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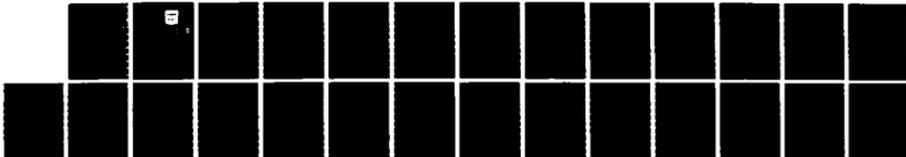
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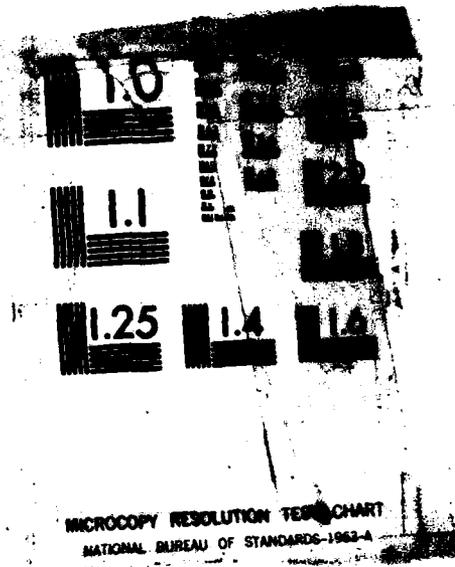
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A LOOK AT NATO STRATEGY--TODAY AND TOMORROW

BY

COLONEL THOMAS J. GOSLING, USAF

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USAWC MILITARY STUDIES PROGRAM PAPER

A LOOK AT NATO STRATEGY--TODAY AND TOMORROW

INDIVIDUAL ESSAY

by

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1 April 1986

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ABSTRACT

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The importance of Western Europe to the United States cannot be overstated. The NATO Alliance has served both parties well. In this essay the author briefly describes the current NATO military strategy of flexible response. Then he presents a general appraisal of NATO and Soviet/Pact conventional and theater nuclear forces, and discusses current command, control, and communications assets each side maintains to direct and control their forces. Next, he illustrates some of the current NATO initiatives, including: Emerging Technologies, AirLand Battle, Follow-On Forces Attack, and CounterAir-90 to show an emergence of an offensive "deep-attack" philosophy developing around modernized weapon systems. He then discusses some aspects of technological change that may impact future force structure, modernization, sustainability, and force readiness. Finally, he provides recommendations to future planners based on the foregoing analysis.

It would be difficult to understate the importance of Western Europe to the security interests of the United States. In terms of our military commitments, conventional and nuclear, Western Europe is as important as the United States Homeland. On the crucial European land mass the United States and Soviet forces stand face to face. In this arena, United States national security policy envisions the defense of America as far forward as possible. Further, the United States links with Western Europe to promote western political and economic values. Likewise, West Europeans look directly to the United States for world leadership. It is absolutely essential that now, and far into the future, the United States and Western Europe sustain their substantial political, economic, military, and psycho-social contributions as partners to maintain, ensure, and further strengthen the deep roots of freedom throughout the world.

The purpose of this essay is (1) to briefly describe the current NATO military strategy for the defense of Western Europe; (2) to describe some aspects of NATO and Soviet/Pact conventional and theater nuclear force structures along with some analysis of the command, control, and communications each side possesses to control and direct their forces; (3) next, to evaluate how technological change impacts current and future NATO war-fighting initiatives embodied in the flexible response strategy; (4) finally, to provide some recommendations for future planners based on the above assessments.

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Current NATO Military Strategy

The NATO Alliance has served the security interests of the United States and its European allies for more than 35 years. The strategic economic, military, and political challenges that first gave rise to the Alliance still exist today--perhaps stronger than ever! NATO is faced with a crucial objective: To maintain a strong, viable force structure to effectively deter and counter an ever increasing Soviet/Warsaw Pact military threat in the face of increasing global socio-economic demands that compete for critical free world resources. Since it is clear that the Soviet Union and the Warsaw Pact countries are willing to continue to commit the resources necessary to maintain a position of superior military strength, NATO's defense must counter the threat with both qualitative and quantitative advances embodied in the strategy of flexible response.

