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SOVIET STYLE
THEATER ASSESSMENTS

September 1989

Final Report

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PREFACE

The following report merely summarizes the eight Research Reports which were completed by the Soviet Security Studies Working Group under our study of Soviet Style Theater Assessments. The reader is urged to consult these Research Reports (see attached bibliography) to better understand our analyses and conclusions.

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1. INTRODUCTION

We began this project asking what seemed like a relatively simple question concerning Soviet thinking about the state of the military balance in central Europe: How do Soviet military planners determine how well they are doing relative to NATO? The focus of this research was the substantive content, methods and procedures used in assessing theater balances.

Conventional wisdom among Western analysts holds that the Soviets employ a highly precise calculus -- the "correlation of forces" -- that integrates military quantities and qualities, political and economic potentials, and a host of other factors. This highly rigorous and dynamic approach to theater assessments, it is widely believed, is indispensable to the Soviet military and political leadership for formulating and implementing its military and arms control policies.

This assumption, however, begs the question: What factors do Soviet military planners consider most important in assessing theater balances, and how are these factors integrated? Using a methodology involving qualitative content analysis of the Soviet military press -- focusing particularly on military-historical literature as a surrogate form of discussion of current issues -- and private interviews with active duty

General Staff officers, we have found that the Soviet military stresses a particular set of qualitative factors in assessing the balance to an equal or even greater extent than mere numerical comparisons of forces, manpower, system capabilities, and the like.

These qualitative factors can be discussed in five broad categories, encompassing those elements which the Soviets seem to find most important in determining the state of the theater balance:

- o surprise at all levels -- strategic, operational, and tactical -- including both the use of surprise and preparations to react to its use by the enemy;
- o integration of military resources, particularly with regard to command and control arrangements and alliances;
- o development of the strategic rear, including the state of the national economy, use of strategic reserves, and logistics and supply systems;
- o quality of military art (i.e., strategy, operational art, and tactics); and
- o quality of political-military and military organization and control.

Soviet consideration of these factors was traced over time, and we concluded that since World War II, Soviet military planners have increasingly appreciated the relative role of qualitative over quantitative factors in affecting war outcomes. Certainly today, with the 19th Party Conference's (June 1988) edict that future military development will be based on qualitative rather than quantitative factors, these considerations will become even more central in Soviet theater assessments.

While it is fairly obvious how one might attempt to incorporate inherently quantitative factors such as numbers of tanks and troops into a correlation of forces calculation -- though much less obvious how one would actually do such a calculation --

the integration of qualitative factors poses serious methodological problems. Thus, one of our major concerns was to pursue the question of how such factors might be included in the correlation of forces. What we discovered from both our literature analysis and interviews with high-level General Staff officers is that the conception of a precise, strategic (theater) level, Soviet correlation of forces calculus is wrong. *There does not appear to be any strategic level correlation of forces calculus for assessing theater balances that is systematically applied by the General Staff.* This is attributed largely to the fact that analyses must be easily understood by the top military leadership and, perhaps more significantly, by the political leadership. Basic methods of comparison -- for example, bar graphs of relative force deployments -- are used because policy makers will have difficulty understanding more complex approaches.¹ More sophisticated calculations appear to be routine, however, for tactical analysis at the company level through the division level, and perhaps at the operational level.²

Instead, fairly ordinary quantity-to-quantity comparisons are made within weapons systems types at the theater level: tanks to tanks, aircraft to aircraft, troops to troops. Gaming is used to explore the force-on-force implications of these numbers, but theater computer models that integrate forces and means are not part of the assessment. The various quantitative comparisons and qualitative factors are not integrated into a single analysis, they are merely aggregated.

¹In our interviews this basic approach was stressed as the method for doing arms control analysis.

²However, time constraints and the relative primitiveness of Soviet field computer processing capability greatly limit the complexity and utility of tactical and operational models in operations assessments.

Our research has also allowed us go beyond a mere laundry list of factors the Soviets consult in performing theater level net assessments. We have formulated a detailed description and analysis of the decision process through which theater balance assessments are made, a model which is applicable to Soviet defense decision-making as a whole. We have also drawn conclusions regarding explicit trade-offs the Soviets note between several of the qualitative factors involved in assessment, and regarding the degree to which the techniques and elements involved in Soviet assessments are indeed uniquely "Soviet."

Lastly, some related conclusions that emerged from our studies include:

- o the core of the Soviet military leadership (with some exceptions) never accepted Khrushchev's emphasis on nuclear forces. The apparent move away from a preoccupation with nuclear weapons in the mid-1960s and towards consideration of non-nuclear operations was merely the surfacing of strategic concepts that had been pursued "clandestinely" during Khrushchev's tenure;
- o in the late-1970s the Soviet military leadership stripped offensive operations of their former exclusive position and began to consider the potential importance of defensive operations. General Staff interest in strategic and operational-level theater defensive operations predated Gorbachev's ascension to the general secretariat.

