadership preference left off in shaping possible impingements on the SS-6 program.

2. Khrushchev's "Space Program" Concerns

As noted in our discussion of Korolyov's incentives to lobby for the SS-6 in the late 1950s, the SS-6 became the workhorse of the Soviet space program. In light of the intensity of the Soviet space effort in the late 1950s and early 1960s, the "handful" of SS-6s eventually deployed as ICBMs is by no means an accurate reflection of the overall production program for the SS-6. Some 16 successful Soviet space shots took place by 1962, according to one reckoning.[39] Failures also must be taken into account, as well as production for test purposes. If therefore the Soviets had elected to forego or mount only a modest space effort, more than a "handful" of SS-6s could have been deployed as ICBMs--assuming of course that in the absence of the space effort the Soviets would have been so inclined.

Even a cursory look at the situation suggests that the Soviets (and particularly Khrushchev) regarded a vigorous space effort as important. Leonid Vladimirov's account of the Soviet space effort suggests, for example, that Korolyov informed the political leaders that the Soviet Union would have the capability, in the form of his SS-6, to launch the first earth satellite in the International Geophysical Year (mid-1957 to mid-1958). According to Vladimirov, Korolyov was stimulated to make this claim by articles in the American scientific press advocating a similar course of action for the United States. The go-ahead was given in the summer of 1957 and a "crash effort" resulted in the sputnik launching in October.

Vladimirov maintains that Khrushchev's interest was particularly sparked by the chance to "overtake America" in at least this field.[40] Subsequently, the competitive urge

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[39]William Shelton, *Soviet Space Exploration: The First Decade* (N.Y.: Washington Square Press, 1968), pp. 280-83.

[40]Vladimirov, *The Russian Space Bluff*, p. 57.

shifted to putting the first man into space. In this respect, Korolyov "kept on persuading the Party leaders--in effect, Khrushchev--to put more and more factories, design offices and research laboratories at his disposal.... by skillfully exploiting his first successes he succeeded in obtaining a great deal."[41]

Although the accuracy of his account cannot be properly gauged here, Vladimirov would seem to offer reasonable evidence of Khrushchev's personal concern with the Soviet space program, especially when considered against the backdrop of two fairly firm facts: (a) whatever he was at the time, i.e., from the summer of 1957 on, Khrushchev was at least first among equals in the political leadership; and (b) the Soviets did mount a vigorous space effort at the time. In this context, there are certain considerations that should be probed in some detail. To what extent, for example, was Khrushchev pressured by Korolyov to support a large space effort? While it is impossible to assess the significance of Korolyov's lobbying, it would seem likely that much would have depended on Khrushchev's personal preferences. For one thing, the attribution of considerable clout to Korolyov in this case is not readily consistent with his apparent lack of clout in pushing the SS-6 as an ICBM. (Although, as noted, the space program option may have weakened his incentive to push the SS-6 as an ICBM.) Moreover, the urge to beat the United States in space was quite consistent with Khrushchev's oft-touted remarks about overtaking the United States in a broad variety of fields.[42]

Indeed, Khrushchev did not seem unaware of the implications of Soviet space triumphs in at least the broader strategic sense.

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[41]Ibid., p. 75.

[42]And this suggests the operation of an action-reaction phenomenon affecting the SS-6 program that one might easily overlook.

As he put it, in his memoirs, "Eventually, we began to launch our Sputniks, which made our potential enemies cringe in fright but made many other people glow with joy."[43] And this was a period, it might also be recalled, when the Soviets (and particularly Khrushchev) were busy courting the "third world," trying to sell the Soviet "model" of development as a better model than the Western one--hence making Soviet space successes a particularly valuable symbol of the Soviet system as the "wave of the future."

In short, for the Soviets and Khrushchev personally, the space effort was a serious business deserving of priority treatment. Obviously, the strategic relationship with the United States in the strict military sense was hardly a trivial concern. But it seems impossible to rule out the impingement of Khrushchev's space program concerns on his judgment regarding the SS-6 program. It is conceivable that he would have preferred both a vigorous space effort and a large deployment of ICBMs. But if it was necessary to make some compromise, how important would his space concerns have been? The weight of these concerns should be gauged by taking into account other preferences Khrushchev may have had as a national leader, as well as the considerations to which the other analytical perspectives call attention.