The primary military objective of NATO is deterrence of conflict that could lead to a nuclear confrontation between the United States and the Soviet Union. However, should deterrence fail, aggression must be met with an appropriate response, drawn from a range of available options, to maintain the Alliance's political and territorial integrity. The current NATO strategy of flexible response calls for a, "triad consisting of: conventional forces that are strong enough to maintain a forward defense, tactical nuclear forces to support the conventional forces, and strategic nuclear forces as the ultimate deterrent."⁽¹⁾ This strategy allows for a flexible application of force to meet and combat any level of aggression. Within the

range of response options, the threat is deterred or countered by conventional, tactical, and strategic nuclear forces. This triad application of forces seeks to produce uncertainty and fear in the potential adversary.

To attain a viable strategy of flexible response, a stable and equitable force balance is necessary. NATO conventional forces carrying out the AirLand Battle doctrine increase the aggressors' commitment of resources to assure a battlefield victory. They contribute a valuable portion of the resources needed to repel and defeat the initial enemy attacks. Further, by their holding actions, they allow time for the political and military leadership to fully assess the range and depth of the conflict and to prepare the proper degree of force necessary to thwart the advance. Also crucial to the response spectrum are theater nuclear forces. Their contribution to flexible response reinforces the conventional capabilities, and gives NATO leaders the means to answer aggression at a higher level. Ground launched cruise missiles (GLCM) and Pershing II missiles allow for precision strikes at both military and economic targets of opportunity. The strategic nuclear arsenal allows for the ultimate security umbrella, and provides a war-fighting capability that can respond to the highest level of conflict.(2)

Additionally, for the NATO strategy of flexible response to be credible and useful, the force structure must have the proper mix of trained and equipped forces, weapons, and logistic support. Further, political leaders must exhibit the will and determination to use military force as a means of accomplishing

their political objectives. Finally, once employed, the force structure must be fully sustained until victory can be assured.

Force Deployments, Capabilities, and Limitations

Over the last 20 years the numerical advantage in manpower and weapons has moved in favor of the Soviets. However, any assessment of the balance between NATO and Soviet/Pact manpower, trained combat units, weapon systems, etc., necessarily contains a certain degree of subjectivity. For example, what may be perceived as tank superiority may be negated by a variety of anti-tank systems--numbers alone cannot tell the whole story. Further, qualitative factors like the length and intensity of training, morale, initiative, leadership, and terrain features cannot be reduced to a statistical relationship. Finally, it is difficult to predict what form or scope future hostilities might take. One could argue that the direction and scope of the initial thrusts would have a crucial bearing on the effectiveness of troop compositions, resupply, and reinforcement actions. It is difficult to judge the human factor and the political will of the two Alliances. Some interesting observations can be made by comparing and contrasting aspects of NATO/Soviet force deployments, capabilities, and limitations as they pertain to conventional assets, theater nuclear assets, and command, control, and communications support.(3)

Conventional Assets

This assessment includes comparisons of deployed manpower and equipment, reinforcement capabilities, and geographical considerations. First, manpower considerations shows that the

Soviet/Pact forces enjoy a 1.29:1 advantage in deployed ground forces. However, it is not precisely known what percentages of forces are actually manning weapons. Further, the number and organization of divisions vary in structure and number, with the NATO forces enjoying a 6.74:1 advantage on the total number of war mobilized divisions. On the equipment side of the ledger, the Soviets have a clear advantage in tanks, guns, and launchers. NATO holds the edge in anti-tank weapons and anti-aircraft guns. Likewise, NATO units have a clear advantage in naval and maritime aircraft, with the exception of bomber and anti-submarine warfare aircraft. Conversely, the Soviets hold a good lead in all categories of land attack fighter aircraft. Also, the Soviets are probably better prepared and equipped to carry out chemical warfare than are the NATO forces. The Soviet/Pact countries are equipped with standard Soviet designed materials; consequently, they enjoy more flexibility and simplicity in training because of this standardization. NATO forces generally tend to use a wide variety of supply sources and suffer by the lack of interoperability and standardization.(4)