1.1 Methodology

Considering the secrecy surrounding many aspects of military affairs in the Soviet Union, particularly in the pre-Gorbachev period, there was little reason to expect that answers to the questions we raised could be found by a simple reading of the Soviet unclassified military literature. Yet, it was considered equally unlikely that the extensive Soviet military literature could completely mask the analytic assumptions of Soviet

military planning. In attempting to communicate to the officer corps the most critical factors in operational planning, the open military literature would reveal, we believed, the primary concerns of the High Command.

This is particularly true of the military-historical literature, which Soviet specialists in military science and operations have always used as both a proving ground and a communications medium for contentious issues in contemporary military affairs. Our alternative methodology, therefore, has been first to consult the Soviet military-historical literature. Since the focus of our research has been on strategic theater assessments, this implied that Soviet reexaminations of the experiences of World War II -- a surrogate literature that discusses contemporary issues in historical metaphor -- would be especially fertile ground for insights into contemporary assessment needs. Indeed, as Eugene Rumer observes, [Rumer (1988)], the continuing study of this war has performed three functions in Soviet military affairs: (1) to provide the foundation for the development of Soviet military science; (2) to serve as a resource for officer education and troop training; (3) and to provide raw material for surrogate discussions of current issues within the Soviet military establishment. Many of these historical articles explicitly state that the lessons of the past are relevant to contemporary conditions. The abundance of these sources therefore provided a more than adequate foundation from which we were able to learn about contemporary Soviet views on theater assessment.

A second aspect of our methodology involved explicit time-series analysis. Looking merely at the military literature of the last few years in "snap-shot" fashion would give a distorted, out of context impression of what must be on-going discussions. For example, if one were to consult only the contemporary discussions on theater

strategy, one would erroneously conclude that Gorbachev's "new political thinking on security" had pushed the military into reexamining defensive operations. As mentioned above, this reassessment had begun in the late 1970s. Each of the studies conducted as part of this project employed a time-series analysis that stretched back to the early 1960s and then moved sequentially to the present. This helped to minimize any potential bias in the contemporary literature and in the researcher's own view of the problem.

The third aspect of our methodology was a direct response to the arrival of *glasnost* in Soviet military affairs: interviews with Soviet military personnel. We were fortunate to be able to conduct a number of interviews with active General Staff and high level Ministry of Defense officials. These interviews were especially helpful in exploring some of the leads we developed from our reading of the literature.

2. SOVIET NET ASSESSMENT: QUALITATIVE FACTORS

Over the past few years, a prominent and growing subset of the strategic studies community in the West has been preoccupied with methodologies for assessing the quantitative balance of forces in central Europe. Our research has uncovered little evidence that the Soviets approach the problem exclusively, or indeed even primarily, in these terms.

In his analysis of the evolution of Soviet discussions of four major World War II campaigns, Rumer (1988) found that the Soviet military considers general quantitative superiority of forces in the theater, or even along a particular front, both insufficient and unnecessary for success. Overall quantitative superiority is, of course, highly desirable, in that it provides the strategic leadership with great flexibility in choosing the method, time, and place of operations. However, superiority in military art and other qualitative factors can make up for differences in sheer numbers. It is these qualitative factors which can provide one of the primary quantitative requirements the Soviets consider truly decisive: *the achievement of local superiority in the sector of the main strike.*

What degree of local superiority is necessary? Rumer found evidence that at least 3:1 superiority is required in breakthrough operations, but again, *this rule applies only locally to the sector of the main strike.*³ Most importantly, Rumer finds that the

³In an interview, Major General Lebedev, deputy head of the Treaties and Legal Agreements Directorate of the General Staff, made several references to 3:1 force ratios at operational and tactical levels -- that is, local superiority.

Soviet military sees the achievement of this quantitative threshold to be as much a function of the quality of military art and other qualitative factors as it is a product of the relative numerical availability of forces. These decisive factors cannot be easily quantified and included in a numerical balance of forces in the theater -- though they may have a quantitative outcome.

2.1 Surprise

Rumer's work, Matthew Partan's (1987) examination of the beginning period of war, and Richard Phillips' (1989a) extension of Partan's analysis, make clear that the factor of surprise is central to Soviet balance assessments. According to Partan and Phillips, the Soviets consider that the aggressor's use of strategic surprise allows him to seize the strategic initiative and gain significant temporary advantages. Two questions relevant to surprise are therefore at the forefront of Soviet examinations of the theater balance: How is the opponent preparing to use surprise? How can Soviet forces prepare to deal with the opponent's use of surprise? Equally applicable are these same questions in reverse: How are Soviet forces preparing to use surprise? How is the opponent preparing to deal with this?

