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The Future of NATO's Tactical Air Doctrine

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School of Advanced Airpower Studies

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Abstract

This study analyzes the need for changes to the North Atlantic Treaty Organization (NATO) airpower doctrine to reflect current post-cold-war realities. NATO air doctrine does not yet reflect the actuality of today's operations, nor does it anticipate the probable future employment of NATO's airpower. Out-of-area operations and Partnership for Peace participation in NATO operations will have profound effects on combined doctrine, training, organizational structures, exercises, and employment of forces. NATO's tactical doctrine revision process served the alliance well during the cold war. But today, the international environment has drastically changed: Both the nature of the threat and the use of NATO airpower during conflict have changed. The current doctrinal revision process has proved too slow and cumbersome to provide adequate direction for air strategists during ongoing operations. There are many new doctrinal areas that must be thoroughly addressed so that NATO can chart a course for the future that in the end provides the best, most effective mix of forces.

About the Author

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Chapter 1

Introduction

The unexpected end of the cold war presented both challenges and opportunities for the North Atlantic Treaty Organization (NATO). The organization that focused 40 years of effort against a single threat suddenly debated its very reason for existence. If NATO was to continue as an alliance, what should be its new focus? Should NATO become involved in "out of area" operations? Should NATO enlarge, responding to the desires of new countries wishing to join? Both out-of-area operations and enlargement present many challenging issues for NATO. The future of NATO's tactical air doctrine will be affected by NATO's new role in Europe, by the results of NATO's decision to conduct out-of-area operations, by the immediate participation of Partnership for Peace (PFP) countries in NATO operations, and by the probable enlargement of the alliance. NATO tactical air doctrine does not yet reflect the realities of today's operations, nor does it anticipate the probable future employment of NATO airpower.

Out-of-area operations and PFP participation in NATO operations will have profound effects on combined doctrine, training, organizational structures, exercises, and employment of forces. The integration of noncompatible forces is only one obvious area that must be addressed. This study investigates the future of NATO's tactical air doctrine and how that doctrine might provide the best guidelines for employing, building, and training NATO air forces into the twenty-first century. The author reviews and assesses currently proposed revisions, discusses possible areas for improvement, and analyzes how NATO airpower doctrine might best respond to the demands of the changing security environment.

The Goal: Stability and the Spread of Democracy

This is a time of transition for Europe as well as for NATO. We do not know what the world will look like in 20 years, but tomorrow's stability may well depend on the choices that NATO makes today. The Central European states are struggling to make democracy succeed. Russia is fighting to implement economic reforms. Engagement among NATO, Central Europe, and Russia—if accomplished with foresight and vision—could well provide an impetus for positive change and enhanced future security of all members. NATO's goal during this transitional period is to provide a strategy for projecting stability

throughout the region. The PFP program provides an opportunity for the spread of democracy. PFP helps participants manage defense reforms plus establish and strengthen democratically controlled militaries. Additionally, PFP participation should aid in national defense planning, resource allocation, budgeting, along with parliamentary and public accountability. Many of these are skills which the former Warsaw Pact countries previously relied upon the Soviet Union to accomplish.[1]

The NATO alliance has proved its worth for more than four decades as the foundation for stability in Europe.[2] It offers communication channels, heightens confidence among member nations, and provides an opportunity for continued United States (US) involvement and influence in European affairs. With the alliance's traditional purpose of opposing the now defunct Warsaw Pact disrupted, NATO is now at a crossroads: determining where and when to become involved. Since its inception, the mission of NATO forces has always been to protect and defend the member countries. The demise of the Soviet Union and the Warsaw Pact provide an opportunity for NATO forces to project stability outside of NATO's traditional borders with less fear of east-bloc confrontation. Stability in many crisis situations may be enhanced by the use of NATO's instruments of power, whether it be by political or military persuasive means. For example, during the Gulf War NATO forces deployed to Turkey. Alliance airpower helped to defend and maintain the cohesion of the coalition while simultaneously stabilizing the northern Iraqi border. When Bosnia erupted into crisis in 1991, a more forceful use of NATO's power might have restored stability earlier, perhaps even diminishing the magnitude of crisis. In the future, NATO may choose to use military force as a form of persuasion to project stability into crisis situations. Alliance efforts during the Gulf War and now in Bosnia indicate that NATO will choose to do out-of-area operations when the interests of the members are at stake. To do so and to project stability into southern and eastern Europe as well as North Africa, NATO will have to further develop its capacity to operate out of area.[3] An out-of-area operation includes any use of alliance forces outside of the traditional NATO area. The use of NATO's airpower for this purpose necessitates changes to tactical air doctrine.