3. Khrushchev's Agricultural Concerns

Khrushchev's personal interest in agricultural matters was a hallmark of his career. During his rise in the 1950s, after Stalin's death, the success of his famous and "risky" virgin lands program in the first few years after its inauguration (in 1954) probably contributed significantly to his political fortunes. There is evidence that his interest in agriculture did not wane subsequently and that it was an important concern in the period of deliberation on the seven-year plan--when

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[43] *Khrushchev Remembers*, p. 47.

decisions on the production and eventual deployment of the SS-6 would have been considered.

Questions of securing appropriate levels of agricultural equipment were raised in the plan preparation period. It is not within the purview of this paper to try to correlate the ups and downs of agricultural investment with even apparent defense spending shifts. But agricultural mechanization was a topic of deep concern to the Soviets (and particularly Khrushchev) in the overall context in which SS-6 production and deployment were probably considered, and Khrushchev may have viewed the SS-6 program and the agricultural mechanization effort as being in direct conflict.

As one indicator of the concern with agricultural mechanization, it is noteworthy that between 1953 and 1961, 1957 was the peak year for production of agricultural machinery.[44] Since the decisions for this production would not have fallen within the preparation period for the seven-year plan (September 1957 to February 1959), they of course cannot be taken to conflict with decisions taken on the SS-6 in this period. Yet the apparent emphasis given to the production of agricultural equipment in 1957 suggests that this production had come to be regarded as important by the time production and deployment decisions on the SS-6 were confronted in the plan preparation period. It is also noteworthy that agricultural equipment production fell off in 1958 and dropped even more in 1959.[45] What caused this downward trend is impossible to say without extensive analysis--and cannot be attributed directly to the gear-up for SS-6 production (whether as space launchers or ICBMs).

Another manifestation of concern with the problem of agricultural mechanization did occur in the 1957-59 plan

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[44]Joseph W. Willett, "The Recent Record in Agricultural Production," in US Congress, Joint Economic Committee, Hearings, *Dimensions of Soviet Economic Power*, 87th Cong., 2d sess., December 10 and 11, 1962, p. 107.

[45]Ibid.

preparation period, however. In January 1958, Khrushchev proposed the abolition of the Machine Tractor Stations (MTSs), and a decree to that effect was promulgated in March of that year. Among other things, the apparent intent was to improve the utilization of existing agricultural equipment by placing the equipment under the direct control of collective farms.[46] A number of aspects of the MTS abolition are pertinent. First, even a cursory look suggests that the proposal was very much Khrushchev's personal initiative. Second, the nature of the move also suggests that Khrushchev was trying his best to "solve" the agricultural mechanization problem "on the cheap" by rationalizing the use of existing equipment to help take up the slack of needed equipment that was not produced. Third, the importance of the move to Khrushchev is indicated by the fact that he pushed it even though it did not go down easily. It was debated (and criticized) in the press. One account of the reaction to it suggests that the "professional" ideologists regarded it as dangerous backsliding--particularly Presidium member (i.e., Politburo member) Mikhail Suslov.[47] What all of this seems to signify, so far as a limited investigation permits us to say, is that Khrushchev probably regarded agricultural mechanization as an important economic priority and that, in the period of preparation for the seven-year plan, he was looking for ways to somehow reconcile this priority with other priorities--possibly space and defense needs.

Since the tie-in between agricultural and defense needs cannot easily be made, it is useful to point up some indications from a later period that suggest that Khrushchev may well have viewed defense priorities and agricultural priorities in some

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[46]Sidney Ploss, *Conflict and Decisionmaking in Soviet Russia: A Case Study of Agricultural Policy, 1953-1963* (New Jersey: Princeton University Press, 1965), p. 123.

[47]Tatu, *Power in the Kremlin*, p. 32.

conflict in the 1957-59 time frame. In January 1961, when Khrushchev was mounting a new push for increased agricultural machinery, he declared, "today our country ... can, without jeopardizing the development of industry and the strengthening of its defense, devote more funds to the development of agriculture."[48] Following up this theme, two months later he noted that, "leading officials ... have erroneously concluded that the equipment now used in agriculture is fully adequate."[49]

In commenting on these remarks, Michel Tatu notes that Khrushchev's plans were frustrated at this time. And Tatu also takes note of a phenomenon, by which, even after investments were already earmarked for agriculture, agricultural needs may have come into conflict with defense priorities.