Soviet discussions suggest two groups of measures to deal with adversarial use of surprise. Advance preparation of forces can mitigate the severity of the impact of surprise, and adequate intelligence and detection systems can provide warning time and lessen the degree of surprise. These preparations are not mutually exclusive, and their combined use further enhances ability to deal with surprise. The degree and effect to

which these measures are carried out is explicitly reflected in Soviet balance assessments.

2.1.1 Advance Preparation of Forces

There are two kinds of advance preparation of forces: preliminary and direct. Preliminary measures are those which can be carried out long before the war begins. They are, in essence, the basis of peace-time deployment strategy. Additional measures may also be taken in response to heightened political-military tension, but when war is not yet imminent. Direct preparations, in contrast are performed during any threatening period which may occur immediately before war breaks out.

Preliminary measures: Preliminary measures are divided into three categories. The first, premobilization and strategic deployment, involves the positioning of forces well in advance of hostilities so that initial operations can be carried out immediately at the outset of war. In an ideal situation forces are predeployed such that any surprise attack can be warded off without additional mass mobilization. One can assume that this is precisely the kind of deployment seen in Soviet forces in Eastern Europe prior to 1989.

The second category of preliminary measures is concerned with the country's economic base. Development of the material-technical base of the economy, in particular the heavy and military industries, is a critical part of premobilization. Attempts to become economically independent, and to establish adequate railroad and transport systems, are also integral to the preparation for surprise attack. The Soviet literature repeatedly refers to the horrible price paid in the beginning period of the

Great Patriotic War for failures in these areas. Soviet military writers attach great importance, however, to the strength of a centrally coordinated and planned economy, both in performing premobilization procedures and compensating for any prior neglect of those procedures.

The final grouping of preliminary measures to deal with surprise attack involves the development of military science. Alternative war plans must be articulated well in advance of the outbreak of war, with full consideration of the enemy's plans and actions. For example, Soviet writers note that it is important to prepare air defense of industrial centers as well as of airfields, troops, and command organs, particularly for a war which may be of long duration [Partan (1987)].

Rumer observes more broadly that over the last decade Soviet writers have begun to stress the need to prepare for the eventuality of carrying out strategic defensive operations, and rather than just offensive operations. Such a shift is necessary because of changes in weapons technology, and the increased scale and intensity of military operations. Recommended defensive preparations include such elements as construction of fortifications, advance planning of multi-front defensive operations, reflection of defensive concepts in troop training, attempts to predict the direction of the enemy's main strike, and consideration of the possible eventuality of temporarily retreating and surrendering territory to the enemy. Once again, the experience of the Great Patriotic War demonstrates that the effectiveness of strategic defense depends on careful preparation. [Rumer (1988)].

Additional preliminary measures may be taken in responses to increased political-military tensions. Assuming that political relations will almost certainly begin to decay

before war appears imminent, political tensions can alert the Soviet leadership to the increasing likelihood of conflict.⁴ During this threatening period, a bolstering of deployed capabilities represents both a deterrent and a defense. Both Partan's and Rumer's work suggest that Soviet sources recognize the possible tension between undertaking premobilization measures during a threatening period and the possibility of sparking a military conflict. Secrecy therefore becomes an important aspect of such preparations. Here, the Soviets recognize the conflict between the extent to which premobilization measures can be implemented and the secrecy with which they can be successfully carried out. In an ideal situation both conditions can be met. When the two conflict, however, Rumer observes a tendency on the part of Soviet military analysts to preserve secrecy, and hence their own capacity for surprise, at the expense of advance preparation.

Partan finds hints of how Soviet military planners hope to resolve this tension. With sufficient political early warning, premobilization can be carried out discreetly over a long period of time, in stages. The use of disinformation, including diplomacy, negotiations, the pretext of maneuvers and exercises, and the use of local wars as a prelude to world war, can also preserve secrecy.

Direct Preparations: In contrast to preliminary preparations, which would take place on a steady basis during peacetime, direct preparations are carried out only during periods of increased threat of war. Soviet views on the likelihood of the existence of such a warning period have evolved over time. Until the 1970s, the Soviet military

⁴The apparent Soviet worldwide alert of its KGB network in September 1984 -- a war monitoring alert -- was a direct response to this kind of political warning.

assumed there would be definite signs of an enemy alert -- even in nuclear war --- and that the Soviet Union would have time to respond with appropriate countermeasures: assembling warheads and transporting them to launch sites, starting up gyroscopes and guidance systems, conducting reconnaissance of the front, alerting command systems, allocating ammunition and fuel to troops, and putting the military-economic base on a war footing.