Should NATO become involved in out-of-area operations, this would not address the separate question of enlargement. The 1949 Washington Treaty excluded out-of-area operations but provided specific provisions for NATO expansion. Expanding alliance membership can serve to extend security and stability. Even without the Soviet cold war threat, there are still many hazards to European stability. The war in the former Yugoslavia, difficulties in Chechyna and Georgia, and even problems in Ukraine indicate the situation on NATO's eastern border may be less than peaceful. Many countries on NATO's periphery are facing economic, social, and political difficulties that might erupt into crisis. A resurgent, nationalistic Russia combined with turmoil in eastern Europe presents an unpredictable environment with unique problems for European security. In the past, the NATO alliance fulfilled vital functions in deterrence, crisis management,

peacekeeping, humanitarian assistance, and alliance defense. It can continue to do so, and its effectiveness can be enhanced through engagement with the states of central and eastern Europe especially if new members help to increase NATO's capabilities.

Enlargement provides both a current and long-term challenge for NATO's tactical air doctrine. Through planning actions, joint exercises, seminars, workshops, and day-to-day representation in Brussels and Mons, PFP members are currently participating in NATO affairs.[4] NATO exercises since 1994 have included PFP members and will continue to do so. PFP countries are making doctrinal and force changes in order to effectively function within the alliance and NATO, as well, must adapt. The participation of PFP countries (with noncompatible weapons systems, training, and force structures) demands some immediate change to employment procedures for airpower. Future operations may also have to contend with a larger defensive area as the NATO perimeter expands through enlargement. Doctrine will have to respond to an ever, growing base and diversity of military forces, as training, exercises, command structures, and employment procedures are adjusted for a larger NATO.

Airpower Doctrine and Why It Should Be Kept Current

In 1948 Gen Curtis E. LeMay stated that "doctrine is of the mind, a network of faith and knowledge reinforced by experience which lays the pattern for the utilization of men, equipment, and tactics. It is the building material for strategy."[5] Doctrine is influenced by theorists, technologies, and political, economic, and social realities. It is affected by combat experiences and should reflect not only the past employment of airpower but the anticipated future use of airpower. Doctrine provides a guide for actions during both peace and wartime. It sets the basis for decisions regarding training, systems procurement, weapons development, and organizational structures—thus having a profound impact on the capability of forces to engage in the next conflict. The USAF basic doctrine manual summarizes current thoughts about doctrine. "Aerospace doctrine is, simply defined, what we hold true about aerospace power and the best way to do the job. . . . It is based on experience, our own and that of others. Doctrine is what we have learned about aerospace power and its application since the dawn of powered flight. While history does not provide specific formulas that can be applied without modification to present and future situations, it does provide the broad conceptual basis for our understanding of war, human nature, and aerospace power. Thus, doctrine is a guide for the exercise of professional judgment rather than a set of rules to be followed blindly. It is the starting point for solving contemporary problems. . . . Doctrine should be alive—growing, evolving, and maturing."[6]

NATO's current tactical air doctrine is almost exclusively a product of cold war thinking, reflecting the use of traditional NATO forces against a Warsaw Pact threat. Yet, due to an altered international environment, NATO's airpower is no longer employed in this fashion. Member-states are now operating out of area, and new members with widely differing backgrounds are participating in NATO operations, providing challenges never envisioned by the cold war doctrine. The current doctrine has ceased to function as a useful tool. It has become slowly reactive to past events, no longer serving as a prescriptive guide for the future employment of airpower forces. Cohesive doctrine supports the development of more capable forces and helps establish unity of effort. NATO's airpower doctrine would be more helpful to planners, strategists, and operators if it were to lead or at least accompany changes of airpower employment and not simply serve to document changes already under way.

