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**GAO**

United States General Accounting Office

Report to the Chairmen, Committees on  
Armed Services, U.S. Senate and House of  
Representatives

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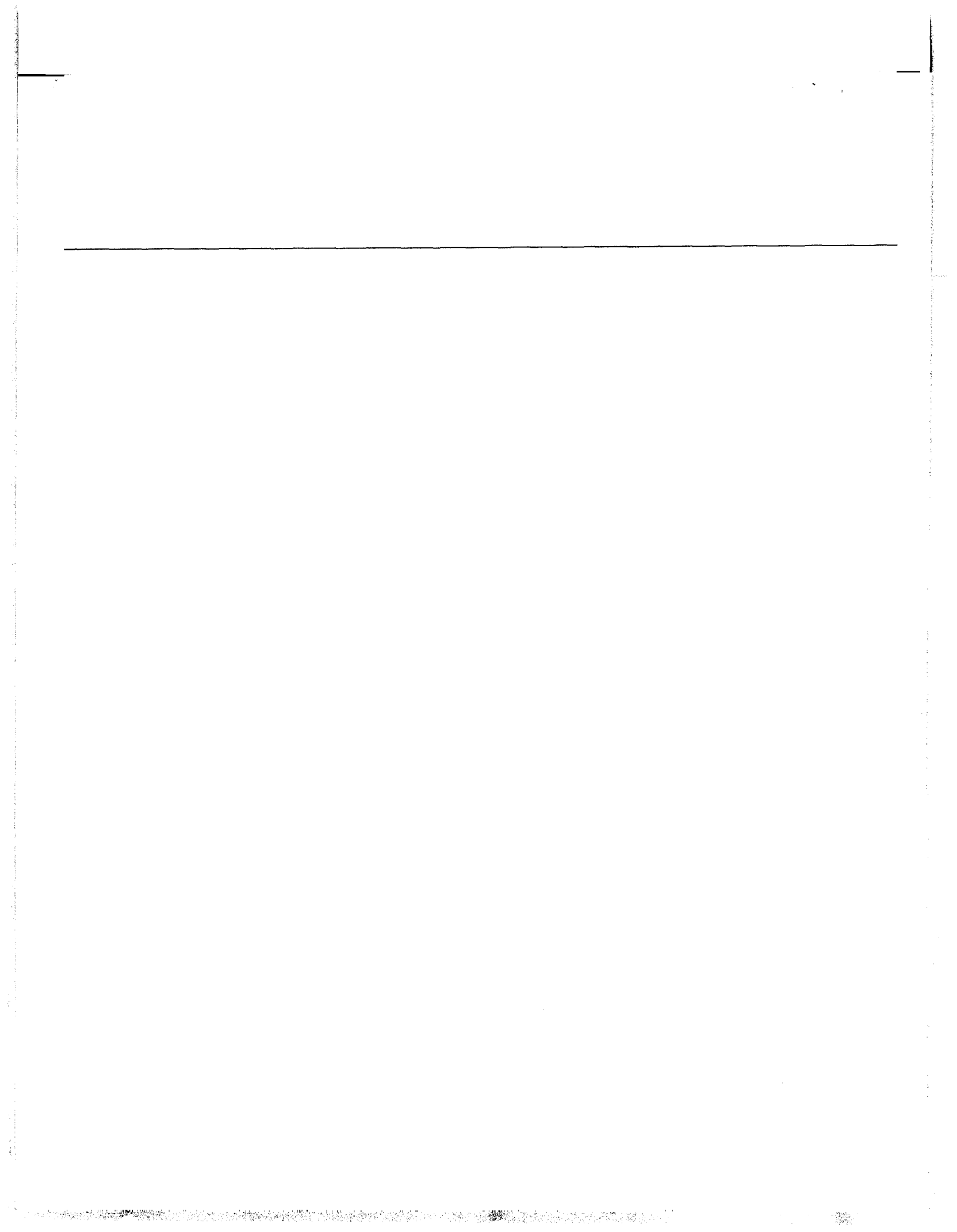
December 1988

# NATO-WARSAW PACT

## Assessment of the Conventional Force Balance



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Comptroller General  
of the United States

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December 13, 1988

The Honorable Sam Nunn  
Chairman, Committee on Armed Services  
United States Senate

The Honorable Les Aspin  
Chairman, Committee on Armed Services  
House of Representatives

The National Defense Authorization Act for Fiscal Years 1988 and 1989 (Public Law 100-180), enacted on December 4, 1987, established the Conventional Defense Study Group and charged it to provide a report to the Congress on the balance of conventional forces between the North Atlantic Treaty Organization (NATO) and the Warsaw Pact. The study emphasizes forces within the European Central Region (composed of NATO forces in Belgium, the Federal Republic of Germany, Luxembourg, and the Netherlands, and the Warsaw Pact forces that they oppose) in accordance with congressional reports accompanying the legislation. The legislation required that the Comptroller General chair the Study Group, which was composed of representatives of the Library of Congress, the Office of Technology Assessment (OTA), and the Congressional Budget Office. To address this legislative requirement, the Study Group convened two separate panels of experts to discuss the force balance issue: one from the U.S. perspective and the other from the Soviet perspective.

This report summarizes the views presented during both the U.S. and Soviet perspectives workshops. The first workshop, sponsored by GAO on April 12, 1988, addressed experts' views of the U.S. perspective of the balance (see app. I). As agreed to by the Director, OTA, the second workshop was sponsored by OTA on April 22, 1988, and addressed experts' views of the Soviet perspective of the balance (see app. II). During the workshops, the experts emphasized the European Central Region in discussing the sufficiency of NATO's conventional forces for both deterrence and defense in relation to the Warsaw Pact.