During the 1980s, there was increasing recognition of the fact that nuclear weapons could be fired so quickly that there might be no threatening period during which to make direct preparations. Keeping nuclear weapons on full, constant alert to guard against enemy surprise attack without the benefit of a warning period, however, is explicitly regarded as dangerous and provocative. The Soviets prescribed resolving this tension between adequate preparation and hazardous provocation through strategic warning and intelligence.

2.1.2 Intelligence and Warning Systems

The maintenance of adequate intelligence and detection systems is the second broad category of measures proposed by the Soviets to deal with adversarial use of surprise. From the late 1950s to the mid-1960s, the Soviets emphasized the rapid transfer of data to the highest command levels, with the existence of intelligence networks independent of the lower commands to avoid delays in getting information to the top. In the 1980s, as implied above, the conflict between the need to prepare for surprise nuclear attack and the desire not to appear provocative was a major reason for an increased emphasis on monitoring capability. Over the last three decades there has

been a marked shift in Soviet discussions from an emphasis on data processing capability to a concern with data gathering.

2.2 Integration of Resources

The Soviet military clearly stresses integration of various types of resources in assessing force balances. This preference, reflected in its long-held notion of integrating the various services in combined arms combat, is also found in its approach to alliance matters, and its command and control philosophy.

2.2.1 Alliance Cohesion

Sands' (1988) work on Soviet assessments of NATO alliance cohesion demonstrates that alliance unity is central to Soviet judgments of alliance effectiveness. The beginning period of war literature that Partan examined contains similar suggestions. This element of Soviet net assessment is quite important, given (1) the Soviet doctrinal position that any future war will be between coalitions, and (2) on-going developments in Eastern Europe. In particular, the two facets of alliances in which integration is considered most essential are doctrine and military science. On the doctrinal side, a successful alliance is composed of members with a unity of political and military-strategic views. Economic and military planning are integrated, allowing the creation of a unified inter-allied military command and military strategy.

Until the Fall of 1989, Soviet assessments of the current East-West alliance structure asserted that the socialist system gave the Warsaw Pact obvious advantages stemming from a shared, coherent political and philosophical foundation. NATO, on

the other hand, suffered from the burden of inevitable capitalist economic contradictions. In peacetime, it was argued, NATO overcomes these contradictions with the unifying factor of anti-socialism, but this contrived unity is achieved at the expense of compromise, concessions, and the dominance of the United States. In crisis and war, according to the Soviets, the facade of NATO unity may break down as conflicts over doctrinal and military science issues become apparent.

Successful integration of allied military science, Sands' research shows, is judged according to two factors: command, control, and organization of coalition forces, and preparation of coalition forces. Command and control integration must be both political and military, with full mobilization of economic, scientific, and technical achievements, material and moral-political forces, and strategic reserves of all members. Centralization and unity of alliance command and control is also crucial, with the smaller powers' forces subordinated to appropriate command levels, but under a blanket of mutual trust and equal rights for all coalition members. Soviet military writers stress that full political and military centralization allows potential problems to be settled in peacetime, so that there is no need for improvisation in the beginning period of a war.

Soviet assessments of NATO and Pact efforts along these lines mention the use of Soviet advisers in other Pact countries and the common use of the Russian language as relative advantages accruing to the socialist bloc. In contrast, NATO suffers from decentralized organization in that each individual member retains the right to make a mobilization decision in a crisis, but partially compensates for this through the maintenance of a wartime command structure in peacetime and pre-planned procedures for transfer of national forces to NATO control. NATO also benefits from a combined

communication system, centralized command and control for its air forces and air defense, and other measures to facilitate mobilization such as combat readiness measures and grouping of forces at border regions.

Sands finds that the Soviets judge the success of preparation of coalition forces in three areas: military-technical policy and standardization, training of coalition forces, and operations. Optimal military-technical policy requires unity of research and development, procurement, and deployment of forces. NATO receives poor marks here in that it relies heavily on American, West German, and British equipment, and attempts at standardization meet resistance from the military-industrial complexes of these countries. Soviet assessments of NATO force training observe that more flexibility would benefit the standardized operational-tactical plans which have been worked out and used in training.

The objective of operations between coalitions, in the Soviet view, is to exploit the weaknesses of the enemy while maintaining the political and military health of one's own alliance. In order to accomplish this goal, potential operations must be well-planned and coordinated in advance, focusing on driving main thrusts against the weaker armies in the opponent's coalition. The ultimate objective of this criterion for choosing the sector of the main thrust is to break through at the enemy's weakest and most vulnerable points and subsequently encircle his stronger force groupings. Operational planning must also include efforts to interdict enemy supply lines, a factor on which the Soviets view NATO as particularly vulnerable. Finally, the Soviets value efforts to encourage individual withdrawals from enemy alliances, although their judgment of

NATO is that the smaller countries seem firmly committed and certain to transfer their forces to NATO control in the event of conflict.