Second, neither all of the available manpower nor equipment will be in theater at the outbreak of hostilities. The rate at which both sides can mobilize will vary with, among others, the readiness and size of movement vehicles, procedures for acquiring replacement personnel and equipment, the size and quantity of reinforcement/resupply needed, time, distance, and transportation and storage facilities. The Soviet/Pact countries have an advantage here in that they generally will be able to mobilize at

a faster rate than the NATO forces. For example, an American division based in the CONUS will be slower to move into action than a Soviet division from Poland. However, the limitations of Soviet internal communications combined with their centralized command structure, may possibly make it more difficult for them to move large divisions from one part of the country to the other. Further, transportation links between the Pact countries are adequate for rapid movements toward the battle zones only as long as they remain free from attack. On the other hand, NATO reinforcement/resupply actions would be limited by congested transportation links as hostilities progress. Finally, within Europe, some countries could mobilize in place. Others, like Great Britain, could face interdiction as they move towards the action. Also, movements across the Atlantic would face the possibilities of serious interruptions--clearly a disadvantage to the NATO Alliance.

Third, geographical considerations affect the employment of manpower, equipment, and reinforcement/resupply actions. In reality, one might view hostilities breaking out on three fronts--north, south, and central. In this regard, Norwegian forces are pulled in two directions--land forces to the north, and sea and air forces in both directions, north and south. The southern flank is divided with Greece and Turkey forming one front while Italy is located in a position to absorb part of a central region attack. Overall, geographic considerations must favor the Soviet/Pact forces if they launch a preemptive attack. NATO units cannot preposition assets on all fronts to effectively

counter a preemptive attack. Next, we look at the theater nuclear side of the balance.

Theater Nuclear Assets

Theater nuclear forces play a key role in the flexible response deterrent strategy for NATO. This discussion includes only nuclear assets with a range greater than 100 nautical miles--it therefore omits battlefield/artillery nuclear assets.(5) If the Soviets can count on the reliability of their systems, it is clear that they enjoy a distinct advantage in theater nuclear assets. Because weather plays less of a role with target acquisition for missile systems than with aircraft, the advantage in this area goes to the Soviets. It appears, however, that the Soviets lose some of their advantage in numbers of systems when the sea-based assets of the United States, Great Britain, and France are computed. This emphasizes the crucial importance of including the sea-based systems in a coordinated use of NATO nuclear weapons--perhaps easier said than done considering United States commitments to the Single Integrated Operational Plan. However, as the Soviets have replaced many of their SS-4 and S-5 missiles with mobile SS-20s, their advantage is strengthened. Further, the Soviets could use some of their SS-11 and SS-19 missiles to strike European targets--an asset that really tips the balance in their favor. To counter this imbalance the NATO countries agreed to install improved Pershing II missiles along with the new Air Force GLCMs. At present some 64 GLCMs are operational, with an additional three sites under construction. European public reaction to the installation of

Pershing II and GLCM was unfavorable; however, it did not stop deployment. President Reagan, on several occasions, has offered to cancel deployment of these new systems if the Soviets will dismantle their SS-4, SS-5, and SS-20 missiles. There has been little progress since the Geneva talks reopened a few months ago. Will the structure of the NATO/Soviet theater forces change dramatically in the future? It is a good bet that the numbers of delivery systems may decrease, but whether or not the total numbers of warheads will actually be reduced is another question. Next, we examine command, control, and communications--the key link between land, air, and sea-based conventional and nuclear forces to insure a coordinated and successful war-fighting effort.