Participants in the U.S. perspectives workshop discussed ways to measure and assess the force balance and identified NATO and Warsaw Pact strengths and weaknesses in mobilization, sustainability, and the quality and readiness of forces. Deficiencies in NATO's conventional force structure and possible corrective actions were also addressed. No precise cost

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estimates were given for most of the corrective actions discussed; however, some recommended improvements were generally believed to have little or no financial impact (such as making planning and organizational changes within NATO to address many of NATO's logistics problems), while others would be very costly (for example, developing an industrial mobilization capability able to respond to a short warning attack).

Participants in the Soviet perspectives workshop focused on the Soviet approach in assessing the balance as expressed in Soviet literature and through Western observations of Warsaw Pact military activities. Experts discussed the Soviet assessment of the conventional balance in Europe and the quality of forces, NATO and Warsaw Pact military strengths and weaknesses, changes in military doctrine under General Secretary Mikhail Gorbachev's leadership, and implications of Soviet balance assessments for the United States and NATO.

Although observations made during the workshops were similar in some instances, there were some differences in the overall assessment of the balance and, therefore, the resulting opinions on the implications for NATO. The differences reflected (1) the distinctly different approaches taken by NATO and the Warsaw Pact in assessing force balances and (2) what the experts believed were the most important issues for NATO and the United States to consider.

A list of experts who participated in the workshops and their biographies is contained in appendix III. A more detailed description of the workshops' results is included in supplement A to this report. Also, we commissioned a series of discussion papers for the workshops, which are included as supplement B. Following the workshops, drafts of this report were sent to the respective participants for comments. Participants were also given the opportunity to revise their papers based on the workshops discussions.

The views and opinions in this report and the supplements reflect those expressed by the participants during the workshops and in their papers written in support of specified force balance topics. These views and opinions, therefore, do not necessarily represent those of GAO or other participating offices.

We are sending copies of this report and supplements A and B to the Secretary of Defense for comment as required by the legislation and to the Secretary of State and the Director, Office of Management and Budget. Due to its length, we are limiting distribution of supplement B

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(the participants' papers) to appropriate congressional members, executive agencies, and selected bodies.

*Charles A. Bowsher*

Charles A. Bowsher  
Comptroller General  
of the United States

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# Contents

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Letter		1
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Appendix I		6
U.S. Perspectives of the NATO-Warsaw Pact Conventional Force Balance	Assessing the NATO-Warsaw Pact Balance	6
	Readiness and Quality of U.S. Forces	7
	Mobilization Deficiencies Seen in Equipment and Industrial Base	8
	Improvements Needed in U.S. and European Sustainability	8
	Suggestions to Improve NATO's Conventional Balance	9
<hr/>		
Appendix II		12
Soviet Perspectives of the NATO-Warsaw Pact Conventional Force Balance	Soviet Approach to the Balance	12
	Soviet Assessment of the Balance	13
	Relative Quality of Forces	14
	NATO and Warsaw Pact Strengths and Weaknesses	15
	Soviet Doctrine	17
	Suggestions for NATO	17
<hr/>		
Appendix III		21
Conventional Defense Study Group Workshops Biographical Sketches	U.S. Perspectives Workshop - April 12, 1988	21
	Soviet Perspectives Workshop - April 22, 1988	24
<hr/>		
Appendix IV		27
Major Contributors to This Report	General Accounting Office, National Security and International Affairs Division	27
	Office of Technology Assessment	27
	Congressional Budget Office	27
	Library of Congress, Congressional Research Service	27

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## Abbreviations

AVF	All Volunteer Force
NATO	North Atlantic Treaty Organization



# U.S. Perspectives of the NATO-Warsaw Pact Conventional Force Balance

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The Conventional Defense Study Group met on April 12, 1988, to discuss U.S. perspectives of the force balance. The workshop focused on improvements to NATO's conventional defense in the Central Region.<sup>1</sup> Participants covered a series of interrelated topics and identified issues for consideration by the Congress in its assessment of U.S. defense programs and actions that the United States should encourage the Western European allies to undertake.

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## Assessing the NATO- Warsaw Pact Balance

Despite problems in measuring the NATO and Warsaw Pact force balance, the experts agreed that NATO's peacetime deterrent position is good and that its conventional capabilities have improved over the last decade, but they should be better. They discussed the many factors NATO's success or failure would depend on and concluded that neither side has such an overwhelming advantage that its victory is assured. However, most scenarios favor the Warsaw Pact as the victor rather than NATO. NATO (characterized as an "underdog" by one expert) has a chance of success, but it needs to address its many shortcomings to enhance that chance.

Participants believed that Warsaw Pact forces, in general, might not have a substantial advantage in manpower or division strength in a short-preparation (2-3 day) or medium-warning (2-week) attack mainly because they lack sufficient forward-based forces (combat elements of forward deployed forces) and reliable reserves and would not be able to mobilize all of their divisions quickly enough to ensure superiority over NATO forces. However, participants expressed concern about NATO's ability to sustain a protracted conventional conflict, due, in part, to logistics weaknesses and limited stock levels in areas such as munitions and spare parts.

A long, slow covert Soviet mobilization, however, could pose an especially difficult problem for NATO. Such a mobilization, from which no single event would trigger a NATO response, could give Warsaw Pact forces an overwhelming advantage if it preceded a short-preparation attack. Some found this prospect troubling, but others regarded it unlikely that the Soviets would run this risk to achieve their interests. Rather than initial conflict starting with a Warsaw Pact attack on NATO, a NATO-Pact conflict might occur after a large uprising in East Germany or due to the

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<sup>1</sup>The European Central Region is composed of NATO forces in Belgium, West Germany, Luxembourg, and the Netherlands, and the Warsaw Pact forces that they oppose.



spillover of U.S.-Soviet fighting in other regions. Some participants questioned whether U.S. or European leaders would respond to strategic warning of Warsaw Pact offensive preparations due to the economic and political costs of mobilization.