Of course, one must now wonder how Soviet military planners are looking at recent developments within the Warsaw Pact. Poland, Hungary, Czechoslovakia, and East Germany appear to be moving rapidly out of political, economic, and philosophical conformity with the Pact. Romania has never been a "good" Pact partner, leaving only Bulgaria. If Soviet military planners do indeed consider such "soft" factors seriously in their analyses, then one can only conclude that they have registered a major decline in Warsaw Pact capability vis a vis NATO. The assessment from the General Staff must be awfully bleak.

2.2.2 Command and Control Philosophy

Phillips' (1989b) work on Soviet radioelectronic combat further reveals the importance the Soviets accord integration of assets. His findings demonstrate that Soviet radioelectronic combat is in itself an integrative, inclusive concept which attempts to achieve an overall, synergistic impact on troop control, as opposed to emphasizing individual, tactical-level measures.

According to Phillips, Soviet views of the objective nature of modern war dictate a movement toward decentralization of command and control structures. Factors contributing to this pressure include the potential for nuclear use, the increased spatial scope of the battlefield, increased mobility and tempo of operations, and reduced time for decision-making and conduct of operations. Logically, it seems that decentralized

troop control would provide the stability, security, and decision-making and transmission speed necessary to respond to a more fluid, fast-moving battlefield.

However, the style and structure of traditional Soviet command and control remains highly centralized. This is due to institutional-cultural and military-historical elements such as Tsarist and early Red Army tradition, the general propensity of large organizations to resist innovation, the disaster resulting from lack of centralized command in the beginning period of the Great Patriotic War, and the need for stable regulations and procedures to accommodate Soviet personnel policy and the influx of new recruits every six months. Unwilling or unable to overcome these factors, the Soviet military has elected instead to take advantage of the resources inherent in centralized command, attempting to mitigate the concomitant dangers of increased vulnerability through the development of radioelectronic combat. Radioelectronic combat, Phillips' research shows, has been developed largely to allow the Soviets to protect the vulnerable assets needed to maintain centralized, integrated command and control.

2.3 The Strategic Rear

Soviet balance assessments include consideration of three elements relating to the strategic rear: strength of defensive economic potential, use of strategic reserves, and quality of logistics and supply systems.

2.3.1 Defense Economic Potential

Rumer's work observes the Soviet military's emphasis on the ability to shift the defense industry rapidly to a wartime footing. Soviet literature on the Kursk operation

highlights the premium placed on economic resources, emphasizing the value of liberating key economic regions which had been captured by the enemy. Examinations of the Berlin operation demonstrate the importance of maintaining the capability to increase defense production through a protracted conflict, since the last campaign may be the most intense.

Meyer's (1989) research explores the question of how defense spending measures are incorporated into Soviet balance assessments. He finds that fiscal caps, expressed in ruble terms, are used only for allocative purposes in defense matters such as salaries, pensions, manpower-intensive research and development, and other personnel-related costs. Since the industrial production system, like the Soviet economy as a whole, operates according to plan and not market forces, the final mix of demand for actual materials must be specified not in rubles but in physical units. Particularly because the defense sector consumes a disproportionate amount of scarce, high-technology resources, suppliers throughout the system must be able to predict accurately the amount of output required from their enterprises. "Budgets" for these materials must be expressed in such a manner that the demand for them is a clear, precise quantity.

These goods are therefore budgeted in terms of material balances, with ruble "prices" and "budgets" later tacked on as accounting mechanisms. The implications of this fact are wide-reaching. "Budget cuts" cannot be decided initially in rubles, but in program cuts (materials which will be diverted to another program or another sector). Similarly, resources are not immediately fungible among categories. For example, R&D funds cannot simply be cut and transferred to procurement, nor can "funds" for one kind of procurement program be readily transferred to another. The military is therefore

constrained by the program priorities -- and corresponding material flows -- imposed upon it by the planning process. Since there is great inertia in the industrial sector due to taut planning and since the political leadership must approve these plans and any major changes, the Ministry of Defense is unable to freely pursue its own priorities within some overall budget ceiling.

This material balance system also explains why the Soviet leadership is currently having so much trouble producing a coherent defense "budget"--one which would help the West settle its long debate over the level of Soviet defense spending or percentage of Soviet GNP devoted to defense. Given the way resources must be allocated in a planned, centrally administered economy, the Soviet political-military leadership has simply never thought of their defense expenditures in those terms.⁵ It therefore seems unlikely that in the process of performing net assessments, the Soviets consider relative levels of defense spending, at least defined in the manner to which the West is accustomed.