Command, Control, and Communications

With the rapid advances in communications technology over the last five years, command, control, and communications have taken on increased importance. Today, successful warfare is most dependent on real time battlefield assessment and the integration of this surveillance with all aspects of command and control of forces. NATO's command and control structure has always been cumbersome. Several of the NATO systems are incompatible, resulting in poor coordination between different national land, air, and sea forces on a dynamic battlefield. Other classical system weaknesses include the Soviet/Pact potential for jamming, spoofing, exploiting, and destroying actions. Innovations are planned to overcome these limitations; however, these improvements will be time-consuming and costly. As defense

dollars become tighter in the near future, trade-offs will be necessary. Perhaps some force restructuring may result in freeing funds to bring qualitative improvements in warning and attack assessment as well as in establishing more survivable command centers and communications links.

Several key improvements have been made in the last decade in Soviet command, control, and communications. One of the most significant aspects of Soviet command and control is the desire for survivable systems under all combat conditions--achieved by dispersal, redundancy, hardness, concealment, and simply large numbers.(6) A past Chairman of the Joint Chiefs of Staff summed up Soviet progress by observing, "While Soviet equipment lags in technological sophistication, it is being put into operation in large numbers and it is simple, reliable, and provides for operational redundancy."(7) The Soviets also place heavy emphasis on the use of satellites for improving their command and control capabilities. Their communications satellites are compatible with ground facilities in the USSR, those aboard certain ships, and those deployed in Eastern Europe. Both the United States and the Soviet Union have made significant progress in satellite communications for updating and maintaining a real-time battlefield communications network. On the other hand, both countries have also been successful in developing and employing anti-satellite weapons that could play a significant role in neutralizing the other's satellite capabilities in the event of hostilities.

When addressing the relative balance in conventional,

theater nuclear, and command, control, and communications assets between NATO/Soviet forces it is apparent that there are advantages on both sides. In the final analysis it would be very risky for either side to initiate an armed conflict in European territory. Regarding theater nuclear forces, it is clear the Soviets have a numerical advantage. Talks to reduce the deployment and use of theater nuclear weapons in Europe continue--little progress is being made, and United States plans to deploy the Pershing II and GLCM continue on schedule. Finally, command, control, and communications problems exist on both sides. NATO continues to suffer from the lack of standardized procedures and equipment--qualitative improvements are being sought. The Soviets have made good progress by installing simple and reliable communications equipment in large numbers to provide for increased system redundancy. No one side has a corner on the market. Overall, much is needed to improve NATO conventional technology--a real challenge in a constrained dollar environment.

In the future, while Pact countries will continue to pose superior numbers, NATO must count on superior systems and greater efficiencies to counter the threat. Political and economic processes must work together to adopt a standardized NATO approach and to reduce costs associated with emerging technologies. The price of a slow response could result in defeat.

Technological Change

Since the end of World War II, the United States and the

Soviet Union have become increasingly dependent on the international environment. This dependence includes raw materials, energy, and a wide range of political relationships. In these relationships, competition and cooperation between the super powers have experienced ups and downs. The United States has maintained the upper hand in technological, industrial, and agricultural strength. Internal problems within the Soviet Union to include slow rates of economic growth, inefficient distribution of resources, slow technological change, deepening energy problems, and poor relations with several allies also work well to serve United States security interests.

In the Soviet Union one can easily distinguish between military and civilian technology--the military gets the priority in money and resources. The Soviet political system has no difficulty in arranging these priorities. Soviet planners find it easy to allocate manpower, along with other resources, in line with national needs.(8) Certainly, public opinion and environmental considerations play a small role in establishing priorities. The United States on the other hand, especially since the advent of the Reagan administration, has had a groundswell of public support for military force modernization in support of the NATO environment. Funding has been obtained for the M-1 Abrams tank, the Bradley fighting vehicle, antitank weaponry, various attack helicopters, short- and long range air defense systems, advanced tactical air fighters, and a 600 ship Navy.(9) Within the range of forward looking conventional defensive initiatives that have emerged in the last five years, certain program and

doctrinal changes are evident in the NATO war-fighting environment. The most significant includes: the Emerging Technologies Initiative(ETI), Follow-On Forces Attack(FOFA), AirLand Battle(ALB), the future AirLand Battle 2000(ALB-2000), and, Counter-Air 90(CA-90). These concepts are deeply rooted in the growing political interest for a strengthened NATO conventional defense.(10)

