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1. Enclosure (1) is forwarded as a matter of possible interest.

2. This research memorandum is a product of CNA's continuing analysis of Soviet military writings. I discusses two significant trends in Soviet military thought that may shape Soviet military strategy into the 21st century. One trend is a reduction in Soviet forces consistent with a doctrine of "reasonable sufficiency." The Soviets appear ready to abandon conventional and theater nuclear options that cost them fortunes to acquire in the 1970s and 1980s. On the other hand, the Soviets will retain their strategic nuclear options even after a START agreement. A continuing commitment to the strategic nuclear sphere is reinforced by the trend towards militarization of space. The Soviets see space as the key to strategic nuclear options and to superpower status in the 21st century. At the same time, the Soviets may be willing to soften the competition in space. Prominent Soviets have begun to suggest that mutual ABM deployments of "thin defenses" would be preferable to the current prohibitions of the ABM treaty.

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Soviet Military Strategy Towards 2010

James M. McConnell

Operations and Support Division



ABSTRACT

This paper tries to identify significant current trends that may continue into the 21st century and shape Soviet military strategy. An armscontrol trend, stemming from the Soviet concept of "reasonable sufficiency," seems slated to handicap the USSR severely in options for fighting and winning large-scale conventional and theater-nuclear wars. Moscow evidently feels the strategic nuclear sphere will be the key arena of military competition in the future. First, the USSR now shows a greater commitment to offensive counterforce than was true of the period before "reasonable sufficiency." Second, Moscow's interest in the strategic nuclear sphere will be reinforced in the future by a long-term trend toward space warfare. However, it may be possible to soften the competition in this sphere through arms control. Prominent Soviets have already begun to suggest that, if the U.S. will limit its SDI ambitions to a "thin" defense, Moscow might actually prefer mutual comprehensive ABM deployments to continued adherence to the 1972 ABM Treaty.

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INTRODUCTION

The hazards of pronouncing on a future over two decades away are too easily appreciated to have to dilate on the subject here. The methodology is simple: to identify those significant trends--militarypolitical and military-technological--in the current environment that appear to have the staying power to live on into the next century and shape Soviet military strategy, including its conventional, theaternuclear, and strategic-nuclear varieties. But we must remember that trends disappear, become transformed, even reverse themselves, and new "law-governed regularities" (to use a Soviet term) come into existence, which events have done little to prepare us to anticipate. Just to take one example from our cwn time: Who, at the outset of the 1980s, could have predicted perestroyka? At that time, it was not even a gleam in Gorbachev's eye.

The reference to *perestroyka* is happy in its timing, since the innovation, as it applies to military affairs, is surely the most significant of the trends that can shape military strategy out to the year 2010. Even if Gorbachev fails in his larger objective of reconstructing the political, economic, and socio-cultural framework of the USSR, the core program of favoring high-tech investment is a good bet for successful implementation, and this cannot be carried off without taking resources away from the development of some currently favored military options. Reallocating resources is a traditional Soviet way of resolving problems, and has little to do with the fundamental reforms put on the agenda by *perestroyka*.

Responsible Western decision-makers are right to be skeptical as long as Soviet words on arms reduction are not translated into deeds. but from a purely analytical standpoint there are good reasons to expect a decisive reduction in the threat. If Moscow comes even close to implementing its announced arms control agenda -- talk is said to be cheap, but it is not, it is only cheaper than action--the USSR will have divested itself of advantages in a whole series of limited military options that it had spent a fortune to acquire over the last couple of decades. Aside from assured destruction, the only option in which the Soviet posture will probably not be materially impaired by arms control is that for fighting a limited intercontinental nuclear war; the proposed 50-percent reduction in strategic warheads will cut counterforce capabilities, but it will also make counterforce commensurately easier by limiting the targets of an attack. Its advantages in all other limited options -- Eurostrategic, tacticalnuclear, and conventional -- Moscow is evidently prepared to abandon.

This, then, is a current trend--toward arms control and the abandonment of military options, with the crucial exception of the option for world nuclear war. However, there is also another trend favoring renewed attention to the option for world nuclear war--the military-technological trend toward the militarization of space. The central hypothesis of this paper is that there may be a connection between these two trends. Why has Moscow made its truly astonishing arms-control proposals? Although many motives have been offered in the USSR and in the West. circumstantial evidence and some Soviet testimony suggest that the precipitating event was Reagan's 1983 threat to shift the military competition to space, and the ensuing Soviet conviction that only through lavish investments in civilian information technology could the USSR hope to get the same military-space "reverse spin-off" that a competitive civilian economy in the West, without design or plan, had yielded to its defense establishment. In short, the first (military-political) trend toward arms reductions may have been occasioned by the second (military-technological) trend threatening the militarization of space.

But, it will be argued, even if the spectre of militarytechnological defeat was seminal in the turn to arms reduction -- and that is by no means certain--it does not necessarily follow that the USSR will revert to militarism as its mainstay once the economic infrastructure for state security is repaired. The Soviets will have built up a new set of vested interests around the comforts of perestroyka, it is said, and the people will be most reluctant to return to the asceticism demanded by a competitive war economy. If I am skeptical of this, it is not because of any vulgar-conservative argument to the effect that a leopard never changes its spots. There is nothing inherent in Marxism or Leninism that led the Soviet Union to militarism; and it was probably not vested interests that put them there or kept them there. It was at bottom a rational calculation of comparative advantage, the same calculation that is made in the West, except the West, not unnaturally, perceives its comparative advantage to lie in a different direction than Moscow's. The Soviets apparently discovered, through a process of trial and error, that a leading role for the USSR in the international system would be a long time coming if reliance were to be put on economic competition, whereas such a role could almost immediately be realized if the Kremlin exploited its ability to impose a real burden of defense on its own people several times larger than that of its Western competitors.

Even if perestroyka succeeds in restoring Soviet growth, that is not going to change the terms of this thoroughly rational calculus. The Soviets may forget the lessons learned the hard way in the flush of enthusiasm for perestroyka, but life will teach it to them again: if they rely exclusively on economic competition, they will lose. The West should welcome perestroyka; like peaceful coexistence and related concepts of the post-Stalin era, it will reduce the ideological distance between the two systems, and to that extent will reduce the Soviet drive to compete. Nevertheless, the Soviet drive to compete has not disappeared. And the competition that remains is likely to take a more militarily effective form, thanks to perestroyka itself.

What does all this mean for the military-strategic sphere? Judging by the Soviet arms-control posture, which reflects an abandonment of limited earthbound military options on a long-term basis, Moscow probably views aerospace as the coming arena of competition. This is where the technological challenge is most daunting, but also where success will be more rewarding in the promotion and protection of vital interests. Analysts continue to predict the end of the nuclear era, but in fact it may be just beginning.