> Whenever funds were unexpectedly needed in a sector of industry ... the funds were always quietly but firmly abstracted from the poor relations of the Soviet economy.... In this way the appropriations for agriculture were unobtrusively cut several times during 1959 and 1960.... All this was being done underhandedly, by "nibbling" as Khrushchev put it later.[50]

Where and how would this "nibbling" have taken place? As it stands, the above statement does not specifically tie agricultural equipment production and defense production together. Andrew Sheren has pointed out, however, that the Soviet defense industries also produce items for the civilian economy. And he further notes that "it is reasonable to suppose that MOP [i.e., Ministry of the Defense Industry] plants have the capacity to produce such items as tractors, agricultural equipment ... etc."[51] In brief, it does not seem farfetched to

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[48]Ibid., p. 168.

[49]Ibid., p. 169.

[50]Ibid.

[51]Sheren, "Structure and Organization," p. 128.

assume that if some appropriations for agriculture were unobtrusively shifted, it would have been most easy to do so wherever a joint responsibility was held for agricultural and other production. And defense-industrial "ministries" and possibly individual plants under their jurisdiction would seem to have had such a responsibility.

None of this, to be sure, constitutes any firm tie-in between the SS-6 program and the production efforts for agricultural equipment in the late 1950s. Indeed, it is not at all clear from the foregoing considerations, whether it was defense priorities or agricultural priorities that may have gotten short shrift in the late 1950s (or whether either of them really did). On the one hand, agricultural equipment production apparently did decline from the high level of 1957. But, on the other hand, the references to "unobtrusive" efforts to shift funds away from agriculture suggest that the allocations may still have been high enough to really detract from other programs--possibly defense programs. What seems reasonably clear at present is that Khrushchev had a strong personal concern for Soviet agricultural mechanization efforts and that there are grounds for believing that Khrushchev saw this concern as coming into conflict from time to time with defense efforts.[52]

4. Basic Significance of National Leadership Concerns

Overall, in calling attention to Khrushchev's space program and agricultural production concerns in the late 1950s, a national leadership approach would seem to have a contribution to make in explaining the SS-6 decision(s). Extensive analysis along the lines of this approach would be necessary, however,

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[52] Whether this concern was purely a personal preference or was at least in part a response to interest-group pressure by Soviet agricultural types is, however, difficult to say without appropriate analysis. In any event, the personal preference factor seems, on the face of it, very high.

to make any reasonable evaluation of the significance of these concerns, and also to determine if Khrushchev had other concerns that mattered, or if the personal concerns of other Soviet leaders may have entered into the picture as well.[53]

For the present, it is sufficient to indicate that the national leadership approach calls attention to considerations that should be taken into account in assessing the SS-6 program--considerations that neither the rational strategic actor

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[53]Another concern of the Soviets--and doubtless of Khrushchev personally--that would appear to merit careful scrutiny in evaluating the SS-6 program is the China factor. While it is difficult to know whether or not the Chinese were apprised of Soviet production and deployment plans with regard to the SS-6, their behavior would suggest they were not and hence, like many in the West, fell prey to Khrushchev's exaggerations. Since the Chinese in the late 1950s sought to press the Soviets to pursue the foreign policy interests of the bloc more boldly, with this new weapon in hand, Khrushchev's boasts may well have helped to bring on the Sino-Soviet split. Soviet reluctance to be bolder (by the lights of the Chinese) would then have probably seemed to the Chinese as basically a reluctance to help out the USSR's major ally. How an anticipation of such consequences of a policy of minimal SS-6 deployment combined with braggadocio may have affected Soviet deliberations on the SS-6 program is hard to say. If the Soviets (and especially Khrushchev) surmised that this policy would tempt the Chinese to put the USSR to the test, this consideration would seem to have argued for a sizable SS-6 deployment. As Horelick and Rush have maintained, a key premise of the Soviet view at the time was that the USSR could afford to wait on a better weapon system because the risks of war with the United States were low (see footnote 6, above). In the fall of 1958 (i.e., during the seven-year plan preparation period), the Chinese apparently sought to test both Soviet and Western resolve by commencing the Quemoy-Matsu crisis. It seems likely that this would have shaken Soviet confidence in their ability to avoid the risks of war and accordingly have prompted some second thoughts about the prudence of minimal deployment of the SS-6. (Incidentally, beginning on November 27, 1958, the Soviets commenced a bold move of their own by issuing an ultimatum to the West with respect to Berlin. Perhaps the desire to convince the Chinese of Soviet boldness helped precipitate this move. But at least in pushing on Berlin the Soviets could hope to keep a determination of the level of tension in their own hands--and not in those of their erstwhile major ally.)

approach nor the pluralistic approach particularly encourages us to probe. Yet like those approaches, the national leadership perspective does not seem capable of standing on its own. As with the other approaches, the weight of the considerations the national leadership perspective emphasizes cannot be gauged in a vacuum. If, for example, we had no real feel for the Soviet estimate of the technical shortcomings of the SS-6, we might be led to overvalue the significance of Khrushchev's concerns for the space program or for agricultural equipment production in constraining the SS-6 program. Similarly, the significance we might attach to the technical shortcomings in impeding sizable deployment of the SS-6 could be quite different if we gave those national leadership considerations short shrift.