All of these initiatives can be generally grouped under the heading of a conventional deep strike concept. The basic idea of "deep strike" is to destroy, delay, disrupt, and defeat the Soviet/Pact second-echelon forces moving toward the line of battle. While this concept allows that NATO forces can stall a first-echelon attack, it admits to a perceived weakness to successfully meet and defeat the Pact reinforcements that would be needed to assure a land victory. The solution to the second-echelon defeat through means of deep strike lies in the exploitation of the West's superior technology to offset the Pact's superior conventional forces.(11)

The Emerging Technologies initiative is the broadest of the mentioned initiatives. It provides a virtual grab-bag of technologies that the other initiatives may draw upon. The original list of technologies was reduced to thirty-three and submitted for United States and European consideration at the Spring Conference of the National Armaments Directors meeting in 1984. Of these, the group selected eleven possible projects that could be developed cooperatively.(12) Subsequent Emerging Technologies studies continue to build upon modern technology and

include programs for target acquisition, situation assessment, precision guidance, munitions lethality, advanced data-processing, and information distribution systems. These advances have and will continue to spur changes in doctrine and theater planning for war-fighting.

The Follow-On Forces Attack(FOFA) and AirLand Battle(ALB) suggest some different doctrinal and planning guidelines based on the technologies of today and tomorrow. The heart of the FOFA concept is its operational presumption that for the Soviet/Pact offensive success hinges on the timely and intact arrival of follow-on forces in the main battle area. Recent developments in Soviet doctrine suggest they are attempting to decrease the amount of time needed to commit second-echelon troops. They have been exploiting advances in decoys, chaff, aerosols, and other items that could confuse NATO sensors and other target acquisition devices. Further, NATO forces can expect to find electronic jamming, spoofing, and other actions designed to impede, disrupt, or otherwise confuse the flow of real-time information critical to timely NATO strikes, especially against moving forces as they make their way to the main battle area.(13) Also, NATO is moving rapidly to a computer-based intelligence system upon which the FOFA is to be carried out. The possible use of battlefield deceptions by the Soviets could have a serious effect on the integrity of these data systems. In general, the FOFA would depend on conventional means to target and counter Soviet/Pact forces throughout the depth of territory occupied by the second-echelon forces. The Army has already begun moving in

a similar direction with its ALB. ALB currently extends the battlefield by advocating deep strike penetrations by the Corps Commanders to prevent the enemy from concentrating his firepower or maneuvering his forces. It also details the need for synchronized, violent, offensive action by conventional forces. Theater nuclear forces and chemical means also play a role, if authorized, in the ALB offensive scenario.(14) Both FOFA and ALB depend, to a large extent, on strong, technology based weapon systems. FOFA considers a theater area from the operational and strategic levels with its primary emphasis on deterrence, and has an overall design applicable to NATO only. On the other hand, ALB focuses on the Corps level and below from the tactical and operational levels with its primary emphasis on war fighting in the near-term battle with worldwide design applicability. ALB-2000 reaches beyond the concepts of today's ALB concepts and projects the Army's needs out to and beyond the year 2000. It draws upon still unproven technologies and asserts new, innovative, and bold ideas on how to win a war. However, FOFA, ALB/ALB-2000 all recognize the significance of Soviet/Pact forces echeloned in depth. They rely on a carefully planned, coordinated, and controlled deep offensive that stresses the importance of seeking and attacking in depth. The success of the forces will depend now, and tomorrow, on high tech platforms and munitions to get the job done right. Here's where airpower plays a very significant role.