It is still possible, of course, that once arms-control removes the threat posed by the USSR in traditional spheres, the U.S. and USSR will be able to strike a bargain continuing the ban on a comprehensive BMD. More likely, however, there will be an agreement for mutual deployments that will be restricted in their capabilities to defend national territories in a global conflict but adequate to handle thirdparty threats and unauthorized or accidental launches. There is evidence that some elements in Moscow have already come around to this view. If there is a meeting of minds in East and West to this end, it will mean a continuation of the competition but, at least for a while, in a regulated way.

In presenting details in the pages that follow, attention will first be focused on the arms-control trend toward reducing the importance of Soviet conventional and theater-nuclear strategies, and then on the trend toward enhancing the relative importance of the strategic-nuclear sphere, in both its offensive and defensive aspects.

REASONABLE SUFFICIENCY: IMMEDIATE IMPLICATIONS

A profound change has taken place in the Soviet declarator; position on military affairs. Two years in gestation,¹ the great breakthrough came with the promulgation of the new military doctrine of "reasonable sufficiency" or "sufficiency for defense" by the Political Consultative Committee of the Warsaw Pact in May 1987.² The new doctrine has implications for both strategic nuclear war and for other options, especially conventional war with NATO. The strategic-nuclear side, however, is less affected by the "new thinking," and we will reserve discussion of it until later, concentrating for the time being on the conventional implications of reasonable sufficiency.

How does Moscow define conventional sufficiency? According to Minister of Defense Yazov, "For conventional capabilities, sufficiency envisages that quantity and quality of armed forces and armaments capable of reliably ensuring the collective defense of the socialist community...."³ This is not very helpful, since the Russian word for defense (oborona) has the same ambiguity as in English. It should be determined whether the word is to be understood in its socio-political sense (defense as opposed to attack and aggression) or in its militarytechnical sense as what the Soviets call, a "type (or method) of combat action" (defense as opposed to offense).⁴ It is clear from Soviet discussions that both senses of the term are involved.³ On the one hand, argued First Deputy Chief of the General Staff Lobov, "We are not preparing our armed forces to attack some other state...." On the other hand, according to Lobov, defense "as a type of combat action" also prevails in the Soviet calculation. Although it is nice to hear that Moscow has no aggressive intentions, it is important to know how the matter stands with defense versus offense. In this instance, Lobov's claim that, "generally the military-technical essence of our doctrine is defensive"⁶ can only be accepted with qualifications. It is easy to accept this with respect to the long-term implications of sufficiency but not with respect to its current implications.

An article published in the summer of 1988 by two staff members of the Institute for the U.S., Andrey Kokoshin and retired General-Major Valentin Larionov, addressed the current and the long-term implications of sufficiency. Kokoshin is a Deputy Director of the Institute; Larionov. for long years with the Military-Science Directorate of the General Staff and with the Voroshilov Academy of the General Staff, is famous in the West for his part in drafting the 1962 book *Military Strategy*, edited by Marshal V.D. Sokolovskiy. In the summer of 1987 Kokoshin and Larionov collaborated on an article that provided one of the earliest indications that Moscow might be on the verge of serious conventional arms control proposals.⁷ A year later, in their 1988 article, they postulated, for heuristic purposes, four hypothetical versions of a defensive strategy for the two blocs.

The first version is not a defensive strategy at all, except in the socio-political sense. The party subjected to attack will not, even initially, assume a defensive posture, but will immediately go on the offensive, at the strategic as well as the operational and tactical levels, until the enemy is completely defeated. Because both parties will take the offensive simultaneously in an attempt to shift the conflict to the other side's territory, the war from the very beginning will be characterized by a series of what the Soviets call "meeting battles."⁸ The Soviets are now quite frank in stating that Version I had pride of place in Soviet military strategy both in the 1930s and in the postwar period right down to the promulgation of the new Warsaw Pact doctrine in May 1987.

Versions II and III of a "defensive" strategy need to be discussed together, because they are competitors for selection as the principal version at the present time (though not ultimately). In Version II, following the enemy's attack, the USSR will take up a defensive posture rather than the offensive posture of Version I. "After repelling the [opponent's] offensive in the course of a defensive battle that allows for a retreat and the abandonment of some territory," the USSR will still have the capability -- "using reserves brought up from the depth--to shift over to a decisive counteroffensive (if necessary, even over to a general offensive) to the point of completely defeating [razgrom] the opponent on his own territory." Version III is less ambitious. It also envisages a successful initial defense followed by a counteroffensive, but only to the point of restoring the status quo ante; the opponent will not have to cope with a decisive offensive on his own territory. Version II, like Version I examined earlier, assumes offensives at all three levels of the military art--strategic, operational and tactical. Version III envisages offensives only at the operational and tactical levels, not the strategic. The model for Version II is the Battle of Kursk in 1943, when the Soviet Supreme High Command intentionally -- and not out of weakness--adopted a defensive posture against the Germans; after repelling the enemy offensive, Moscow began a counteroffensive, which was subsequently transformed into a general offensive taking the war into the heart of Germany. The model for Version III is the Battle of Khalkin-Gol in 1939, when the Soviets, after stopping the Japanese invasion of Mongolia, decided not to carry the war to the territory from 10which the invasion was launched.

It is clear from events that the Warsaw Pact doctrine of May 1987 did not pronounce in favor of either of these "defensive" versions; it simply stipulated that "the basic method of action of the Soviet armed forces in repelling aggression will be defensive operations and combat action,"¹¹ leaving open the question of what to do after the aggression had been repelled. This failure to pronounce permitted a dispute to break out between a coalition of military strategists, and military and civilian military-policy analysts favoring Version II¹² and a group of retired military and civilian military-policy analysts espousing Version III. Initially, the proponents of Version II seemed to be in a secure position, but in the summer of 1988 the balance shifted away from them. The defection of Kokoshin and General-Major Larionov is revealing on this score. In the summer of 1987, they had held up the Battle of Kursk, the model for Version II, as meeting the standards of reasonable sufficiency at the current stage.¹⁴ In an interview in September 1988, however, when asked whether Soviet policy still favored Version II, Kokoshin answered:

That assessment could have been regarded as accurate even three months ago, but is already out of date. Things are moving very quickly here. There is a real possibility that the USSR will adopt the third model as its goal. We shall see what the results are of the current major review of military strategy.