Measuring the conventional balance is extremely difficult, and it was agreed that a multi-scenario approach would be more useful than static numerical comparisons (or "bean-counts") or formulations that consider only a small number of factors. Although numerical comparisons must be included, multi-scenario analyses would consider the effects of scores of other factors, including quantitative force levels, on a vast range of plausible NATO-Warsaw Pact scenarios. The scenarios would feature differing assumptions, such as the political-military context, warning times, mobilization times, alliances, operational strategies and tactics, force effectiveness, troop quality, rates of advance, and attrition.

Diverse scenarios could lead to identification of very specific, solvable U.S. and allied vulnerabilities while suggesting Warsaw Pact problems that NATO might capitalize on. Also, improvement measures that would prove critical in some scenarios would not show up as important in more standard planning cases. Recent Department of Defense and industry attempts to increase the sophistication of traditional balance assessments have generally not been sufficient because operational strategy, command and control, doctrine, logistics, sustainability, force composition, the potential value of new weapon systems, or the relative merits of alternative arms control measures have not been adequately considered using a computerized simulation or war-gaming approach.

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## Readiness and Quality of U.S. Forces

The readiness of active duty U.S. military personnel has improved greatly during the 1980s and has exceeded that of the Soviet Union. Improved U.S. readiness can be attributed to the All Volunteer Force (AVF)—a low accession, high retention force—and to adequate operations and maintenance funding for the last 8 years. U.S. active forces have higher quality personnel than Soviet forces because U.S. enlistees are better qualified, the United States conducts more frequent and realistic exercises, and the forces have greater overall experience due to a higher retention rate.

The size of the U.S. reserve forces and their state of readiness, however, are of concern. Because the AVF emphasizes retention, fewer trained military personnel are available for U.S. reserve units than in the past.

In contrast, the higher personnel turnover in conscript forces, such as those of the Warsaw Pact and the Federal Republic of Germany, gives these forces an advantage in the size of their reserves. Yet the United States relies on its reserve forces to provide the bulk of its combat support in the early days of a crisis. This situation leads to U.S. dependence on reservists who have no prior active duty military experience. It also means that unless reservists receive increased individual and unit training, they will be less qualified to perform their missions.

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## Mobilization Deficiencies Seen in Equipment and Industrial Base

NATO's mobilization deficiencies are most apparent in equipment and the industrial base. NATO would require 6 to 18 months to produce significant additional new equipment and munitions. The United States, for example, lacks a "cold" industrial base for the production of "smart" munitions (i.e., those munitions equipped with guidance systems) and components. Generally, manufacturing facilities are dismantled when production ends. To correct this problem, the United States could stockpile long lead-time components under a rolling, or perpetual, inventory approach. Some experts called for the creation and retention of an industrial mobilization capability as a hedge against future crises, but others argued that such a capability would be very costly and that priority should go to increased sustainability through greater stock levels. It was also noted that creating a workable defense strategy matched to a viable defense industrial plan should be a high priority.

In addition to equipment and industrial base mobilization deficiencies, manpower deficiencies could also arise if NATO leaders did not show the political will to implement reserve call-ups.

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## Improvements Needed in U.S. and European Sustainability

Sustainability requirements vary depending on the assumptions employed (for example, degree of Warsaw Pact strategic warning and NATO response), but generally speaking, U.S. and European sustainability levels are deficient. The United States should increase its combat stocks to (1) sustain its forces until new production can supply U.S. forces and (2) allow for the decreased effectiveness of older weapons and supplies. According to one expert, the United States should not limit its stocks because of lower European levels but should instead increase European stocks. The cost of such improvements might range from a small percent of what the United States annually spends for defense to a one-time cost of \$75 billion to provide 60-day stocks for NATO forces.

NATO's logistic weaknesses are as serious as its limited war reserve stocks, thus creating shortfalls in NATO's combat sustainability. For example, as one expert noted, because of logistic problems, NATO forces would expend their combat supplies after 3 to 5 days of fighting. NATO logistics are severely limited, largely due to a lack of integration and central direction. NATO commanders lack authority over logistical support. A participant suggested that NATO should implement the logistics recommendations it adopted in the Long Term Defense Program of 1978,<sup>2</sup> which stressed the need for multinational logistics as a NATO, rather than a national, responsibility. In this regard, NATO commanders should have authority for logistical control rather than sovereign nations. These improvements involve little cost but require major changes in U.S. and European attitudes and necessitates that authority be relinquished to NATO's commanders. In addition, European reserves should provide greater logistical support for U.S. forces in wartime.

In one expert's opinion, logistical control at the NATO level is impractical unless it is limited to bulk supplies, such as rations, ammunition, petroleum, oil, and lubricants. Well-known problems associated with the lack of NATO standardization in areas such as maintenance, medical supplies, and major item supply prevent NATO from obtaining full benefit from this suggestion.

## Suggestions to Improve NATO's Conventional Balance

Participants agreed that any improvements in NATO's conventional capabilities should occur within the political framework of continued U.S.-European ties. While Western Europe will remain dependent on the U.S. nuclear deterrent for its security, the Europeans should be encouraged to assume greater responsibility for their defense. Steps suggested toward this end include

- European and eventual U.S. use of French lines of communication and facilities in crisis and wartime;
- greater French-German cooperation, including forward prepositioning of supplies for French forces;
- European forces' specialization in limited missions and joint purchases of equipment to reduce duplication;
- creation of physical barriers to delay a Warsaw Pact advance;
- deployment of Italian and Turkish forces to the Central Region; and

<sup>2</sup>The Long Term Defense Program is a NATO plan designed to improve the alliance's defense capabilities over the next decade.

- greater European political cohesion through such organizations as the Western European Union.