E. IMPLICATIONS

Although the task of fully analyzing the SS-6 decision(s) along multiple-approach lines basically remains to be done, the overview presented here suggests that each of the approaches examined in this study has an important, albeit partial, contribution to make to the effort. The use of each would seem to be supported by certain basic decision-making factors that are discernible in the setting in which decisions on the SS-6 probably took place. For example, the likelihood of high-level deliberation (in a mid-term economic plan preparation period) of a weapon system with apparently substantial strategic "weight" and significant performance drawbacks supports the use of the rational strategic actor approach. The likelihood of interest-group activity for or against a weapon system that challenged established service roles and missions and defense-industrial relationships supports use of the pluralistic approach. And finally, the likelihood of the impingement of leadership preferences, by a leader who had preferences that could have swayed his judgment on the SS-6 and who could have acted on the basis of those preferences without constituent pressure, supports use of the national leadership approach.

Just how far further analysis might take us in evaluating the SS-6 decision(s) cannot be hazarded at this point. Throughout the discussion, various considerations have been pointed up that might yield fruitful insights if pursued in more detail, particularly using classified information. But there is no way of knowing what such an investigation might reveal until it has actually been attempted.

In the meantime, the application of the three analytic approaches to the SS-6 decision(s) should not be regarded as establishing either directly or by default the validity of any one of the approaches. The temptation to grant presumptive validity would appear to be greatest with respect to the rational strategic actor approach. The treatment of the other two approaches particularly shows, for example, how very complex an analysis of decisionmaking in the SS-6 case can become. It suggests that, when all sources of information have been tapped, we may still be very far even from what a pluralistic or national leadership approach (or some other decision-making approach) might be capable of revealing about a comparable US strategic arms decision.

Consequently, since the pluralistic and national leadership approaches may seem to be much more in line with common notions about what constitutes decision-making analyses *per se*, the treatment of these approaches in the SS-6 case might be taken to suggest that Soviet strategic arms "decision-making analyses" are bound to yield only speculation. By default, therefore, the rational strategic actor approach, which focuses on considerations (like strategy and weapons characteristics) that can be treated without reference to decisionmaking and that, for the most part, have been so treated in analyses of Soviet strategic arms efforts over the years, can appear to stand on much firmer ground.

One might also be inclined to accord a presumptive validity to the rational strategic actor approach because the considerations it encompasses seem "harder" on their face. Compared with such inherently amorphous and soft phenomena as "interests"

and "preferences," which one is compelled to emphasize in pursuing a pluralistic or national leadership analysis, the focus on strategic doctrine and weapons characteristics in the rational strategic actor approach is at least a focus on apparently much more tangible, and "harder," analytic material.

Generally speaking, in certain major respects the difference is indeed real and significant for analysts trying to evaluate Soviet strategic arms efforts. With respect to Soviet strategic doctrine, the analyst can cite a tangible corpus of writings on some particular topic--e.g., the role of ICBMs--to make his case. And with regard to weapons characteristics, much of the data may be substantially harder than that with which the analyst has to deal in probing, say, leadership preferences. Indeed, dealing with weapons characteristics can appear to be overall an inherently "hard data" enterprise, simply because much (if not most) of the evaluation is bound to fall within the purview of the physical sciences. And finally there is an understandable and, in terms of current Soviet strategic arms efforts, entirely justifiable reason to concern ourselves primarily with weapon characteristics, since they are the very essence of the Soviet *capabilities* about which we worry.

We would be remiss, however, if we took any of these basic "pluses" on the side of the rational strategic actor approach as sufficient reason to avoid further investigation of the SS-6 case along multiple-approach lines, or to rule out the need for future multiple-approach analyses of other Soviet strategic arms decisions. It is by no means intended to diminish the significance of focusing on capability questions to suggest that the attempt to learn all that we possibly can about how and why past Soviet strategic arms decisions were made is worth making.