Later, in his statement before the House Armed Services Committee in March 1989. Kokoshin said that "the objective of the armed forces of each side...would be simply to restore the situation which existed before the outbreak of hostilities--the status quo ante bellum--without crossing the border of the other side....¹⁶ Larionov made the same point in an April 1989 interview with a Western reporter.¹⁷ Although this implied the ascendancy, if not the ultimate triumph, of Version III, at that time defenders of Version II were not yet prepared to concede defeat.¹⁸ However, a subsequent unsigned Novosti Press Agency article published in Poland claimed that the abandonment of large-scale strategic-offensive operations to achieve victory and substitution of the objective of reestablishing the status quo ante had been incorporated into "all fundamental documents, including combat regulations."¹⁹

The difference between these two versions of a "defensive" strategy would be of less interest if they represented simply a difference in war plans, leaving capabilities the same; war plans, after all, can be changed in relatively short order. However, there was also a difference in advocated force structures. Proponents of Version III generally seemed to favor significant unilateral reductions in general purpose forces, against the militant opposition of proponents of Variant II. There is little in the record, however, to suggest that the latter were in principle against a Version III force structure for the USSR, provided that it was the result of negotiated mutual reductions, even if asymmetrical.²⁰

The dispute was settled with Gorbachev's announcement of unilateral cuts of half a million men in the armed forces over the two years 1989-1990 Western analysts believe that the scheduled removal from the forward area of six tank divisions, the one air-assault brigade, and all assault-landing bridging formations will sharply reduce the USSR's ability to launch a deep offensive on short notice.²¹ This development reflects a new access of influence for civilian foreign- and military-policy analysts, the so-called *institutchiki*. The initiative for unilateral steps in disarmament had come from them, 22 against the solid opposition of the higher command. 23 In the past Western analysts were criticized for using the views of the *institutchiki* as oblique evidence of Soviet intentions. It was said of them that (1) they know nothing except what appears in Western literature and (2) they have no influence. 24 These are two different matters; the first proposition can be false and the other true. At the time, there appeared to be good grounds for believing the military-policy analysts knew much more than they were being credited with in the West, but out of a lack of knowledge, no position could be taken on the question of influence, except to note privately that it would be strange for a regime believing so strongly in the political essence of war not to have a regular military-political review of strategic options.

It now appears that the institutchiki have both knowledge and influence. Nikolay Shmelev recently revealed that, in the early 1970s, a number of colleagues at his institute (unnamed) opposed the deployment of SS-20 missiles and even sent their protests to "the top."²⁵ How could they protest a deployment that they do not know is being contemplated? In the past, of course, Moscow relied more on war-waging capabilities for political impact, which meant a greater influence for military strategists, whereas today it would strain the military art all out of shape to use it to justify the tenets of reasonable sufficiency. The higher command may support perestroyka because it promises future benefits--and I think they do support it for that reason--but they can hardly take heart from the current savaging of traditional Soviet military options on the advice of political scientists. As Kokoshin and Larionov have recently noted, while military professionals are actively involved in current discussions of military development. "this issue is increasingly losing its narrowly military character," and attracting the attention of policymakers, civilian scientists, and even the public.

This brings us down to Version IV, which is the long-term goal of reasonable sufficiency.

REASONABLE SUFFICIENCY: LONG-TERM OBJECTIVE

Version IV in the Kokoshin-Larionov scheme is the most defensive of the four hypothetical strategies. According to the authoritative May 1987 statement of the Warsaw Pact, the ultimate goal of arms control should be the reduction of forces in Europe to a level where neither alliance "would have the means for a surprise attack on the other side or for mounting offensive operations at all."²⁷ This objective would be realized in Version IV, the ultimate in a "non-offensive defense," that is, a posture that would be defensive in the military-political sense and non-offensive in the military-strategic sense. Whereas Versions I and II allowed for victory through an offensive at all three levels of the military art, and Version III at only the operational and tactical levels, Version IV admits a potential for tactical victory alone. "On a strategic and operational scale the concept of victory is ruled out." 28

Version IV is to be realized in three different stages of negotiated arms control, further unilateral measures being ruled out, at least for the time being. The first stage (1991-1994) calls for the elimination of imbalances and asymmetries in a number of armaments categories (tanks, armored personnel carriers, artillery, tactical "strike" aircraft, combat helicopters), together with a reduction of the armed forces of both sides to a level 10 to 15 percent below that now held by NATO; in this stage the Warsaw Pact would have to make far deeper reductions than NATO. The second stage (1994 through 1997) calls for the armed forces and armaments of both sides to be reduced, this time symmetrically, by another 25 percent (roughly 500,000 men). The third stage (1997 through 2000) will be characterized by further mutual reductions and, more importantly, by deliberate efforts to restructure both alliances on exclusively defensive principles.²⁹ The two sides would not simply renounce offensives; they would supposedly be incapable of offensives. It is interesting to note that, in principle, Version IV has the support of top military leaders, 30 though we may find, when it comes down to Soviet final proposals, that there is a devil in the details.

Let us leave aside the question of whether, given the ambiguity of weapon systems, it is at all possible to create forces incapable of either strategic or operational offensives. Certainly the Soviets in general, and Kokoshin and Larionov in particular, have furnished no practical guides through this thicket. Some Western analysts even characterize the concept of non-offensive defense as utopian, on the order of the Soviet proposal to abolish all nuclear weapons. However, the two proposals are not lacking in realism to the same degree. At bottom, the much smaller standing armies of the Soviet proposal, however structured, may turn out much like the standing armies of the pre-World War I period, which were designed, not to take the offensive, but to cover mobilization.

This raises an interesting question that we need to address. As far as one can tell from Soviet discussions, reasonable sufficiency and non-offensive defense apply only to standing armies. However, one can create reserves and mobilize them; does non-offensive defense govern their makeup and use? Here, too, a debate may already be shaping up. On the one hand, there are military-policy analysts who argue that any large-scale conventional conflict between the blocs would "inevitably escalate," and it is only necessary to prevent an opponent's victory in a short, intense conventional conflict. Because a protracted war cannot be fought on a nonnuclear basis, the USSR can safely "abolish its cumbersome system for mobilizing industry....³¹ Other military strategists and military-policy analysts seem to be sending a different message. Attention is now focused on lessons to be gained from discussions of the 1920s in the USSR, especially the arguments against a "strategy of annihilation" advanced by A.A. Svechin, who favored instead a so-called "strategy of attrition." According to General-Major Larionov, rather than a short war decided by a few fast-paced offensive operations, Svechin's strategy of attrition emphasized "the protracted character of a future conflict, which would require mobilization of all the country's resources and a multi-option strategy."³²