NATO might enhance the effectiveness of other conventional defense improvements through

- increased emphasis on conventional war-fighting in NATO planning;
- greater emphasis on ground forces versus tactical air;
- initial defense by light infantry, primarily reservists, and rear deployment of armor as an operational reserve;<sup>3</sup>
- initial use of “dumb” weapons to conserve limited stocks of “smart” munitions;<sup>4</sup>
- greater emphasis on rear area operations;
- more realistic command-post exercises to test responses to adverse situations; and
- efforts to reach agreements to put authority for logistical control into the hands of NATO commanders.

Arms control measures, either reciprocal or negotiated, can affect conventional defense improvements. Such measures might include the following:

- restrictions on Warsaw Pact reserve forces, such as limits on exercises and improved warning through greater monitoring;
- reductions in some offensive forces; and
- U.S.-Soviet troop reductions. Some called for very asymmetrical measures to limit Warsaw Pact forces, indicating that equal or less asymmetrical reductions could harm NATO’s defense.

In general, as the participants agreed, any improvements in NATO’s conventional capabilities may have to occur in the context of stable or falling real U.S. defense spending. Even with reductions in U.S. defense spending, enough funds are available for NATO conventional force improvements. Improvements in conventional defense capabilities will depend, however, on a reallocation of funds among defense programs (for example, from aircraft to ground forces equipment), increased efficiency in defense management (for example, to correct the mismatch

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<sup>3</sup>One expert characterized this suggestion as somewhat idealistic and impractical because it would require drastic changes to current military concepts and plans.

<sup>4</sup>One expert disagreed with this statement and suggested that “smart” rather than “dumb” munitions should be used first in an effort to gain the advantage and stop the conflict as soon as possible.

between U.S. strategy and the defense industrial base), and rationalization of NATO spending (for example, country specialization in specific areas of defense production). However, reductions in U.S. defense spending may lead to a retrenchment in the U.S. force structure over the next several years, leading to the withdrawal of some U.S. forces from Europe. One expert added that this situation would result in a degradation of conventional defense for NATO, lowering the nuclear threshold even more.

Any U.S. troop withdrawal should be gradual, balanced (between combat support and combat service support), and combined with a political reinforcement of the U.S. commitment to Europe as well as with appropriate withdrawals by Warsaw Pact forces. Many participants argued that a large U.S. troop withdrawal could be perceived as an isolationist action on part of the United States and could produce fears of a U.S. reduction in its commitment.

# Soviet Perspectives of the NATO-Warsaw Pact Conventional Force Balance

The Conventional Defense Study Group met on April 22, 1988, to discuss the force balance from the Soviet Union's perspective. The workshop focused on the Soviet approach to the military balance and how this approach is reflected in Soviet assessments of the balance. Participants also identified a number of arms control and force planning issues that, in their view, would follow from Soviet assessments of the balance.

## Soviet Approach to the Balance

Probably the most important difference between the Soviet and NATO approaches to assessing the balance is the thoroughness and seriousness with which the Soviets attempt to evaluate force balances in a strategic-operational context; that is, in the context of various military operations in which opposing forces would actually engage in the event of war. Planners in the West tend to judge the balance of forces in terms of inventories of weapons or various force packages deployed against opposing forces in the context of a very limited number of scenarios. They sometimes include simple qualitative comparisons as well, but the models and games used in the West to test force requirements tend not to give adequate consideration to how forces would actually fight at various levels of warfare.

The Soviets, by contrast, have developed a broader, "scientific" approach to assessing the balance. They make the forecasting of a diverse set of scenarios for future operations the very basis of their military planning and arms control.

Numbers are important in Soviet assessments, but they are not derived as simple "bean counts." The Soviets have evolved a complex set of calculations that aim to measure the sufficiency of forces to execute strategic missions relative to enemy forces. Soviet calculations of the balance encompass a range of difficult to quantify factors, such as surprise, morale, troop training, and command experience, as well as comparisons of weapons and equipment, all within an operational context.

Soviet assessments are governed by a military doctrine that comprises a set of views defining the goals and nature of a possible future war and how the Soviet Union should prepare for and conduct such a war. This doctrine provides a context for deciding the size and composition of the Warsaw Pact forces and integrating their organization, tactics, training and equipment into a cohesive fighting force. It also unites military concepts and arms control into one overall foreign policy.

## Soviet Assessment of the Balance

Soviet planners believe that they have a marginal advantage in the conventional balance in Europe today, although they are far less optimistic about the future. They believe that their superiority in numbers and possession of a sound doctrine probably outweigh NATO's superiority in individual equipment items and the training of individual soldiers. But Soviet confidence in current capabilities is not overwhelming; they believe that they would need to control events in the threatening period leading up to the outbreak of war so as to disrupt NATO mobilization and seize and retain the initiative. The Soviets also see their advantage eroding with the development of new technologies and systems in the West, which they cannot compete with and which makes their successes less certain than before.

The Soviets are examining a diverse set of scenarios regarding how a war might start and be fought. This analysis has led to important, and often surprising, conclusions in terms of necessary force advantages to achieve victory, the role of air power, and other factors that would affect the outcome of a war.

For example, the Soviets probably believe that they have roughly a 2 to 1 force advantage in Europe, and possibly less, given the Soviets' tendency to exaggerate the value of NATO's forces and make a rather conservative estimate of the value of their own forces. Viewed in the context of a range of scenarios, however, the Soviets do not believe that they must have superiority across the theater to achieve victory. Instead, the ability to mass at decisive places and times with sufficient forces to achieve their objectives is the key. The Soviets have apparently concluded that a 1.5 to 1 force advantage—or even parity—across the entire theater may be sufficient to enable their forces to achieve a 3-4 to 1 force advantage on a few breakthrough sectors and a 4-8 to 1 advantage at the tactical point of penetration.

The density of forces—that is, the amount of fire per kilometer of frontage and the number of divisions in an operation—may be equally as important in force-level calculations as overall force ratios. Lowering the density of forces will aid the attacker and make rapid advance and maneuvers easier. Thus, if negotiations were to reduce forces on both sides of the East/West German border by 25 percent, for example, and prevent the building of any compensatory defensive fortifications, it would be difficult for NATO to create an effective density of defense but would in no way hinder the Soviets' ability to concentrate force on the main axis of an attack.