CA-90, although not a deep strike concept, can be associated with FOFA, ALB, and ALB-2000 concepts. Basically, CA-90 focuses

in on improving NATO's aircraft survivability and contains both offensive and defensive programs. Mature technologies to help improve the survivability of aircraft include: making aircraft hard to see on enemy radar, adaptable standoff and self-protection jamming, radar warning receivers that tell pilots when an enemy gunner has them in his sights, lethal suppression of defenses by missiles and drone aircraft, and self-protection weapons. CA-90 also calls for the deployment of conventionally equipped ballistic missiles to attack Pact airfields, which relates to the battlefield concepts mentioned earlier. However, even the eventual substitution of ballistic or cruise missiles as the principal means of carrying out a deep attack will not solve the dismal cost-benefit ratios characteristic of modern day air interdiction campaigns.(15) Other problems can also be identified with emerging battlefield technologies. Despite the adoption of the FOFA by the NATO defense Planning Committee in 1984, many Europeans continue to question its operational desirability and validity, and most Allied governments have not increased their defense spending commitments needed to fully support the plan. Similarly, the United States Air Force has several "big-ticket" items in procurement including the F-15, F-16, B-1, and MX programs that will take preference over deep strike technologies. Other perceptions by our allies include the notion that the deep-strike philosophy would appear too offensive and would be judged by the Soviets as a nuclear strike. Additionally, the political cost of putting new weapon systems in Europe may be very high. Considering the efforts necessary to

emplace Pershing II and GLCM, and the continuing objections to their presence, what difficulty would we have in putting in larger missile systems to carry conventional warheads? Finally, there are increasing problems, political and economic, that arise when the question is raised about who will develop and produce the advanced technologies. Most Europeans feel they are falling farther behind the Americans and Japanese in technology, and view most of the current proposals as having a "buy American" stamp. Also included in NATO concerns is the potential application of Strategic Defense Initiative (SDI) technology in Western Europe. In this regard, the United States has assured the Europeans that they would not be forgotten in SDI's umbrella of protection. However, this has not quelled European objections to SDI in general, and it is likely that SDI will be a centerpiece of debate in the emerging technologies discussions.(16)

There seems to be little doubt that the incorporation of advanced technology in both short and long range NATO deterrent and war-fighting scenarios is going to add more political and economic stress to a wary defense procurement structure. The move toward higher levels of conventional sophistication in planned weapon systems will mean increased dollars for munitions, spare parts, and support facilities. Coupled with increased political concerns of new weapon system deployments, these increased costs will dictate that NATO establish a firm set of priorities to promote enhanced force structure, modernization of equipment, and increased sustainability of forces. Obviously, these priorities will have to be balanced in a context of force

readiness levels. The recommendations that follow are by no means all inclusive, but tend to emphasize some of the most urgent concerns that must be addressed and resolved in order to clearly progress in the development and application of emerging technologies and force structure imbalances in the context of NATO's flexible response strategy.

Recommendations

1. Continue to step-up activity to seek integrated command, control, and communications systems with greater commonality in doctrine, procedures, organizational structures, trained personnel, equipment facilities, and standardized communications. As command, control, and communications are the lifeline in any war-fighting capability, these areas must receive the highest priority in both funding and development.
2. Explore, develop, and deploy a fully integrated plan for development, deployment, and employment of theater nuclear assets. Insure that these forces continue their key role in NATO's deterrent strategy. Do not concede one inch to the Soviets in Geneva without major concessions regarding their theater nuclear forces. Maintain a steady course to install all planned Pershing II and GLCM's in NATO. Continue to negotiate from a position of strength.
3. In developing doctrine, force structure, force modernization, and force sustainability concepts, look at NATO forces as an entity. Consider a balanced appraisal of operational need and operational challenges. Reject the tendency to evaluate and condemn the various parts of a problem at the expense of the

whole. For example, one must overcome the need to emphasize the firepower of an emerging technology system at the expense of its sustainability, maintainability, and reliability.