The debate over a strategy of attrition may be related to another debate going on now in the USSR over changing the system for manning the armed forces to accord with the non-offensive defense of Version IV. As in the case of their military strategy, some Soviet theorists are reaching back for guidance on manning into the 1920s, when the USSR replaced the mass conscript army of the civil war and intervention period with a so-called "mixed" recruiting system, combining a small volunteer cadre army with territorial-militia formations based on Military-policy analyst Aleksey Arbatov is one of universal service." those favoring the shift over to a volunteer professional army; 35 he is not concerned about manpower reserves because he is not in favor of a strategy of attrition. Chief of the General Staff Moiseev and his superior, Minister of Defense Yazov, however, are quite concerned about reserves. Moiseev's very first objection to voluntary recruitment is that it does not generate enough well-trained reserves, because of longer-term enlistments and smaller turnover of personnel on active duty. Hence, their preference for relatively short (two-year) conscript service, whereby even the small regular army of Version IV would yield large trained reserves.³⁰ The virtually unanimous rejection of the volunteer principle by the top military leadership³⁷ suggested until recently that it might never be instituted. However, worth noting is the recent opinion of the Chairman of the new Supreme Soviet Committee for Defense and Matters of State Security that a volunteer army "would be stronger than the present one... I disagree with those who say that the idea of a professional army should be rejected out of hand, so to speak, merely because it is not to the taste of certain military leaders."

Surely, it makes a difference to the West how this debate turns out. If the General Staff gets its way with a strategy of attrition served by an unchanged manning system for the armed forces, the world may find itself moving away from a competition of standing armies, only to be caught up in a competition of mobilization potentials, that is, a transition from World War II to World War I scenarios. No doubt this is progress, but only a world that has lived for half a century under the gun of standing armies ready to go into action at any moment is likely to deem it a desirable state of affairs. But regardless of how the debate turns out on mobilization capabilities for a war of attrition, arms control seems slated to make standing armies poor instruments for conventional war and a peacetime diplomacy of force. Arms control will also cripple Soviet theater nuclear options. Eurostrategy has already been finished off by the INF Treaty, and success in conventional arms reductions is almost certainly going to mean negotiated inroads on tactical-nuclear capabilities. Standing armies may be left with punitive capabilities and an escalation bridge, but probably not with capabilities for fighting and winning theater nuclear wars.

This leaves only strategic nuclear warfare relatively unconstrained. To be sure, arms control has even this option in its sights, but the proposed 50-percent reduction in warheads seems to put few additional difficulties in the way of counterforce capabilities for waging such a war. The Soviet declared objective of ultimately eliminating all nuclear weapons is a non-starter, and their unofficial proposals for minimum-deterrent postures (in both their land- and seabased versions), ³⁹ which are recommended as an intermediate step along the way to a nuclear-free world, have not attracted favorable official attention in the West.

However, it is one thing to say there is latitude for competition in the strategic sphere. It is quite another thing to say the Soviets intend to exploit this latitude. Let us now take up the evidence for this.

STRATEGIC NUCLEAR SUFFICIENCY TODAY

The Soviet Union, not unreasonably, feels the strategic nuclear sphere will be the key arena of military competition in the future. As one officer puts it, "maintaining the balance at the strategic level makes it possible to reduce the military potential at other, lower levels of confrontation...."⁴⁰ Even Aleksey Arbatov who is not uncritical of certain aspects of Soviet strategic policy, takes the same stand. He complains that "a disproportionately large share of Soviet resources are directed toward the confrontation in nuclear and conventional armed forces and armaments in the theaters of Eurasia, as well as toward the contest with the West on the seas and oceans, including near conflict regions of the developing world...." That emphasis, in his view, is misplaced. "The pivotal element in the global military-strategic confrontation, which latter is the most important aspect of security, has been and still is the correlation of strategic offensive potentials of the USSR and the U.S." He adds that maintaining the strategic balance is an unconditional priority of our security and defense policy, and our strategy and armaments programs. As long as nuclear weapons have not been eliminated everywhere and fully, this task remains the main guarantee of our security and should be fulfilled, whatever the cost.... Here, as they say, we will not quibble over the price.⁴¹

Just as important is the character of the Soviet commitment to the strategic sphere. Although there are determined efforts to mislead the West on this score, it would appear that reasonable sufficiency has made very little change in the Soviet concept of global nuclear war. Sufficiency here is a call for parity, but a parity that has (to employ Soviet terminology) both "qualitative" and "quantitative" aspects. The qualitative aspect is said to deal with the ability to carry out a retaliatory strike inflicting unacceptable damage. References to quantity, on the other hand, as one Soviet author informs us, is a shorthand way of advocating counterforce capabilities." The celebrated formula of Eugene Primakov holds that, under reasonable sufficiency, "the qualitative assessment of parity comes to the fore, ... while the quantitative assessment still retains importance.... "43 Other writers in the mainstream confirm the continuing importance of the quantitative aspect. "It is necessary to emphasize," says Andrey Kokoshin, "that one of the important factors in the stability of the military-strategic balance... is the capacity of a country whose strategic forces have been subjected to attack of restoring the disturbed balance with a retaliatory strike against analogous forces belonging to the aggressor...." And he subsequently added that one could speak of a military-strategic balance when "the side subjected to attack...retains the ability to hit in a retaliatory strike a broad class of military targets and to inflict unacceptable damage on the population and industry of the aggressor country.... "44" As G.K. Lednev says, the continued protestations of his compatriots that the USSR has only a punitive strategy and not a counterforce strategy "recall the pilot who puts on his parachute and repeats that he does not acknowledge the laws of gravity."

Of course, the Soviets always present their interest in counterforce as symmetrically retaliatory, but this does not necessarily follow even from their declaratory position. Moscow explicitly repudiates the unthinking Western interpretation that the Soviet pledge of no-first-use of nuclear weapons means no-first-use of strategic nuclear weapons. As Aleksey Arbatov explains, "This pledge refers to all nuclear weapons, without differentiating between strategic forces, intermediate-range, shorter-range, or tactical nuclear systems. In other words, the USSR will not consider itself constrained in launching a strategic retaliatory strike if the Americans use nuclear weapons against targets in any theater of war."⁴⁰

How does the current Soviet view of parity differ from that held before the promulgation of reasonable sufficiency? It doesn't; since Brezhnev's speech at Tula in 1977, the Soviets have emphasized parity in assured destruction, without renouncing counterforce options.⁴⁷ Soviet capabilities for hard-target kill are almost exclusively a product of the period after Tula. At the same time that these capabilities were being introduced, Moscow adopted a new form of strategic operation--"the strategic operation for repelling an opponent's aerospace attack." Evidence at the time was persuasive that this included ICBM action against an opponent's strategic means of nuclear attack,⁴⁸ and past speculation that it also included anti-satellite and ballistic missile defense⁴⁹ has recently been supported in the literature.⁵⁰

Since the advent of reasonable sufficiency, the quantitative side seems to have assumed even greater prominence. In a work published in 1988, well after the announcement of reasonable sufficiency, three distinguished theoreticians said the Soviet armed forces as a whole had three "basic" tasks that were of "vital importance to the state." These were as follows, in the order repeatedly given throughout the book: "repelling an opponent's aerospace attack;" "suppressing the potential of an opponent's war economy;" and "destroying groupings of an opponent's armed forces," without which "the war's political objectives cannot, as a rule, be achieved and a victorious outcome to it cannot be concluded."⁵¹ Thus, two tasks out of the top three are counterforce, and the first enumerated task is not countervalue (qualitative) but counterstrategic (quantitative).