2.3.2 Strategic reserves

Both Partan's and Rumer's work demonstrate the importance the Soviets place on proper maintenance and use of strategic reserve forces. These forces must be rapidly maneuverable, and they must operate under control of strategic-level leadership to facilitate the greatest possible impact on the overall flow of the war. Ability to

⁵Gorbachev's claim that Soviet defense spending in 1989 would be about 77.3 billion rubles seems to validate this view. After the fact, Soviet military spokesmen have admitted that prices for military hardware are not factor cost adjusted. In other words, prices do not reflect true costs. It is most likely that this number was generated by adding up the fiscal accounts of the various defense industry ministries.

mobilize, equip, and deploy reserves as rapidly as possible is also essential; these concerns are clearly tied to the health of the defense industrial base. Rumer shows that under nuclear conditions, the Soviets expect strategic reserves to replenish losses from nuclear attack and allow subsequent efforts to intensify. In addition, in the last decade the Soviets have emphasized the importance of strategic defense, and strategic reserves are expected to play a major role in defensive operations. Such reserves will cover gaps in the front, organize defense of new positions to which the forces are retreating, create strike groups for counter-attacks, and reinforce defensive groups of fronts in threatened positions.

2.3.3 Logistics and supply

Finally, in performing balance assessment the Soviets consider the quality of logistics and supply systems as a major factor. In their judgment, optimal supply arrangements consist of centralized command of rear supply, with independent operational-level rear commands and mobile, dispersed supply units and distribution centers. The importance of adequate transportation networks, including railroads and highways, is reflected throughout the time periods and operations Rumer examined. In addition, as already mentioned, the Soviets consider NATO's reliance on supplies from across the Atlantic to be one of the weakest elements of the Western alliance.

2.4 Quality of Military Art

Rumer, Partan and Phillips found evidence of a strong emphasis on quality of military art in Soviet net assessment. Primary elements the Soviets consider include concentration of forces, the achievement of local quantitative and qualitative superiority in the sector of the main strike, correct choice of either consecutive or simultaneous operations, use of the narrowest possible breakthrough sectors, and greatest possible depth of operations. In nuclear conditions, the principle of concentration of forces still applies, although it is conceived of as concentration of effort and includes extensive use of maneuver.

Adequate formulation of war plans in advance of the outbreak of hostilities is another element of paramount importance, according to the Soviet military. Rumer's examination of the Moscow operation demonstrates, for example, the value the Soviets have placed in the last decade on preparing for strategic defense by groups of fronts. Sands' work illustrates an emphasis on alliance planning cooperation. As noted previously, however, if advance preparations must be taken at the expense of the element of surprise, the Soviets choose to forego these benefits in favor of retaining surprise.

2.5 Quality of Organization and Control

The Soviet military discusses the importance of command and control systems in terms of their responsiveness, survivability, and degree of centralization. The degree of responsiveness involves reaction time in making the transition from peace to war, and speed throughout the troop control communications chain -- acquisition of information, the taking of decisions, and transmission of missions.

The issues of survivability and centralization go hand in hand, as discussed earlier. Phillips (1989a, 1989b) and Rumer (1988) find the Soviets making arguments for decentralization in favor of troop control survivability, continuity, and stability. Phillips' (1989b) research shows, however, that an entire military concept -- radioelectronic combat -- has been developed in order to maintain centralized control in the face of vulnerability problems. Rumer also finds that even when centralization of command and control for the sake of secrecy and surprise inhibits operational planning by staffs, the ability to maintain surprise takes precedence. It is difficult to escape the conclusion that the Soviets maintain a distinct preference for centralized organization of command and control.

Lepingwell's (1988) work on the Soviet air defense forces bears this out. From the 1950s until 1980, air defense resources were centralized under the command of the VPVO. The 1981 reorganization, which devolved control of those forces to the military districts, and diluted the VPVO's main mission by assigning it PVO SV forces, was reversed within five years under pressure from the VPVO. The air defense service argued not only that the decentralization was inefficient and dangerous, but that the decentralization of forces would retard and complicate the transition from peace to war. The VPVO's position was bolstered by the KAL incident in 1983, several high-level personnel changes, and developments in the threat from the United States which seemed to heighten the importance of homeland defense.

3. EVOLUTION OF SOVIET NET ASSESSMENTS OVER TIME

Our cumulative research has demonstrated three distinct trends in Soviet military thought in the post-war period:

- o a growing stress on qualitative over quantitative factors in performing net assessments;
- o an increasing recognition of the possibility of non-nuclear operations;
- o and an increasing emphasis on strategic defensive operations.

Within the framework of these changes, the factors the Soviets consider in performing net assessment seem to have remained remarkably constant.