Such an attempt is worth making because the Soviet strategic threat is compounded of both capabilities and intentions, however important the former. And in trying to comprehend

Soviet intentions,[54] we are likely to be drawn into making social science judgments even about the significance of weapons characteristics as an indicator of these intentions.

Earlier in the paper it was pointed out that one can easily fall into the trap of reading the Soviets in American and Western terms--by, for example, hastily transplanting pluralistic decision-making notions in Soviet soil. There is a similar, and perhaps more subtle, trap to watch out for in evaluating weapons characteristics precisely because an analysis of them can rightly begin with an assumption of the universality of the behavior of physical phenomena--i.e., of the same physical "laws" operating in both the United States and the Soviet Union. It is this, after all, on which a physical science evaluation of the nature of these characteristics basically depends. Yet it would be a mistake to believe as a consequence that all analysis of Soviet weapons characteristics is bound to be free of the taint of national differences and thus inherently "hard." Indeed, if this analysis extends to the point where judgments are made about the significance the Soviets attach to these characteristics,

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[54]The SS-6 case points up how "intention" questions and "capability" questions can be interrelated in complex ways. In the late 1950s, the intention question that was particularly vexatious was the extent and nature of likely Soviet production and deployment of the SS-6 so that one would know what Soviet ICBM capabilities the United States would have to deal with in the early 1960s. Of particular concern was whether the Soviets intended to field a sizable force of SS-6s. Underlying that question was the even more worrisome one (and ultimately the most worrisome question that any threat evaluation confronts) of what the Soviets intended to do once they had those capabilities in hand. But addressing these basic questions of intent involved, among other things, examining the system's capabilities, so far as its performance characteristics could be discerned and evaluated, before the extent of the deployment was in fact known. In short, certain capabilities discernible in the late 1950s were germane to an assessment of the Soviet intent to achieve certain other capabilities in the 1960s, which in turn were germane to an assessment of Soviet intent to threaten the United States in the early 1960s.

such judgments are both "soft" and social scientific to some degree. For they involve, surely, an estimate of Soviet perceptions. These may differ from US perceptions because of a peculiarly Soviet evaluation of the very nature of the weapons characteristics in question.[55] And, as the suggested relevance of Soviet command and control perspectives in the SS-6 case would indicate, these perceptions may also differ because of other uniquely Soviet considerations that are brought into play.

In the overview of the SS-6 decisions, the technical shortcomings of the first Soviet ICBM were noted and, on the basis of available information, found to be insufficient in themselves to have precluded a larger deployment of the system than the one eventually made. A detailed analysis using all available data might well reveal that in fact those shortcomings were so overwhelming that Soviet decisionmakers could not possibly have decided to push ahead with a sizable production and deployment effort. In that event, the significance accorded other decision-making considerations in impeding the program would then have to be diminished drastically.

In that event also, the analytic role the physical scientist might play in interpreting the weapons characteristics of the

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[55]National differences can matter even when our analysis of Soviet weapons characteristics is confined to relatively straightforward technical evaluation. It is one thing to broadly acknowledge that Soviet and US design philosophies, scientific styles and the like might differ. It is quite another for a US physical science analyst to be appropriately aware of the subtle ways such factors might affect his evaluation, even when he tries to make allowance for them. In general, it is useful to bear in mind that although the physical scientist has an edge on the social scientist with respect to the control (and hence verification) possibilities permitted by his subject matter, "doing science" also has its share of hunch, chance and implicit assumption. See, in this regard, James D. Watson, *The Double Helix* (New York: Atheneum, 1968).

SS-6 could be such that the social scientist's role might be quite perfunctory. But this cannot be assumed at the outset of an investigation of the SS-6 decision(s) and certainly should not reinforce an inclination to ascribe interpretations of Soviet weapon system characteristics in other decision-making cases solely to the province of physical scientists.