Preview and Methodology

It is evident that NATO will change as a result of new military missions, PFP participation, and eventual enlargement. This study investigates the relationship among NATO members, new mission areas, and the PFP. It focuses on the future of NATO air doctrine and strategy. Assumptions are made that NATO will continue to function as a viable security organization, future alliance operations will include out-of-area missions, and NATO will proceed along the path toward eventual enlargement. Chapter 2 provides a brief background and current status of the out-of-area and enlargement issues. Chapter 3 discusses the implications of out-of-area operations on NATO tactical air doctrine. Chapter 4 focuses on the effects of PFP incorporation and eventual enlargement on NATO air doctrine. Chapter 5 provides conclusions and recommendations for both current and future changes to tactical air doctrine and future actions regarding PFP participation in NATO.

Notes

1. *Study on NATO Enlargement* (Brussels, Belgium: NATO Publications, September 1995), 13.
2. Ibid., 5.
3. Strobe Talbott, "Why NATO Should Grow," *New York Review of Books*, 10 August 1995, 5.
4. *Study on NATO Enlargement*, 13.
5. Air Force Manual (AFM) 1-1, *Basic Aerospace Doctrine of the United States Air Force*, 16 March 1984.
6. AFM 1-1, vol. 1, March 1992, vii.

Chapter 2

Issue Background

The NATO Air Doctrine Process

The development of NATO's tactical air doctrine has evolved over the years into a formal and somewhat bureaucratic process. The Military Agency for Standardization (MAS) is the governing body for NATO's doctrine and publications. The Air Board, administered by the MAS, oversees the efforts of 18 different working parties which address doctrinal and airpower issues ranging from airlift to search and rescue to tactical air doctrine.[1] The Tactical Air Working Party (TAWP) oversees NATO's tactical air doctrine which is embodied in seven main allied tactical publications (ATP), and 11 standardization agreements (STANAG).

NATO Tactical Air Doctrine—ATP 33, STANAG 3700
NATO Offensive Air Support Operations—ATP 27B, STANAG 3736
NATO Tactical Air Support of Maritime Operations—ATP 34, STANAG 3703
NATO Counter Air Operations—ATP 42, STANAG 3880
NATO Doctrine for Airspace Control in Times of Crisis and War—ATP 40, STANAG 3805
NATO Air to Air Refueling—ATP 56, STANAG 3971
NATO Doctrine for Recon and Surveillance—ATP xx, STANAG 70 (not yet written)
NATO Methods of Warning Own Aircraft of Enemy Fighter Attacks—STANAG 3275
NATO Quals for Fixed Wing Above Water Warfare/Air Defence Aircraft Controller—STANAG 1183
NATO Air Control Terms and Definitions—STANAG 3993
NATO Minimum Qualifications for Forward Air Controllers—STANAG 3797

The TAWP meets at least once a year to improve procedures and interoperability among NATO forces engaged in tactical air operations.[2] Currently there are no lower tier, supporting doctrinal publications; thus each ATP provides doctrine, specific procedures, and some tactics for the employment of NATO's air forces. However, plans are to establish a tiered doctrinal system with the new NATO Allied Joint Publication (AJP) 1, *Allied Joint Operations Doctrine,* established as the "overarching keystone document."[3] ATP 33, renamed "NATO Air Power Doctrine," would support

AJP 1, with the specific functional documents tiered beneath ATP 33. In addition, future TAWP plans include writing supporting tactical air publications to clarify specific procedures.[4] For nearly 50 years, the term *tactical air doctrine* adequately described the planned use of NATO's airpower: in crisis, air assets were to be employed mainly in a tactical versus an operational or strategic role.[5] The renaming of ATP 33 and the new AJP 1 publication indicates that NATO is now beginning to recognize a wider role for airpower.