In private conversations with Westerners, Soviet *institutchiki* attempt to downplay the significance of this work. Statements made about the book in the Soviet press, where one would expect a reluctance to mislead Soviet cadres, should be more reliable. In this connection, according to Aleksandr Savel'ev, on the staff of the Institute of World Economy and International Relations in Moscow, one can "conclude," judging by the current military-strategic and military-political literature, that, "at present," the three missions enumerated above are in fact the Soviet armed forces' "main tasks," that they involve both conventional and nuclear scenarios, and that "planning the makeup of the armed forces and modeling the various options for their possible employment" are carried out using these tasks as a point of departure.⁵² The content of the counterstrategic mission has also been expanded--from land to sea. Until the appearance of the 1988 work mentioned above, the "main" task of the Soviet Navy by far and away had been SSBN countervalue "action against the shore;" destroying the opponent's SSBNs, by contrast, was considered "secondary," and apparently mainly involved strikes against SSBN bases.⁵³ There was no evidence in the literature that combatting SSBNs had been integrated into the "strategic operation for repelling an opponent's aerospace attack."

Now, the very first mission of the Soviet Navy is listed as "repelling an opponent's aerospace attack from ocean axes" by destroying his sea-based nuclear delivery platforms; these must be constantly tracked in peacetime and "simultaneously" hit at the very beginning of the war, "regardless of the type of weapons being used," conventional or nuclear. "The basic objective of this combat action is to prevent or reduce as much as possible the damage that can be inflicted on the state by the opponent's aerospace retaliatory strike." In the future, it is predicted, space-based nonacoustic means will play a "big role" in detecting submarines.⁵⁴

That Moscow is prepared to compete stoutly in this field is evident from a recent *Pravda* article by V.S. Etkin, Chief of the Applied Space Physics Department of the Academy of Sciences' Space Research Institute. He attributes to "U.S. specialists" a belief--almost certainly held in fact by his own compatriots--"that the country--U.S. or USSR--which first manages to create a space system for detecting submarines will achieve military superiority," i.e., by Soviet definition, the ability to fight and win an all-out nuclear war without incurring unacceptable damage. That this was not simply a unilateral striving on the part of America was tacitly admitted in the author's subsequent reference to "the competition to acquire such space means."⁵⁵

However, expansion of counterforce ambitions from land to sea is not the only earnest of Soviet preoccupation with strategic warwaging. There is also the technological trend toward space weaponry, which seems slated to dominate the moves and countermoves of the coming decades.

STRATEGIC NUCLEAR SUFFICIENCY IN THE FORESEEABLE FUTURE

In the introduction, the hypothesis was advanced that there may be a connection between the emerging potential for space warfare and the Soviet decision to negotiate radical reductions in general-purpose forces. Why did Moscow decide in favor of these reductions? Numerous reasons have been advanced in the West--politico-military, ⁵⁶ foreignpolicy, 57 narrowly military, 58 economic. 59 There is also a school, to which this author belongs, that postulates immediate economic but ultimate military reasons as the factor that tipped the scales.

Certainly, Moscow is concerned about the lag in economic growth evident since the mid-1970s. At that time, Brezhnev had abandoned the traditional high-investment ("extensive") approach to growth, ostensibly in favor of a better use of resources ("intensification"); actually there was very little intensification, even of the traditional kind. It is not generally appreciated in the West how much of Gorbachev's initial program for "accelerating socio-economic development" represented a reversion to traditional practices -- higher investment in heavy industry, especially machine-building, coupled with discipline in the work place. the anti-alcohol campaign, hortatory appeals to Soviet man's better nature, and so forth. It was only later, in large part in the interest of intensification, that Gorbachev added his perestroyka founded on nontraditional principles, but even today "acceleration" based on high investment lies at the heart of the Kremlin's economic strategy and is likely to survive the setbacks that perestroyka might suffer in the future.

The Kremlin's high-investment strategy has a narrow focus--the information-technology component of machine-building. The economist Nikolay Shmelev is even of the opinion that this technology is "the only field that demands a high degree of growth....It is unnecessary for Soviet traditional industries to achieve vigorous growth...."⁶⁰ There is a sense of great urgency in the Soviet concern for informatics. According to an article in the Central Committee's political journal,

> the entire developed world is now entering on a new economic era, in which information becomes the main economic factor. If we do not start implementing an informatics development program in the near term, then--without any exaggeration--by the end of the century we will find ourselves outside the bounds of modern civilization.⁶¹

The economic lag in turn will adversely affect national security. As two officials of the Foreign Ministry note,

It is no accident that political authorities in industrially developed countries are today confronted by the need to choose: either invest in civilian research, ensuring the competitiveness of national industry and consequently economic development, or create new armaments, taking the risk of falling behind in the scientific-technological race and thereby weakening the economic and, in the final analysis, the defense potential of the state...

One arrives, then, at the paradoxical conclusion: to enhance security, the USSR must cut security expenditures. Foreign Minister Shevardnadze says:

today, as never before, the ability of the armed forces to carry out their mission depends directly and mainly on a strong economy and a highly developed science.

Today, it is not so much its weapons stockpiles that are of decisive importance for the state's security as it is the ability to create and produce new weapons.... 63

There is a tendency in the West to regard the projected cuts in Soviet forces as one more non-traditional item in Gorbachev's *perestroyka*; hence the reflex assumption that, if *perestroyka* fails, all bets are off on arms control. However, there are precedents in Soviet history for cuts in current military capabilities that had the effect of benefitting the economy immediately and national security ultimately--in the 1920s, the late 1940s after World War II, and in Khrushchev's day from 1954 to 1960.⁶⁴

There is no question but that the Soviet military expects to benefit from "acceleration."⁶⁵ At the risk of being charged with "looking for clouds in silver linings," we must try to estimate the relative balance of projected economic and military benefits in the Soviet calculation. Is Moscow more interested in consumer welfare, in economic growth per se as an index of great-power status, or in competitive military achievements to strengthen its global political influence? Obviously, all these motives are present, if in some cases (consumer welfare) only instrumentally; the question is which one has the greater weight.