The Warsaw Pact's ability to successfully execute the air operation, however, is a complicating factor for the Soviets, as they increasingly believe that air superiority (an area of relative NATO strength) is critical to the success of strategic operations. The Soviets have underlined the need to improve their aviation and airborne/air assault forces and to deny NATO air superiority.

A complicating factor for the Warsaw Pact is NATO's possession of nuclear weapons and apparent willingness to use them. If war should occur, the Soviets would aim to keep the conflict conventional and avoid escalation to nuclear weapons—although they plan for scenarios in which nuclear weapons might be used. From the Soviet point of view, it is only with nuclear weapons that NATO can threaten the territory of the Soviet Union. At an operational level, tactical nuclear weapons would confuse the battlefield, slow the Warsaw Pact rate of advance, and greatly disrupt troop control and operational plans.

Also important in Soviet assessments is the question of a short or long war. In the event of war, the Soviets would aim to win quickly, because the "correlation of forces"<sup>1</sup> would shift to NATO's favor during a long war, as NATO would gain time to bring its strategic resources to bear. Nonetheless, the Soviet Union does prepare for a long war—lasting upwards of 1 year—and may have the capabilities and assets to fight one.

In order to win quickly, the Soviets emphasize the importance of speed and "surprise," meaning catching off guard those NATO leaders responsible for making mobilization decisions, preparing defenses, or releasing nuclear weapons. Modern technological systems may provide NATO with adequate warning of a Warsaw Pact attack, but NATO's leadership may be caught by surprise if it does not heed that warning.

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## Relative Quality of Forces

It is within this operational context that the Soviets assess the relative quality of NATO and Warsaw Pact equipment and personnel and the general quality of forces. NATO may enjoy a qualitative advantage in weapon-for-weapon comparisons, but the Soviets do not believe that this is the most important assessment. More important are offense-defense

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<sup>1</sup>Correlation of forces refers to the relative strength of each side at any given point in time.



and systems-to-systems comparisons. Soviet strengths tend to lie in combining simple technologies into “systems of systems”<sup>2</sup> that make it possible for operational and strategic concepts to offset technological inadequacies.

In the mid- and long-term perspectives, however, the Soviets see this balance eroding. The Soviets have a pessimistic assessment of their ability to compete with the West in future advanced technologies. They seem to be hoping that the new emphasis on defense in Soviet military doctrine will establish a better foreign policy environment to provide the West incentives to slow or halt the modernization of forces, encourage technology transfer from West to East, and create a more favorable arms control environment that could diminish the defense burden at home.

Viewed in the same operational context, a comparison of personnel quality is more difficult to assess. Overall, the Soviets believe that, compared with NATO, they have a personnel advantage in executing large-scale operations but a disadvantage in small-unit proficiency. Although the Soviets have identified major personnel problems in their own military forces, they believe a good part of their disadvantages may be offset by the organization of personnel training and management of the Warsaw Pact forces. Likewise, they have identified important shortcomings among NATO corps—mainly in NATO’s lack of training for operational commanders, lack of opportunity to exercise operational command, and the sharp differences among NATO forces.

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## NATO and Warsaw Pact Strengths and Weaknesses

Soviet planners believe that the Warsaw Pact air forces represent a key area of weakness compared to NATO. Aircraft is seen as NATO’s main advantage at this time; it comprises NATO commanders’ only real means of affecting the battle on an operational scale, especially in an unreinforced or short-warning scenario where operational ground force reserves are minimal. The Soviet assessment of NATO’s reliance on air power is important in view of Soviet arms control proposals to cut NATO air power. This reliance has resulted in the Soviets’ developing the air operation as the first stage of a conventional assault, to destroy NATO air forces and command and control assets on the ground in the first hours of a war. NATO’s reliance on runways and a few repair facilities adds, in

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<sup>2</sup>This systemic approach emphasizes the combination of technical and operational capabilities to achieve Soviet objectives.

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**Appendix II**  
**Soviet Perspectives of the NATO-Warsaw Pact**  
**Conventional Force Balance**

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Soviet eyes, to the vulnerability of NATO air power to a conventional preemptive strike.

The Soviets see naval or amphibious forces as another area of NATO comparative advantage. Although navies have limited opportunities in the European theater, they give NATO the option of long-war sustainability, that is, they provide another option aside from rapid capitulation or nuclear strike. The Soviets have noted the U.S. Navy's conventional capabilities for projecting power, for example, through use of the Tomahawk long-range cruise missile.

A third potential NATO advantage is the resourcefulness and initiative of NATO junior officers and pilots, although it remains to be seen whether these qualities would be sufficient to offset NATO weaknesses in the areas of operational strategic planning.

Despite these NATO advantages, the Soviet military appears to believe that a number of factors would help to ensure a Soviet victory should war break out today. These include the Warsaw Pact's numerical superiority in tanks, artillery, infantry fighting vehicles, tactical missiles, and nuclear weapons and the Soviets' belief that they have a greatly superior "military art" (that is, the Soviet concepts of strategy and operations) that enables them to effectively design and control operations that make optimum use of the forces they have. The Soviets see the greatest advantage of the Warsaw Pact in the operational employment of their forces. They believe they have three key advantages: (1) the Warsaw Pact has a cohesive, consistent war doctrine; (2) the Warsaw Pact, while a coalition, is under absolute Soviet control; and (3) the Soviets are trained to conceptualize for the operational level of war.

The Soviets see two key NATO weaknesses that Warsaw Pact operations would be designed to exploit. The first is an ineffective "system of strategic leadership," that is, the weakness and rigidity of NATO's strategic control system and lack of strategic leadership. Whereas the Soviets note that NATO may have a major advantage at the tactical level, they believe that NATO is "out-thought" at the operational level—where it counts in their view.