Prior to 1970, the employment of NATO's airpower relied solely on national air doctrines. However, when the alliance adopted the strategy of flexible response, the need increased for air, land, and sea forces to integrate effectively together. Under pressure from the Supreme Allied Commander in Europe (SACEUR), the MAS formed the Tactical Air Working Party in order to develop combined tactical air doctrine and common procedures for allied air operations.[6] NATO's airpower doctrine is constantly undergoing revision and modification through the TAWP process, but change is slow and doctrine has yet to undergo the sweeping changes required to reflect post-cold-war realities. The TAWP assigns each document to a custodial nation, which coordinates change requests, manages revision reviews, and distributes updated data.[7] The TAWP charter stipulates that STANAGs and ATPs under their responsibility will be reviewed at least once every two years.[8] Changes are discussed at TAWP meetings and then staffed individually by each nation. Fourteen of NATO's 16 members have TAWP delegates (Iceland has no forces and Luxembourg's interests are represented by Belgium).[9] The French also attend TAWP sessions and vote on airpower issues.[10] Doctrinal change is thus an iterative, slow-moving process, and revisions have traditionally been relatively modest in scope. Joint doctrine takes months to coordinate in the United States, and the NATO process is lengthened considerably by the complexities of coordinating among different nations. Other NATO members may or may not develop joint positions on proposed changes, depending on their organizational structures.[11] Final positions on doctrinal change are affected not only by national military traditions and capabilities but also by political and economic imperatives. Most nations have demonstrated a reluctance to accept changes in doctrine that would ultimately result in increased costs, in turn limiting the scope of possible change.[12]

NATO's air doctrine is thus a result of compromise and negotiation among the NATO nations which attend the TAWP and choose to participate.[13] It is also likely that the airpower doctrine revision process will be slowed by the incorporation of new states into NATO. More voices will translate into more complexity and debate before consensus can be gained on airpower issues, unless NATO takes action to streamline the doctrinal revision process.

Out-of-Area Operations

The surprising events of 1989 and 1991 caused NATO to reevaluate its mission. After much controversy and debate, the NATO ministers determined

that it would put more emphasis on the political aspects of the alliance rather than its military means.[14] The London Declaration in mid-1990 acknowledged that the USSR was no longer the main threat; nevertheless, it vowed that NATO would still have an important role to play. The alliance would continue to provide border security for its members and would also "expand its mission to promote security and stability across Europe."[15] To do this, forces would have to be capable of operations outside the traditional NATO areas.

At the November 1991 Rome Summit, NATO representatives reiterated their desire for the organization to serve as the primary security apparatus for all of Europe. NATO's new strategic concept acknowledged the more uncertain security environment presented different risks for the alliance. NATO would increasingly be called upon to undertake missions in addition to the traditional and fundamental task of collective defense of its members. In January 1994, the NATO ministers even offered to support missions including peacekeeping or other operations under United Nations (UN) or the Organization for Security and Cooperation in Europe (OSCE) authority.[16] However, at the same time, mounting budgetary pressures caused the alliance to announce plans to transfer many units to the reserve and shrink conventional forces by approximately 25 percent.[17] NATO ground forces were to be reduced from the 32 divisions of the cold war to only 11 active ground divisions (which included American and French units), and NATO would begin to rely more heavily than ever before on airpower.[18] Throughout the cold war, NATO had built a deterrent posture based on strong defenses. The challenge now would be to maintain sufficiently capable forces to preserve security within Europe and project stability elsewhere.[19]

Although NATO as an organization was involved in the Gulf War in a very limited way, NATO's training and experience in combined operations would prove extremely helpful in combat. The Gulf War lesson for NATO was that there was an increasing need to be prepared for such out-of-area operations.[20] In Bosnia, NATO forces maintained the no-flight zone for several years. NATO air strikes against the Bosnian Serbs in 1995 helped secure protective zones and contributed to the Dayton peace settlement. These operations were conducted mainly under the influence of US employment plans in the absence of relevant NATO doctrinal procedures. They are indicative of the new use of alliance forces and especially NATO's airpower in today's shifting security environment.