All of this calls attention to the basic problem addressed in the study--namely, the assumptions analysts bring to evaluations of why Soviet strategic arms decisions occur. It is important in this regard to avoid assuming that the scope of a social science investigation of these decisions is so narrow as to preclude judgments about the significance of weapons characteristics. And it is equally important to avoid assuming that the scope of a decision-making analysis of these decisions is so narrow as to preclude consideration of such topics as weapons characteristics and strategic doctrine.[56]

As indicated in the introduction to this study, in focusing on such topics as strategic doctrine and weapons characteristics as explanations of Soviet strategic arms decisions, we make implicit assumptions about the decisionmaking that allows these topics to "determine" decisions. Such assumptions may be valid, but then again they may not. To make some determination in this regard, these decision-making assumptions should be treated explicitly. In addition, these assumptions should be juxtaposed to contrary decision-making assumptions stressed by other interpretive points of view. And it would be no small

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[56]That is to say, particularly as topics that would be considered (and indeed featured) in decision-making terms *outside* the purview of interpretations such as the pluralistic and national leadership approaches, which are more in line with what we usually regard as decision-making analyses. Clearly to some extent these characteristics (e.g., that the system in question is an ICBM and not an MRBM or bomber) would be looked at in evaluating organizational interests or leadership preferences. And strategic doctrine could of course be viewed as an indicator of, for example, service interests, as many analysts would contend it should be.

contribution if that juxtaposition yielded only a sufficient appreciation of the strengths and weaknesses of all these decision-making assumptions to keep us properly appreciative of when we were justified in making assertions and when we were not.

As it stands, this overview of the SS-6 program, in which such a juxtaposition was made, suggests that, from whatever perspective, the decisionmaking in the case is exceedingly difficult to understand and may never be really understood. The overview also suggests, however, that we are also probably not justified in simply turning our backs on decision-making analyses and relying on such topics as strategic doctrine and weapons characteristics, which can be treated without specific reference to decisionmaking, to carry the interpretive burden. In this regard, it would be unfair to argue that a pluralistic interpretation or a national leadership interpretation has somehow failed if it does not explain the SS-6 program as a decision-making analysis of some US weapons program might be able to do. First of all, when considered in decision-making terms in the rational strategic actor approach, Soviet strategic doctrine or the weapons characteristics of the SS-6 can also probably not yield such an explanation. (In short, they are part of the decision-making "problem" as well, and not just apart from it.) More importantly, unless it is shown by subsequent analysis that a social science judgment on the significance of the performance characteristics of the SS-6 is almost perfunctory (i.e., that a physical science evaluation shows that the system's shortcomings were truly overwhelming), that social science judgment should be weighed against similar judgments that can be made on pluralistic or national leadership grounds.

In that matchup, it is not justifiable to apply a double standard of evidence, which is skewed to favor one interpretive point of view and to disfavor others. One is after all in

this case trying to estimate not only such soft and amorphous topics as interests and preferences but another soft and amorphous topic as well--the Soviet "perception" of the significance of the system's technical characteristics. The point is that we should remain open to the possibility that, when all is said and done, we may have at least as much to go on in getting a fix on those interests and preferences as we do on that "perception." The only way we can achieve any valid judgment on the matter is to take our analysis of each of these "soft" topics as far as we possibly can and to do it fairly.

Appendix B

MULTIPLE APPROACHES AND FUTURE ANALYSES

MULTIPLE APPROACHES AND FUTURE ANALYSES

It is important that we maintain a sober view of where we are and where we can go from here in analyzing Soviet strategic arms decisions. As stated in the introduction, this study only begins what ideally would be a very large analytic effort. A substantial appreciation of the strengths and weaknesses of our assumptions about how and why certain Soviet strategic arms decisions are made--and hence an improvement in our understanding of those decisions--basically requires a series of individual decision-making case studies. And even with them in hand no real "key" to the mysteries of Soviet strategic behavior is likely to be had. But only then will we be in a position to make anything approaching a reasonably firm statement on the utility of particular approaches for the analyst and the policymaker he informs. Only then will we be able to classify Soviet strategic arms decisions in the sort of detail that would even begin to approximate a true taxonomy. For such detail should include, to the extent possible, a matchup of particular categories of strategic arms decisions and particular Soviet decision-making practices.

With tasks of this sort yet to be accomplished, we are indeed very far from attaining a decision-making model with genuine predictive possibilities. It is a matter of some debate, in any event, whether the social sciences in any field of inquiry can or should aspire to emulate the physical sciences in this regard. But it is surely a moot point at this juncture and probably for the long run as well, with respect to how and why Soviet strategic arms decisions are made.

If, as most social (and other) scientists agree, classification is near the bottom rung of the ladder of scientific understanding and prediction perhaps at the top, we are at best just beginning the climb. To pretend otherwise may not only be dangerous, because of the security stakes involved, but may also keep us from doing the spadework without which no real progress is likely to be made. And, as suggested in this paper, such spadework would profitably include subjecting individual Soviet strategic arms decisions (or sets of decisions) to analysis along multiple lines of inquiry.