For an attempt at an answer, let us turn first to a remarkable article of the era of glasnost' -- the sort one never expected to appear in the Soviet press. The article was written by two institutchiki, Aleksey Izyumov and Andrey Kortunov, and published in the journal International Affairs, which has been taken under the wing of the Foreign Ministry. 66 According to the authors, the considerable foreignpolicy successes of the Soviet Union have never been predicated on its economy. "Indeed, in the 70 years of its existence the Soviet Union has not been able to come even close to the level of production efficiency and living standards of the leading capitalist countries, particularly the U.S...." Soviet foreign-policy successes rather have been "primarily due to such factors as the USSR's military strength....and the systematic allocation of a higher share of our national income to the needs of foreign and military policy than the governments of Western countries could provide in peacetime." The authors are unwilling to make a blanket critique of this emphasis on military strength; they simply question any automatic link between military strength and successful diplomacy. They especially single out for celebration the attainment of strategic parity and stress the requirement to keep America from regaining superiority; they thus establish their own priorities--in the strategic nuclear sphere⁶⁷--which, as we have seen, are also the priorities of their compatriots.

According to Izyumov and Kortunov, when the Soviet economy began to lag in the mid-1970s this did not generate concern because the economic weakness was being compensated for by an access of military strength. "In the second half of the 1970s and the early 1980s, the Soviet Union significantly expanded its potential both in nuclear and in conventional armaments on the continent. Never had the military balance in Europe emerged so favorably for the USSR and its allies...." The alarm bells only began to ring when the economic decline began to impact negatively on scientific-technological progress, especially in informatics, which in turn was seen to have adverse implications for defense.⁶⁸

In this situation, the authors see the USSR as having only two options. The first is to continue along the old track, but in the end this will ruin Soviet defense. "Exhaustion of the economy under the growing burden of military-policy expenditures will increasingly be reflected in the purely military-technical component of our power, especially if the arms race spreads to space," as the U.S. SDI program dictates. The other option is to hold down foreign-policy and military expenditures in order to bolster the economy. Deliberately expressed, as the authors themselves say, "in military language," this second option "is tantamount to 'falling back to previously prepared positions in order to minimize losses and accumulate forces'."⁶⁹ The clear implication is that, having accumulated sufficient forces, the USSR (to continue with the authors' military metaphor) will counterattack; Moscow will not have to fall back forever. "At this stage the need becomes urgent to adopt a doctrine that would ensure us the breathing space required for reconstructing the USSR's economy...."⁷⁰ No Soviet reader would miss the implications of the authors' reference to a "breathing space" or "respite" (*peredyshka*); this was the very word Lenin used in his speech to the Congress of Soviets in March 1918, urging ratification of the onerous Treaty of Brest-Litovsk with Germany. "We need peace," said Lenin at the time, "to gain a breathing space to give the masses a chance to create new forces of life. In all probability that breathing space will be of short duration...After we have rested, then, together with the international proletariat, we shall start a new October Revolution, but this time on a world scale."⁷¹

Izyumov and Kortunov are not the only Soviets now evoking the Brest Peace as a lesson for the times.⁷² The Soviets have complained about some Western interpretations of their current initiatives--that the USSR only wants a respite from domestic problems, after which it will throw itself with new energy into the arms race?⁷³ Yet the Soviets themselves raise the Brest analogy and argue the need for a peredyshka, also interpreted by them as a falling back in order to regroup and generate the strength for a counterblow.

There is, however, one big difference between Lenin's and Gorbachev's peredyshka. Lenin thought of his as short-lived, a matter of months; but Gorbachev wants his new course to be understood as strategic and not simply tactical.⁷⁴ He should probably be believed. Izyumov and Kortunov ask only that a military emphasis be avoided for the "foreseeable future," 15 an expression usually denoting the next 10 to 15 years. Colonel Proektor, too, feels that a diminution in the significance attached to a policy of force is "a trend of the present and foreseeable future."⁷⁶ According to Aleksey Arbatov, the USSR considers reductions in the military burden "a priority task of our military policy up to the year 2000."⁷⁷ That is also Gorbachev's planning horizon; his Comprehensive Program for Accelerating Socio-Economic Development stops at the year 2000. After that, Moscow will have to take stock anew. Izyumov and Kortunov cite with approval Lenin's remark that communism will vanquish the old social order only through higher economic efficiency, but if competition between the two systems is the name of the game, that is advice for losers. Credible Western forecasts suggest that, even if perestroyka is successful, the best estimate is for average annual Soviet growth of 3 percent.⁷⁸ At that rate, the USSR will be engaged for a long time in overtaking and surpassing capitalism. The temptation to seek respect through military strength is going to be strong.

Izyumov and Kortunov's reference to the vulnerability of their country's economy "if the arms race spreads to space" reflects the probable priority concern of the Kremlin. As Deputy Foreign Minister Petrovskiy puts ic, the U.S. creation of a comprehensive ABM system "may be of no less importance for military relations of the late 20th and early 21st century than the stockpiling of nuclear arms was for the decades since World War II."⁷⁹ Gorbachev himself, in his speech to the Supreme Soviet in November 1985, complained of the imperialists that,

> in undertaking an arms race in space, they hope to surpass us in electronics and computers. But we will find an answer....

> Our country will not allow parity to be disrupted. The Soviet Union will have to restore the balance....

Earlier research has noted the correlation between the U.S. move to shift the competition to space, the emergence of the Soviet concept of economic acceleration, and the concomitant debate over whether to cut expenditures on either social programs or conventional military capabilities.⁸¹ It must have been with a mounting sense of disr It must have been with a mounting sense of dismay that Moscow reviewed the evidence of the Reagan Administration's interest in space, even before the President's SDI speech of March 1983--the leak to Aviation Week of the successful X-ray laser test in 1981, the public position taken in 1982 by High Frontier, the head of which was the military advisor of Reagan's campaign, and so forth. 82 In one of his last acts as General Secretary in late October 1982, Brezhnev assembled at the Kremlin the elite of his officer corps, informing them of a "special need" to speak of strengthening the material foundations of the armed forces. "The struggle in the military-technological field has been sharply exacerbated, often assuming a fundamentally new character. A lag in this struggle is unacceptable."⁸³ What may have been troubling him can be surmised from a charge levelled by TASS commentator Leonid Ponomarev earlier that month: Washington is "now planning a military breakthrough into outer space."⁸⁴ American "preparations for a war in space" were also the subject of an October Revolution Day article that year by Minister of Defense Ustinov;⁸⁵ there can be no doubt that he was referring to a space-based strategic defense.⁸⁶ In January 1983, Moscow took the problem to its allies; the Pact leadership concluded that "the arms race is shifting to a qualitatively new, much more dangerous phase," involving "systems and means for conducting combat operations in space and from space."⁸⁷