Partan (1987) finds evidence of these changes in the way the Soviets define the beginning period of war. The 1960s definition stated that the beginning period of war ended when the defender could achieve a major turning point or seize the strategic initiative, or when the attacker achieved his initial objectives. The new formulation, relevant over the past decade, focuses on the defender's ability to frustrate the attacker's initial plans, and states that the beginning period of war ends when that goal is achieved even if the attacker retains the strategic initiative. The new concept therefore places less stringent demands on the defender, who no longer has to gain the strategic initiative in order to have concluded the beginning period of war. Partan hypothesizes that this definitional change may have taken place because of the difficulty of conceiving of a clear initiative when the opponents are exchanging nuclear strikes, or because a prolonged conventional phase may precede the first use of nuclear weapons. Clearly the change also reveals a more receptive attitude toward the possibility of conducting

defensive operations. Phillips' (1989a) extends Partan's observations further in time and suggests some recent Soviet military interest in reopening the issue.

Rumer also finds a marked increase in discussion of defensive operations in the 1975-1987 time period. While defensive operations are now viewed as a legitimate method of initially depleting enemy resources, it remains clear that offensive operations remain necessary actually to win a war. Virtually every article Rumer consulted which discussed strategic defense referred to the new generation of highly accurate conventional weapons, leading him to conclude that the interest in defense is a reaction to NATO's enhanced capability to thwart a traditional, blitzkrieg-style Soviet offensive. The Soviets have therefore been forced to reconsider their strategy. Within these parameters, however, Rumer found that the factors the Soviet military uses when conducting theater net assessment have remained quite constant throughout the post-war period.

4. SOVIET DEFENSE DECISION-MAKING

Several of our studies have attempted to lay out an explicit framework for Soviet defense decision-making. At first glance, the models presented in these works may appear contradictory, and so it is useful to explore each of them in detail.

Rumer postulates a "loose coupling" model as a direct counter to traditional "rational actor" approaches to Soviet politics.⁶ Under the strategic actor paradigm, policy outcomes are entirely the product of the political leadership's calculated decisions, fully consistent with their original intent; the process by which the decision is made has no impact on the policy outcome. The loose coupling model allows for consideration of the influence of the very process of formulation and implementation of decisions. This model speculates that the top political leadership sets general policy guidelines, but specific options are developed and executed by the professional military community, mainly the General Staff. The political leaders therefore maintain a guiding role, but the experts who devise and carry out the nuts and bolts of policy contribute significantly to the policy outcome, sometimes imprinting their own perceptions of doctrine on policy and perhaps contradicting the original intent of their political bosses. Rumer's research shows that the professional military, through discussions embedded in the military-historical literature, indeed continues to carry out its own agenda when the political line diverges from its specific interests.

⁶Adopted from Condoleezza Rice (1987), "The Party, The Military, and Decision Authority in the Soviet Union," World Politics, Vol. 40, No. 1 (October), pp. 55-81.

Lepingwell's work employs a similar framework, which he labels the "integrated model," but he applies it at a lower level of analysis. He postulates that the General Staff behaves as a rational actor, weighing threats in a relatively unbiased manner and determining rational Soviet responses to them. In his view, it is the armed services which have the capacity to behave in terms of organizational or bureaucratic politics, and to use their expertise and role in implementation to inject their own interests into the equation. He concludes that, in order to explain the actions and even the continued existence of the Soviet air defense forces, it is necessary to view Soviet defense decision-making through this prism.

What we have, therefore, is the General Staff seemingly taking on two distinctly different roles in the two models: an organizational actor in Rumer's work, and a rational actor in Lepingwell's. This apparent contradiction is logically integrated using Meyer's three-layered analytic framework. In Meyer's view, the political leadership and, most importantly, the Defense Council (Level I) make broad socio-political doctrinal and economic decisions. Level II decision-makers, the General Staff and Ministry of Defense officials, construct and implement the military-technical side of doctrine, military strategy, and the five-year defense plans. The services and industrial ministries, comprising Level III, are concerned with matters of operational art, tactics, and concrete weapons programs.

The General Staff is therefore the pivotal player. Occasionally it behaves as an organizational actor, when it interacts with superior actors at Level I. At such times the General Staff must use its organizational resources to attempt to protect its own priorities against other institutional claimants to scarce resources. It also, however, has

its own set of "rational" institutional priorities, and within the Ministry of Defense it must frequently serve as mediator of the diverse interests of the services. In this sense it indeed behaves as a rational actor. We therefore see that, rather than presenting inconsistent paradigms, Rumer and Lepingwell have simply focused at two different levels of analysis and hence present different aspects of the same model.