4. Advance the ideas of competing and complimentary resourcing; that is, examine all aspects of an emerging technology and determine how that system may be dependent with or interdependent on another system for support and sustainability. Identify common system dependence relationships and evaluate the soft spots carefully in terms of the cost-benefit ratios.

5. Seek a balance in the costs of present force readiness and across the spectrum of future force modernization. In this regard, we must seek combined and joint initiatives and insure that priorities are developed and funded properly to enhance future successes on the battlefield. The United States has to be prepared to give more in the NATO environment--sharing more technology transfers, buying more European developed weapons, and stressing unity of purpose in achieving stable, political outcomes. The United States must seek, and continuously advance, policies and plans to increase the total strengths of the NATO Alliance.

6. Avoid the past pitfalls and adverse consequences of continually modifying expensive systems with "improvements" that eventually lead to fewer numbers of deployed systems, reduced sustainability, and increased training costs. One must be able to critically analyze each weapon system modification in terms of the main measures of necessity, adequacy, and merit as they relate to the well defined needs of the battlefield environment.

The posture and force structure of the NATO environment is changing. In the next ten years NATO planners will have to cope with constrained resources in the face of emerging, high-cost technologies. Emerging technologies will need to be tempered by trade-offs in force readiness and weapon system balance across the spectrum of flexible response. Perhaps the greatest challenges will be in the areas of low intensity conflict--especially terrorist activities--where perceptions on the use of nuclear options just do not exist. NATO problems related to political, economic, and military aspects of the Alliance will grow more complex in their multinational context. It is difficult to conceive of a future where NATO planners will even find excess defense resources to meet war-fighting requirements. Hence, the real challenge to both a deterrent and offensive posture will be to determine the best force mix and attendant technology, in a combined theater of operations, to promote a stable and peaceful Europe. It would be sad to think of a future where the NATO Commander would have to follow the footsteps of French General Ferdinand Foch, as he wrote in a September 1914 message to Marshal Joseph Joffre during the first battles of the Marne: "Hard pressed on my right. My center is yielding. Impossible to maneuver. Situation excellent. I am attacking."

ENDNOTES

1. Blakely, Norman D., "Introduction," NATO Capabilities and Strategy, Air War College Associate Programs, Vol II, Ch. 15, 14th Ed, p. 2.
2. Rogers, Bernard W., "NATO in the 1980's: A Decade of Challenge and Decision", Air War College Associate Programs, Vol II, Ch. 15, 14th Ed. pp. 1-6.
3. For a detailed summary that provides greater subjective insights concerning the NATO and Soviet/Pact conventional balance see, The Military Balance, 1985-86, International Institute for Strategic Studies, October, 1985, pp. 183-185.
4. Ibid., pp. 186-187.
5. Ibid., Table 2, "NATO/Warsaw Pact Potential Nuclear Weapon Systems, Europe," pp. 165-166. All numbers of launchers used in this essay were derived from this source.
6. Polman, Norman, "Thinking About Soviet Command, Control, and Communications," Air War College Associate Programs, Vol II, Ch. 13, 14th Ed., pp. 34-35.
7. Ibid., p. 34.
8. "Soviets Strive to Catch the U.S. in Technology and Make Some Gains," Air War College Associate Programs, Vol. II, Ch. 11, 14th. Ed., pp. 33-35.
9. Hudson, George E., et al., American Defense Manual. p. 102.
10. Ibid.
11. "Superior technology" when used in this context refers to all types of weapon systems used in a lay down deep strike attack. I would not limit the technologies to simply conventional means, but include nuclear delivery systems as needed.
12. Hudson, p. 254.
13. Record, Jeffrey. "Defending Europe Conventionally: An American Perspective on Needed Reforms," Air University Review, Vol. 36, September-October 1985, pp. 60-61.
14. Wickham, John A. et al. The Posture of the United States Army for Fiscal Year 1987, p. 15.
15. Record, p. 61.
16. Hudson, pp. 102-103.

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