It may well be argued that all the various considerations that have been pointed up in this study could be treated within a single broad analytic framework in examining particular Soviet strategic arms decisions. This is possible, but it does not seem likely to happen--at least not in a productive way. Whatever the admirable intent of the analyst to remain unbiased, some considerations would doubtless be emphasized to the detriment of others. Certain considerations would probably be stressed from the start, with the "big picture" being folded in simply to round out the analysis.

The use of multiple approaches obviously is no guarantee against biases. So long as social science problems remain social science problems, the biases of the analyst are bound to intrude. What a multiple-approach analysis can do is help us to be more aware of our conceptual biases, our analytic assumptions, and compel us to challenge them more often than we otherwise might be inclined to do. In some instances, these biases may be entirely defensible and in others they might not be. The very nature of social science inquiry does not permit us to do more in dealing with them than to recognize them for what they are and to subject them to the most extensive scrutiny we can using common standards of logic and evidence.

Ideally, case studies of Soviet strategic arms programs would be made as a concerted multiple-approach effort involving specialists in various fields related to the program(s) in question. Individuals with substantial expertise in such fields as Soviet strategic doctrine, the performance characteristics of Soviet weapons, Soviet economic planning, Soviet foreign policy, Soviet political leadership, and the like would all appear to have a necessary analytic contribution to make.

The value of such an effort in enlarging our understanding is underscored by considering some alternatives. Progress seems least likely to be achieved if decision-making case studies are undertaken by a single analyst hewing basically to a particular approach. Both by dint of natural talent and predisposition a given analyst is not likely to be sensitive to a sufficiently wide variety of considerations that might bear on a particular decision, nor capable of doing justice to those considerations that lie outside his immediate area of expertise. A lone analyst utilizing multiple approaches would, on the basis of all that has been argued in this paper, seem to stand a better chance of making progress. But since Renaissance men are in notoriously short supply these days, it is doubtful that one analyst's sensitivity to a variety of decision-making considerations would be matched by adequate expertise to treat those considerations properly. In short, whatever the management problems involved, a concerted analytic effort using multiple approaches and involving a number of different specialists would seem to be the best way to ensure that available data bearing on a given Soviet strategic arms decision are not overlooked and that they are properly evaluated.

Notwithstanding the attractiveness of multiple approaches in principle, they will probably be very difficult to apply. Even posing the array of questions that the individual approaches suggest should be posed in analyzing a given decision (or set of decisions) would seem to be a large task. Clearly then,

appropriate analysis to the point of arriving at an overall judgment is a tall order indeed. Similar treatment of an array of Soviet strategic arms decisions, to improve our understanding of how and why those decisions are made--and the role of the action-reaction phenomenon in those decisions--would be an enormous undertaking.

Since such evaluation would seem to require the use of classified materials, the role of analysts without access to these materials is likely to be limited.[1] This limitation does not, however, rule out the useful and important contribution of helping to frame appropriate questions. Nevertheless, the main burden would appear to be on those within government with access to classified data and a professional responsibility to offer policymakers information and advice on Soviet strategic arms behavior.

It should be stressed, however, that the hopes of emulating decision-making analyses of US strategic behavior would seem to be inherently limited by the probable dearth of data on the Soviet defense environment. Indeed, because of these data limitations *bona fide* "case studies" in the strict sense of the word may not be possible at all. In addition to the

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[1]The difficulty of dealing with Soviet strategic arms decisions on an unclassified basis is, by the way, apparent in the lack of any substantial decision-making case study in the open literature. Small forays into this field have been made from time to time, such as in Graham Allison's treatment of the Soviet side in his Cuban missile crisis study. And of course there is no dearth of generalized pieces on the Soviet-US arms race. But to the author's knowledge, no decision-making case studies have appeared (and none can be expected to) that have any resemblance whatsoever to such studies on US weapons decisions as Harvey M. Sapolsky's *The Polaris System Development: Bureaucratic and Programmatic Success in Government* (Cambridge, Mass.: Harvard University Press, 1972) or Michael Armacost's *The Politics of Weapons Innovation: The Thor-Jupiter Controversy* (New York: Columbia University Press, 1969) or Ted Greenwood's *Making the MIRV: A Study of Defense Decision-Making* (Cambridge, Mass.: Ballinger Publishers, 1975).

problem that all decision-making analyses confront of having to deal not only with processes but also with such inherently soft topics as "goals," "interests," "preferences," and the like, which are the ingredients that are processed in the making of decisions, it is reasonable to expect that even with the use of highly classified data in a given case there will be limited information with regard to such ingredients as well as with regard to the process itself.