5. INTEGRATION OF FACTORS IN SOVIET NET ASSESSMENTS

Partan explicitly, and the other authors implicitly, demonstrate that the available evidence indicates a tendency for the Soviets to aggregate rather than integrate the various factors which have been discussed relevant to theater net assessments. Integrative tendencies are apparent only in Soviet recognition of trade-offs between various factors; their discussion of these trade-offs reveals a proclivity to avoid making choices and, instead, to devise ways around them.

The first set of trade-offs involves measures to conduct careful preparations before engaging in conflict with the enemy. Partan has shown that when preparations to confront possible first use of nuclear weapons by the enemy, including keeping one's own forces on nuclear alert, could be construed as provocative, such preparations are foregone. The Soviets have developed strategic intelligence and monitoring capabilities to compensate for the necessity of making this trade-off.

The other conflict involving preparations has to do with surprise. When detailed preparations for an operation could be observed by the enemy and thus lessen the degree of surprise, the Soviets explicitly choose surprise even at the expense of preparations. They insist, however, that the explicit choice rarely has to be made, and recommend a whole series of measures of deception and secrecy in order to minimize the extent to which preparations reveal the character or details of war plans.

Phillips' (1989b) work on command and control centers around another trade-off, that between centralization and decentralization. The development of radioelectronic combat has made it possible to maintain the desired centralization of troop control

while solving the consequent vulnerability problems. Lepingwell's work also clearly demonstrates the Soviet preference for centralized command and control; the Soviet air defenses have remained centralized since their inception, with the exception of the since-reversed reorganization of 1981.

Finally, Partan notes a consideration of the trade-off between numerical superiority and coalition unity, where one element can compensate for weaknesses in the other. Sands' work demonstrates the strong preference the Soviets maintain for alliance cohesion, and leads to a reasonable hypothesis that strength along the qualitative dimension may be considered preferable to slight superiority in numbers.

6. SOVIET NET ASSESSMENT: HOW "SOVIET?"

The final question we ask in this report concerns the uniqueness of Soviet net assessment. Rumer, after tracing surrogate arguments concerning Soviet balance assessment over the course of four decades, concludes that these assessments reflect simple common sense. Any great power in the position of the Soviet Union would rationally perform assessment in precisely the way the Soviets have.

The key phrase, however, is "in the position of the Soviet Union." The Soviet military has a cultural and military history which is indeed unique, and that history has certainly shaped their "common-sense" approach to assessment. The very fact that discussions of the Great Patriotic War are the most prominent forum for debating military issues in the military literature reveals a great deal about the impact of history on their orientation toward these issues. Rumer's work, as well as Partan's and Phillips', demonstrates that the Soviet near obsession with the factor of surprise stems largely from the disastrous experience of the beginning period of that war. Similarly, Phillips (1989b) convincingly establishes the relationship between the Soviet World War II experience and the military's continuing predilection for centralized command and control. Along another dimension, Lepingwell shows that the very existence of the air defense forces as a service can be attributed to the unique Soviet historical position -- the disasters borne of disorganized and decentralized air defense during World War II, and the need to counter the threat of American strategic bombing in the immediate post-war period.

Lepingwell's dissection of PVO behavior also demonstrates how "common sense" organizational procedures, such as slow learning behavior, slow adaptation to lessons learned, propensity to follow standard operating procedures, etc., are played out in the context of the Soviet defense decision-making process. The services often cannot simply lobby for their own advantage or act unilaterally once a decision contradictory to their interests has been made by the higher military or political leadership. Not only would such a course of action be politically impermissible, but as Meyer demonstrates, the economic latitude to act according to those interests does not exist. They instead rely on surrogate discussions of touchy issues, taking advantage of external circumstances and often merely biding their time until the situation become favorable to them once again.

7. IMPLICATIONS

What are the implications of these findings for American policy makers? How, for instance, do the Soviets react to various American defense programs? Which do they find most threatening, and why? How does the Soviet defense decision-making process affect likely Soviet responses to their perceived threat? Certainly the most striking conclusion that can be derived from our work is that qualitative factors occupy a central position in Soviet net assessment, perhaps even more important than mere bean counting.

What the Soviet military focuses on when examining the military balance, therefore, must be the forces themselves and, in particular, the manner in which those forces are produced, organized and deployed. We have outlined five major qualities which the Soviets find essential to a well-functioning military: (1) the capacity to use and react to surprise; (2) the integration of forces and other assets, especially command and control and alliances; (3) the quality of the strategic rear; (4) the level of development of military art; and (5) the quality of organization and control of forces, with a marked preference for centralization. Our research demonstrates that the Soviet military will continue to try to perfect itself along these lines, and concomitantly will feel most threatened by and respond most vigorously to an opponent who excels in these areas.

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