The second major NATO weakness is in the area of sustainability and reinforcement, primarily in terms of the time required for reinforcement and resupply from NATO's strategic rear, the unevenness in sustainability as well as capability among NATO corps, and NATO's dependence on a few

North Sea ports from which land lines of communication would run perpendicular to any Warsaw Pact penetration. Soviet operational plans would likely place the Warsaw Pact's strongest formations against NATO's weakest. These perceived vulnerabilities would also provide the Soviets with very strong incentives to penetrate the North Sea ports quickly and effectively cut NATO off from its strategic rear before reinforcement and resupply could occur.

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## Soviet Doctrine

Although the current Soviet leadership has publicly stated that it has made major changes in its military doctrine—emphasizing maintenance of force levels that are no more than “sufficient” to ensure defense of the Soviet Union—it is unclear what these changes in doctrine may mean, how much they may represent a break from the past, and how they will be reflected in the structure and capabilities of Soviet and Warsaw Pact forces. According to the participants, so far these statements represent more of a political doctrinal statement than elaborated policy; as yet they have little substantive content in military/technical terms. Participants noted no change in the Soviet military adherence to the offensive as the only way to defeat the enemy and in Soviet strategy and force development programs. They believed that Soviet seriousness will be determined by the extent to which the Soviets define and provide force guidelines for “reasonable sufficiency,” and advised a “wait-and-see” approach on the part of NATO.

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## Suggestions for NATO

Because this workshop focused on the Soviet view of the balance, workshop participants did not attempt to prescribe specific courses of action for NATO, either for arms control with the Soviet Union or for force planning at home. Instead, they suggested a number of guidelines and cautionary notes that follow from Soviet assessments of the balance and that often do not emerge when the balance is viewed from a U.S. or NATO perspective.

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## Approach to Arms Control

Today, the United States and NATO have a unique opportunity to put forward arms control proposals to a receptive Soviet political leadership. What proposals the Soviets will accept in negotiations is still open; it provides a good opportunity for NATO to take the initiative in presenting its own proposals. One of NATO's biggest constraints in doing so, however, is the lack of a doctrine or operational concept to develop comprehensive proposals. NATO may, therefore, be at a serious disadvantage in any negotiations in conventional arms reductions. The United States has

started to develop an operational concept, but it marks just a beginning. Such efforts should be accelerated.

To assist in developing an operational concept, NATO should increase efforts to incorporate Soviet, or "Red," assessments into the arms control process. An understanding of how Soviet planners make their assessments is critical in evaluating Soviet arms control proposals and in contributing to negotiating positions NATO or the United States may propose. Evaluating Soviet proposals from the Soviets' own viewpoint would aid in understanding Soviet objectives and military minimums for national security and the mixture of forces that may be needed for NATO. Efforts are underway to understand how the Soviets make their assessments, but more work needs to be done to utilize the results of these efforts to support U.S. judgments about arms control and NATO force planning.

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## Force Reductions

Four implications emerged regarding potential force reductions. First, because the Soviets do not believe that they must have superiority across the theater in order to achieve victory, caution must be exhibited in any agreement for force reductions. Soviet writings suggest that the Soviets could have a force advantage across the theater of as little as 1.25 to 1—or even parity—and still achieve victory. One suggestion for NATO force reduction negotiations was to strive for parity without losing sight of other aspects of the balance.

Second, any overall symmetrical reduction in forces would not be to NATO's advantage, given that lowering the density of forces, by Soviet calculations, would aid the attacker and make rapid advance and maneuvers easier. NATO should aim to create a density of force that would slow a Soviet advance and preserve the cohesion of NATO defense.

Third, unless all equipment is disabled or destroyed, the Soviets could agree to force reductions, knowing that a dramatically reduced division would be capable of regeneration in a few weeks. This is because of the way the Soviet personnel system is structured and the vast differences between NATO and Warsaw Pact "reserves." There was some discussion whether NATO might profitably structure its forces similarly, but this would require major conceptual changes in U.S. and NATO forces.

Finally, NATO should not expect any significant unilateral reductions on the part of the Soviets—either to promote good will or to pressure NATO

into an equivalent response—that would not also be in the Soviet Union's own military and political interests.

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### Air Power

The Soviets see U.S. and NATO air power as the most important reduction to negotiate. The Soviets continue to suggest trading airplanes for tanks in the arms reduction process. NATO needs to remember that aircraft is its only real advantage at this time. One participant suggested that NATO measures to better protect air resources—such as investing in air defense and basing facilities—could frustrate the most elaborate Soviet operational plans and thus greatly enhance NATO's deterrence of a Warsaw Pact attack. Workshop participants believed that to dismantle aircraft would be irresponsible; they called for exceedingly careful negotiations on this point.

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### Nuclear/Conventional Weapons

Participants agreed that keeping a nuclear threat in place and effective in an escalatory link is important. From the Soviet perspective, eliminating nuclear weapons or reducing the nuclear risk is a particularly important policy element, since it is only with nuclear weapons that NATO can threaten the territory of the Soviet Union. It is unlikely that denuclearizing Europe could be balanced by conventional forces.

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### Tank/Antitank Balance

NATO must recreate the tank/antitank balance. Participants underscored that NATO deployed sufficient antitank missiles only after the Soviets had developed a means to defeat NATO's shaped charge warheads (through the use of explosive reactive armor). The Soviets are into their second generation of explosive reactive armor, before NATO has fielded a means to defeat the first generation.

NATO must be cautious in negotiating reductions in tanks, as NATO is currently more dependent on tanks for carrying almost the entire antitank burden. This burden can be met by the Soviets through both their tanks and antitank guided missiles.