But this is precisely why multiple approaches are especially commended in analyzing Soviet strategic arms decisions. For the very same reason, the use of multiple approaches in an array of cases would also seem necessary. The data are simply likely to be too skimpy and soft to allow us to put much confidence in what a single decision-making approach and a single case might tell us about how and why Soviet strategic arms decisions are made.

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——— *denotes basic formal relationships of national decision-making entities.*

····· *denotes presumed relationships of key organizations and personnel in Soviet strategic arms decisionmaking.*

EXPLANATORY NOTE: Charts, and other similar graphic devices, can powerfully shape as well as merely reflect our decision-making assumptions. By highlighting formal lines of authority at the expense of informal ties, they can, for example, make decision-making processes seem neater and less variable than they really are. By depicting only the most relevant decision-making entities for certain kinds of decisions, charts can also encourage us to assume the basic irrelevance of other entities. To guard against this assumption, this chart has been compiled precisely to serve as a pictorial reminder of the larger decision-making context in which Soviet strategic arms decisions take place. Beyond that, however, the viewer should appreciate that, especially due to data constraints, the chart depicts particular decision-making relationships in only the most gross and summary fashion.

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This chart is a part of Paper P-1256, *Analyzing Soviet Strategic Arms Decisions*, by Karl F. Spielmann (Institute for Defense Analyses, Arlington, Va., April 1977). Chart by Patricia Denny.

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Ya. P. Ryabov (suggested
"Ryabov Addresses Eighth
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Ryabov became new secret
it is possible that he r
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AGENCIES OF THE COUNCIL OF MINISTERS WITHOUT MINISTERIAL STATUS

TELEGRAPHIC AGENCY OF THE SOVIET UNION (TASS)
L.M. Zamyatin

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STATE BOARD OF ARBITRATION (GOSARBITRAZH)
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STATE COMMITTEE FOR THE UTILIZATION OF ATOMIC ENERGY
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3

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Ya.P. Ryabov (Defense supervision?)
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S.P. Trapeznikov

TRADE & DOMESTIC SERVICES
Y.I. Kabkov

TRANSPORT & COMMUNICATIONS
K.S. Simonov

SOURCES: Basic national-level governmental and party organs: adapted from charts in US Congress, Joint Economic Committee, *Soviet Economy in a New Perspective*, 94th Cong., 2d sess, 1976.
Basic Ministry of Defense and National Aerospace Defense Forces organs: adapted from charts compiled by Harriet Fast Scott in *Air Force Magazine*, March 1977.
Defense Council (suggested membership and weapons acquisition relationship to other organs): Raymond Garthoff, "SALT and the Soviet Military," *Problems of Communism*, 24:1 (January-February 1975), p. 29, and Harriet Fast Scott, "The Soviet High Command," *Air Force Magazine*, March 1977), p. 53.
Military-Industrial Commission (suggested weapons acquisition relationship to other organs): Garthoff, "SALT and the Soviet Military."
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Ministry of Communications Equipment Production (suggested possible status as defense-industrial ministry): letter to author from John McDonnell, Centre for Foreign Policy Studies, Dalhousie University, Halifax, Nova Scotia (November 3, 1976).
Ya. P. Ryabov (suggested possible status as "successor" to Ustinov as defense supervisor): "Ryabov Addresses Eighth DOSAAF Congress," in Foreign Broadcast Information Service, *Soviet Union, February 1, 1977*, p. V1. (Address indicates defense responsibility of some sort. Since Ryabov became new secretary of CC CPSU, following Ustinov's appointment as defense minister, it is possible that he replaced Ustinov.
N.V. Ogarkov and N.N. Alekseyev (suggested key weapons acquisition roles in Ministry of Defense): based on formal roles in ministry and previous identification with SALT (see Garthoff, "SALT and the Soviet Military," pp. 28-29).
State Committee for Science and Technology (suggested relationship to weapons acquisition process): based on known "civilian" links of the committee to Academy of Sciences in Organisation for Economic Co-operation and Development, *Science Policy in the USSR* (Paris, 1969), pp. 51-62; and identification of Academy weapons role in Garthoff, "SALT and the Soviet Military," p. 29.