Acknowledgement of a compelling need to change economic policy followed closely. The first casualty was Brezhnev's low-investment strategy; the achieved investment growth rate for the 1981-1985 planning period was over two-thirds higher than that projected in November 1981. The increase in the investment growth rate of machine-building was even more rapid.⁸⁸ The turnaround in that sector was already was even more rapid.⁸⁸ The turnaround in that sector was already revealed in the 1983 output figures.⁸⁹ The well-known Soviet economist Aganbegyan dates the "beginning of the restoration process" to General-Secretary Andropoy's maiden speech at the November 1982 Central Committee Plenum, ⁹⁰ which reflected a clear awareness of the USSR's economic problems but seemed to be short on remedies. A few months later, in January-February 1983, Tat'yana Zaslavskaya was writing her critique of the Soviet economic system--the so-called "Novosibirsk Document," which was presented to a high-level seminar in April $1983.^{3}$ Two months later, a Central Committee Plenum officially endorsed the notion that economic reform was "not simply a wish...but an objective necessity."92

Having decided on higher investment, the problem then evidently became one of paying for it. There were rumors already from the turn of 1982-1983 that Chief of the General Staff Ogarkov was at odds with the political leadership. However, the conflict only broke into the open in material sent to the printer in April 1983, a little over one month after Reagan's SDI speech. Western observers of the fight for resources in 1983-1984 have assumed Ogarkov was demanding higher allocations; the evidence suggests, however, that he was trying to hold on to what he had, specifically the very expensive option for protracted general conventional war adopted as the basis for the military side of the fiveyear plan 1981-1985. Arrayed against Ogarkov was General-Secretary Chernenko's presumed shield-bearer; Commander-in-Chief of the Warsaw Pact Kulikov, who argued by implication that, since a conventional war between the blocs would "inevitably" escalate -- something no Soviet had said for a decade -- expensive conventional capabilities were unnecessary. At this point in the debate, the issue was whether Soviet capabilities should be reduced unilaterally, much as Khrushchev had done in the 1950s. It took Gorbachev to put the reductions on a mutual basis; the imperialists would be asked to disarm at the same time as the $\frac{93}{93}$ USSR, certainly a more attractive course for the Soviet military.

To the extent that Western observers have identified a military interest in eliminating the Soviet lag in advanced technology, they have tended to interpret it as primarily a concern over the USSR's competitiveness in conventional warfare. Technological innovations in earthbound options, however, are relatively marginal, whereas in space, with its utter dependence on informatics and miniaturization, the Western advantage can be decisive for the fate of the USSR. That Soviet analysts appreciate the American comparative advantage in space warfare is evident from their charge that the U.S. took up SDI only when events of the 1970s and early 1980s demonstrated "the hopelessness of attempts to win the arms race in the traditional spheres."⁹⁴ Beyond the American comparative advantage, Moscow is likely to have in mind that strategic nuclear war offers the greatest physical threat to the USSR and affects its most vital interests. In the apparent Soviet view, to keep a war at the conventional level the victor's objective can only be the occupation of a defeated opponent's territory, not the replacement of his social system. The stability of a regional nuclear war between the blocs depends on confining threats of overthrowing social systems to only one or, at the most, "several" countries of the opposing bloc. In a strategic nuclear war, however, the entire social systems of both alliances are deemed to be at stake.⁹⁵

An article published early in the movement for economic reform by the influential political analyst Fedor Burlatskiy revealed the priority Soviet security concern. According to the author, in the mid-1970s a new technological revolution began, founded on microelectronics and information. "Mini-computers, integrated circuits, industrial robots, microprocessors--these are the holy of holies of the technological revolution." For all the positive aspects of this revolution, "it is impossible to rid oneself of an oppressive sense of alarm, seeing the direction and manner in which the capitalist centers of industrial might are directing these achievements." Burlatskiy continues in this vein for some time.

> Who will dare claim that technological progress can be harmful? Technophobia...is now archaic, like nostalgia for horse carts or bark sandals. Nevertheless.. we should still look at the other side of the coin, for the sun can burn if it is misused. What can we not say, then, of technological progress, which more than once has brought harm to men, especially in the military field?

Indeed, according to the author, "present-day technology is producing the most dangerous burns, first-degree burns, burns that will not heal, in military affairs...." He refers to the technological revolution that is spreading to conventional armaments, but that is not the crux of his concern.

The greatest step, not a step, a leap, even a breakthrough into the unknown, is the development of military space systems. We do not have to guess what lies behind the "Star Wars" program of President R. Reagan. On the strength of their achievements, primarily in the field of electronics, as well as by exploiting Japan's potential, the Americans hope to achieve superiority over the USSR in the military field. The means intended for so-called "space wars" are anti-satellite and anti-missile systems. To be very precise, it is these systems, used to destroy an opponent's missiles, that constitute the last word in the technology of tomorrow....

He concludes with the rhetorical question:

So, what is the moral, and what the solution? The solution lies in more active efforts by the socialist countries....to master the latest achievements of science and technology....

To be sure, it is true that the Gorbachev investment effort is focused on civilian machine-building,⁹⁷ but this by no means rules out national security as the ultimate concern. Here the American experience has been instructive for the Soviets. SDI was not the product of a deliberate military research and development project; an informed estimate is that 90 percent of its components came from the marketing end of a competitive civilian industry that had no military objectives in mind at all. Lowell Wood of the Lawrence Livermore Laborator has made much the same point about his Brilliant Pebbles concept. Of the three gross components of a Brilliant Pebble, he remarks, two--the "eyes" and the "brain," so to speak--can be bought relatively cheaply compared to the third component, its "legs," a miniaturized rocket propulsion system; this is because the first two have been involved in the intense competition for the consumer dollar. Wood jokes that, if American teenagers had only developed a taste for high-performance rockets over the past decade, even the cost of "legs" might have shrunk dramatically by now.⁹⁸ The point is that, in the West, you can get unplanned results, but not in the Soviet Union.

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The Soviets give every sign of recognizing this. At a recent conference on conversion of war industry to civilian production, Andrey Kokoshin pointed out that in the 1960s, when the impetus for computer development both in the U.S. and USSR came from military requirements, Soviet models were state-of-the-art, "neck-and-neck" in the running with America. Subsequently, however, the mainstream of development in the West moved over into "the commercial market," but not in the Soviet Union. "With us everything stayed primarily in the military enclave. and we had already begun to lag sharply at the start of the 1970s." During the ensuing decade, when civilian informatics in the West drew even further ahead, there began what he calls a "process of reverse spinoff," in which gains in civilian technology started to spill over into the military domain -- in the West, but not in the Soviet Union. There was no spinoff in the Soviet Union because there were no civilian successes there to spin off. Analyses arriving at this conclusion successes there to spin off.⁹⁹ Analyses arriving at this conclusion have almost become a cottage industry in Moscow.¹⁰⁰ The clear implication of all of them is -- if the USSR wants to ensure its security. it must first take a detour through civilian informatics.