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### Operational Planning

Some participants proposed ways for countering the weaknesses the Soviets perceive in NATO's command and control, sustainability, and reinforcement. One participant suggested the need for a more cohesive operational command and control—improvements that would perhaps be the least offensive means of achieving deterrence and defense but would reduce Soviet confidence in achieving success. Also stressed was the

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importance of reducing the disparity in capability and sustainability among NATO corps, perhaps through a redistribution of national forces. Participants also suggested that NATO move more stocks forward and eliminate its dependence on a few ports.

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## **NATO Force Planning**

According to the participants, NATO could profit from observing the way the Soviets conduct their own military planning. NATO could focus on military organization for planning that mitigates conflict among the services and planning based on operational concepts. With the technical and other assets that NATO already has, incorporating an operational context for force development and strategy and including the Soviets' assessments in that process could result in a truly formidable NATO defense.

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# Conventional Defense Study Group Workshops

## Biographical Sketches

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### U.S. Perspectives Workshop - April 12, 1988

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Charles E. Bennett

Representative Bennett is from the Third District of Florida. He has served in Congress for 40 years and is currently the Chairman of the Subcommittee on Seapower and Strategic and Critical Materials, House Armed Services Committee. He was a cosponsor, with Senator Levin, of the legislation that established the Conventional Defense Study Group.

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Charles A. Bowsher

Mr. Bowsher is the Comptroller General of the United States and the head of the General Accounting Office. Before his appointment as the Comptroller General in October 1981, he was a partner with Arthur Andersen & Co., one of the country's major accounting firms. He also served as Assistant Secretary of the Navy for Financial Management for 4 years.

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John M. Collins

Mr. Collins is currently Senior Specialist in National Defense with the Library of Congress, a position he has held since his retirement from the U.S. Army in 1972. Mr. Collins has published and spoken extensively on defense issues in the United States and abroad.

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Paul K. Davis

Dr. Davis is Director of the RAND Strategy Assessment Center. His professional career has included work on strategic programs, technology, and arms control; regional and global military strategies and related defense programs; balance assessments; artificial intelligence; and simulation.

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Jonathan Dean

Former Ambassador Dean was the deputy U.S. negotiator for the 1971 Four-Power Agreement in Berlin. In 1973, he served as deputy head of the U.S. delegation to the NATO-Warsaw Pact force reduction negotiations in Vienna and as head of the delegation from 1978 to 1981. In 1984, Ambassador Dean became Arms Control Advisor to the Union of Concerned Scientists.

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Stanley S. Fine

Rear Admiral Fine (ret.) served as Deputy Commander for Plans, Programs and Financial Management/Comptroller of the Naval Ships Systems Command in 1972; Director of the Fiscal Management Division of the Office of the Chief of Naval Operations in 1973; and Director of Budget and Reports, Department of the Navy, from 1975 until retirement.

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Charles W. Groover

Mr. Groover is currently Director, Logistics and Crisis Management Division, Systems Research and Application (SRA) Corporation. He joined SRA in 1985 following a 31-year military and civilian career in the Defense Department, including 17 consecutive years in the Office of the Secretary of Defense.

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Joseph M. Heiser, Jr.

General Heiser (ret.) served more than 2 decades as a U.S. Army field officer and retired from active service in 1973 as Army Deputy Chief of Staff for Logistics. Since 1973, he has served the Army; the Secretary of Defense; the Comptroller General of the United States; the Supreme Allied Commander, Europe; the Secretary General of NATO; and the President of the United States as consultant and advisor on logistic matters.

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Alan M. Jones

Dr. Jones is a senior professional staff member with Systems Research and Applications Corporation. In this capacity, he has conducted studies on NATO's conventional-nuclear force mix and arms control issues. Before joining SRA, he analyzed strategic and theater nuclear and space weapons issues at the U.S. Arms Control and Disarmament Agency.

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Lawrence J. Korb

Dr. Korb is currently the Director of the Center for Public Policy Education at the Brookings Institution. Previously, he served as the Dean, Graduate School of Public and International Affairs, University of Pittsburgh; vice president of Raytheon Company; and Assistant Secretary of Defense for Manpower, Installations and Logistics.

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Frederick J. Kroesen

General Kroesen (ret.) served as Commander of the U.S. Army 82nd Airborne Division from 1972 to 1974; the VII Corps in Germany from 1975 to 1976; the U.S. Army Forces Command from 1976 to 1978; and U.S. Army, Europe, and NATO's Central Army Group from 1979 to 1983. He is currently engaged as an independent consultant in a variety of projects related to NATO.



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Appendix III  
Conventional Defense Study Group  
Workshops Biographical Sketches

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Carl M. Levin

Senator Levin, from Michigan, is the Chairman of the Subcommittee on Conventional Forces and Alliance Defense, Senate Armed Services Committee. Senator Levin directed the preparation of Beyond the Bean Count - Realistically Assessing the Conventional Military Balance in Europe and, together with Representative Bennett, cosponsored the legislation that established the Conventional Defense Study Group.

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John D. Mayer

Mr. Mayer is currently Deputy Assistant Director for Weapons Analysis, National Security Division of the Congressional Budget Office. He served in numerous command and staff positions in the U.S. Army and was an analyst in the Office of the Assistant Secretary of Defense for Program Analysis and Evaluation.

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Charles Robert Roll, Jr.

Dr. Roll is currently the Director of the RAND Corporation's Washington Operations. He served almost 4 years as the Principal Deputy Director, Program Analysis and Evaluation, Department of Defense. Previously, he conducted public and private sector studies at Science Applications, Inc.

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Peter Sharfman

Dr. Sharfman is the Program Manager for International Security and Commerce at the congressional Office of Technology Assessment (OTA). In this capacity, he supervises OTA's work in the national security area. Before coming to OTA, he was Assistant Director of Net Assessment, Office of the Secretary of Defense.

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Leonard Sullivan, Jr.

Mr. Sullivan is a Washington-based consultant on national security policy matters. He spent 12 years in the Office of the Secretary of Defense, including 6 years as a Deputy Director and 1 year as the Principal Deputy Director of Defense Research and Engineering.

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James P. Wade, Jr.

Dr. Wade is Chairman and Chief Executive Officer of Defense Group Incorporated. He previously served as Chief of Staff and Senior Advisor to Ambassador Nitze, DOD representative to the Strategic Arms Limitation Talks (SALT). He also served as the head of the DOD SALT staff reporting to the Secretary of Defense and the Policy Planning and National Security Council Affairs Staff.

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James Woolsey

Mr. Woolsey served as Under Secretary of the Navy from 1977 to 1979. Among other positions, he was a member of the President's Commission on Strategic Forces, member-at-large to the Strategic Arms Reduction Talks and member of the President's Blue Ribbon Commission on Defense Management. He is currently a partner in the Washington, D.C., law firm of Shea and Gardner.

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### Soviet Perspectives Workshop - April 22, 1988

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John A. Battilega

Dr. Battilega, Vice President and Operations Manager of Science Applications International Corporation, is a specialist on Soviet military decision-making, force planning/troop control, and U.S.-Soviet asymmetries. He is also co-director of a Soviet studies center concentrating on Soviet military assessment methods and a former U.S. Army officer.

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Charles A. Bowsher

(See U.S. Perspectives Workshop, p. 21.)

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Kenneth S. Brower

Mr. Brower is Vice President of Spectrum Associates, Inc., and an International Research Fellow at the Soviet Studies Research Centre, Sandhurst, England. As a practicing naval architect and engineer, he has specialized for 16 years in comparative assessments of U.S. and foreign ship and weapon system design practices for numerous U.S. government agencies.

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Christopher N. Donnelly

Mr. Donnelly is the Director of the Soviet Studies Research Centre, Sandhurst, England. He has specialized in Soviet affairs since 1966, when he studied Russian studies at Manchester University and the Moscow Energy Institute. He has published extensively on Soviet military affairs and holds a reserve officer's commission in the British Army.

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Herbert J. Ellison

Dr. Ellison is professor of Russian history and Chairman of the Russian and East European Studies Program at the Jackson School of International Studies, University of Washington. He was Secretary of the Kennan Institute for Advanced Russian Studies at the Wilson Center, Smithsonian Institution, and has published and lectured widely in the United States, Europe, the Soviet Union, and China.

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John H. Gibbons

Dr. Gibbons has directed OTA since 1979. He spent 19 years with the Oak Ridge National Laboratory, beginning as a research physicist and rising to direct its program on energy and materials conservation and the environmental consequences of power production. He organized the first energy conservation activities for the federal government in 1973.

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Rose Gottemoeller

Ms. Gottemoeller is a Research Associate at the RAND Corporation, specializing in Soviet leadership decision-making, strategic force employment and sustainability, and Soviet cruise missile development. She spent 1 year at the International Institute for Strategic Studies in London and previously worked at the U.S.-Soviet "Hotline," the U.S. Information Agency, the National Oceanic and Atmospheric Administration, and the Battelle Institute.

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Natalie Gross

Ms. Gross is a professor of Political-Military Studies at the U.S. Army Russian Institute in Garmisch, West Germany, and a consultant for the RAND Corporation on Soviet military affairs. She has been a Visiting Research Fellow at the Soviet Army Studies Office, Command and General Staff College, Fort Leavenworth, Kansas, and has published widely in the United States and Europe. She emigrated from the Soviet Union in 1973, where she served in the Reserve Officer Training Program at Moscow University.

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John D. Hines

Lieutenant Colonel Hines is a Foreign Area Officer for Soviet affairs in the U.S. Army and a Senior Analyst in the Army Intelligence Agency. He was the Senior Analyst for Soviet assessments in the Office of Net Assessment, Office of the Secretary of Defense; an Analyst at the Defense Intelligence Agency; and had several assignments as a signal officer in Germany and Vietnam. He has written extensively on Soviet strategy, operations, and control.

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Nancy Lubin	Dr. Lubin is a Project Director at OTA and an Adjunct Professor at Georgetown University. Previously, she spent several years at the Universities of Leningrad, Moscow, and Tashkent and was with the State Department and Harvard's Russian Research Center. Her work includes assessments on Soviet military planning, U.S.-Soviet space cooperation, and a book on Soviet Central Asia.
John D. Mayer	(See U.S. Perspectives Workshop, p. 23.)
Claire E. Mitchell	Ms. Mitchell is an Operations Research Analyst with the RAND Corporation's Washington Office, specializing in strategic force issues, Soviet operations research, and arms control. Prior to joining RAND, she worked as a Program Analyst for the Matthesen Research Co. and as a Foreign Service Officer for the U.S. Information Agency.
Peter Sharfman	(See U.S. Perspectives Workshop, p. 23.)
Uwe Stehr	Dr. Stehr is Scientific Advisor on Arms Control to the SPD-Bundestag party in the Federal Republic of Germany and for 1988-89 is a Senior Associate at the Carnegie Endowment for International Peace, Washington, D.C. Previously, he worked as a Research Associate at the Frankfurt Institute for Peace Research. He has written widely on East European history and East/West affairs.
Notra Trulock III	Mr. Trulock is the Director of Soviet Military Studies at the Pacific Sierra Research Corporation; a consultant to the Under Secretary of Defense for Policy, DOD; and a member of the Future Security Environment working group. His present work focuses on Soviet views of the impact of new military technologies and implications for Soviet strategic planning.
Graham H. Turbiville, Jr.	Dr. Turbiville is a Senior Analyst with the Soviet Army Studies Office (SASO), Fort Leavenworth, Kansas, focusing on Soviet combined arms operations. Prior to joining SASO, he served with the Defense Intelligence Agency. His articles have appeared in a number of publications in the United States and abroad.

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