PROSPECTS FOR INFLUENCING THE TREND TOWARD SPACE MILITARIZATION

In the early fall of 1987, when Soviet arms-control intentions were beginning to take shape, a prediction was published by this author that "in the not-too-distant future Moscow is likely to come forward with conventional proposals that Western governments cannot refuse." The analysis went along the lines reported here: that Gorbachev's armscontrol approach was apparently an outgrowth of the 1983-84 debate over unilateral reductions; that Moscow would have to cut military expenditures anyway; and the danger was that the West would not recognize how strong its bargaining position really was. But another danger was also identified. The West had to remember why Moscow had gone in for arms control. It was evidently girding up its loins for the contest in space, and the U.S., having forced the USSR to burn its bridges to other options, would need to keep up its end of the competition.¹⁰¹ When this paper was being briefed, a member of one audience asked why, if the USSR agrees to eliminate its advantages in the traditional spheres, Washington and Moscow could not then mutually renounce the militarization of space, with appropriate guarantees.

This outcome, of course, is not to be ruled out. There are some who interpret Moscow's more relaxed position on the subject of SDI as the result of a conviction that the initiative is politically dead and will never be implemented. More likely, however, Moscow feels its concessions have earned it the right to expect U.S. restraint in deploying SDI. There is even some evidence that, given American restraint, mutual AEM deployments are preferable to mutual renunciations of such deployments.¹⁰² The first hint of Soviet abandonment of a rejectionist stand appeared in an article co-authored by General-Major Yuriy Lebedev, Deputy Chief of the General Staff's Treaty and Legal Directorate, and published in the Central Committee's political journal, *The Communist*, in September 1988. According to Lebedev, if there is no meeting of the minds over banning space defense systems, then a negotiated agreement on limiting or reducing them is "inevitable."¹⁰³

The second item of evidence is a February 1989 article written by Ednan Agaev, a second secretary in the International Organizations Directorate of the Ministry of Foreign Affairs, and published in the Ministry's journal, *International Affairs*. According to Agaev, the 1972 ABM Treaty legitimized the concept of "offensive deterrence," which is "the quintessence of an offensive, i.e., an objectively aggressive, philosophy." As an "alternative to mutual assured destruction" he counterposed the concept of "defensive deterrence," founded on "powerful shields" and shortened "swords" on both sides. By "powerful shields" he meant ABM systems, without copying SDI. By shortened swords he meant a radical reduction in offensive warheads, mainly by replacing MIRVed missiles with single warhead systems.¹⁰⁴

Evidently this strand of opinion favors BMD because it will protect the Soviet Union against third powers and restore its unique standing in the international community along with America, rather than permitting it to sink in the growing sea of offensive nuclear powers. This theme was addressed by Aleksey Arbatov in another article in *International Affairs* the following month. The author said, in a passage lifted from context without shame:

> The 100 defensive missiles [of the Moscow complex] allowed by the ABM Treaty are clearly insufficient to protect against a deliberate strike by major forces of the U.S., Great Britain, and France. Protection against strikes by terrorists and other possible nuclear powers and against unsanctioned and accidental missile launches requires cover, even if only "thin," for the entire territory of the country....

That there is justification for taking this passage out of context is evident from the charge of General-Major Lyubimov that Arbatov's advocacy of "a 'thin' screen for the entire territory of the country...would in fact mean repudiating the permanent ABM Treaty." It is curious that, even though, as Lyubimov notes, Arbatov's stance contradicts the official position of the Soviet government, the editors of International Affairs, an organ of the Foreign Ministry, refused to print Lyubimov's critique, and he had to be satisfied with publication in the military-political journal, *Communist of the Armed Forces*.¹⁰⁷

Views similar to Arbatov's were subsequently presented more openly in *Pravda* by V. S. Etkin, Chief of the Applied Space Physics Department of the Academy of Sciences' Space Research Institute. Etkin noted that "space research, next after the thermonuclear problem, is the sphere of the most advanced science, where fundamental knowledge, technical progress, and defense come together...." It is high time, in his view, that the U.S. and USSR resorted to cooperation in space, rather than leaving their competition unfettered. This is the case with "spacebased anti-missile defense," the capabilities of which have been called into question, but only when it comes to a "global" conflict between the U.S. and USSR.

> But what if the conflict is not global? What if it is a matter of guarantees against accidental launches or, the main thing, against missile launches by extremist groups? Such a limited system, which would include both ground- and space-based positions for combating unmassed missile launches, is within the bounds of possible technical solutions.¹⁰⁸

Certainly all this amounts to something more than individual views gaining expression under *glasnost*'. It is too early to tell, however, whether it represents an acceptable trend of thinking among a portion of the Soviet elite or the first officially inspired efforts to accustom the public to a change of course.

Soviet accommodation on strategic defense would complete the armscontrol circle. Conventional and theater-nuclear options already seem slated for crippling limitations; as matters now stand, the strategic sphere alone seems to remain a contested arena of the future. A BMD agreement, coupled with steps to "shorten" the nuclear swords of both sides, will not stop the contest but for a decade or so can soften its rigors and add a degree of predictability to Soviet and U.S. behavior.

NOTES

- According to Marshal Akhromeev during his visit to the U.S., the USSR Defense Council, chaired by Gorbachev, spent two years working out the new "defensive" military doctrine (Walter Pincus, "Soviet Pledges Military Changes," Washington Post, 13 Jul 1988).
- For earlier Soviet usage of the word "sufficiency," see Raymond L. Garthoff, "New Thinking in Soviet Military Doctrine," Washington Quarterly, Summer 1989, pp. 131-139.
- 3. D. T. Yazov, "The Military Doctrine of the Warsaw Pact--a Doctrine for the Defense of Peace and Socialism," *Krasnaya zvezda*, 28 Jul 1987, p. 2.
- 4. According to General-Lieutenant Petrenko, "The concepts of 'attack' [napadenie] and 'offense' [nastuplenie] should be differentiated....The first is a political category, the second is from the sphere of the military art" (V. Ya. Petrenko, "If You Are Arguing Doctrines," Novoe vremya, no. 4 [22 January], 1988, p. 14.)
- Sergey Akhromeev, "A Doctrine of Preventing War and Defending Peace and Socialism," Problemy mira i sotsializma, December 1987, p. 26.
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