In out-of-area operations, NATO has proved to be the only European organization capable of taking effective military action. The Western European Union (WEU) served as a "technical coordinator" for limited minesweeping operations in the Gulf War and also provided an initial response during Operation Sharp Guard enforcing embargo operations against Bosnia.[21] However, after the WEU was replaced by NATO's forces in the Adriatic, it quickly became evident that the WEU did not have the competency or capabilities of NATO.[22] The WEU, which was originally established in 1948, has recently been resurrected as a potential security arm for the European Union (EU); however, it is not adequately organized for

military operations.[23] Its nine members are dedicated to collective defense, and they have limited out-of-area capabilities.[24] With insufficient infrastructure, trained forces, or support structures, the WEU is not capable of sustaining even medium-sized out-of-area operations.[25]

No other European security group has the ability to project power (and thus stability) like NATO. The OSCE has 53 members and suffers from a cumbersome management process. With no security council, the OSCE is incapable of decisive action. In addition, the organization does not have the military forces or command structure to enforce its decisions.[26] Neither the WEU nor the OSCE is an effective vehicle for major military operations or peacekeeping. While both organizations can promote communication and foster cooperation, NATO will continue to be the "security framework of choice" for the near future.[27] With no immediate Russian threat and NATO's decision to project stability outside its traditional borders, the alliance will increasingly become involved in out-of-area operations. Airpower doctrine must adapt to this reality.

The PFP and NATO Enlargement

NATO's tactical air doctrine is already being affected by the possibility of enlargement. PFP countries are participating in NATO exercises and peace operations, necessitating immediate modifications to specific ATP procedures. Eventual membership in NATO could immensely affect NATO's core tactical air doctrine. In January 1994 NATO formally agreed upon the PFP concept in order to respond to those eastern European states anxious for NATO membership. The purpose of the PFP is to enhance the growth of democracy and stability, to encourage civil-military reforms, intensify cooperation, communication and good relations, as well as to fortify common defense.[28] The prospect of eventual NATO membership provides incentives to reforming countries to strengthen their democratic and legal institutions, liberalize their economies, respect human rights, and foster peace through peacekeeping operations.[29] Currently, 26 countries have joined the PFP. All of the countries of the former Warsaw Pact, as well as the states of the former Soviet Union are members. The PFP roster includes Albania and Slovenia, in addition to Austria, Sweden, and Finland.[30] It is a diverse group with widely differing reasons for joining PFP. Not all aspire to NATO membership and not all have the capacity or ability to take part in NATO military operations.

Eventual admission will be fostered and possibly accelerated through immediate participation in NATO exercises and operations, providing a timely incentive to address the applicability of current airpower doctrine. While enlargement will occur through a gradual, deliberate process, there are no fixed, specific requirements for inviting new members to join.[31] Prospective members must illustrate a commitment to democracy and liberty, demonstrate internal stability, and the capability to contribute to allied defense.[32] An invitation for membership requires consensus among the 16 NATO members, and each country will be considered on its individual merits.

In the United States, the Senate must eventually ratify by a two-thirds majority the extension of American protection to new NATO members, to include any nuclear guarantees.[33]

Precedence exists, though, for NATO membership without strict adherence to alliance principles or without the ability to contribute military forces to NATO operations.[34] In 1949 Italy, a former Axis power, was offered NATO membership against innitial Allied desires. However, the Allies finally agreed that rebuffing Italy would "increase the communist influence and discredit the present Christian Democrat government."[35] Thus, Italy was offered membership to foster democracy and stability. Neither Luxembourg nor Iceland has the military capacity to contribute to NATO defense, yet both are members.[36]

Resolution of disputes has also not been a deterrent to NATO membership in the past. Greece and Turkey have long been members, and NATO has helped to improve relations between these two traditional rivals, perhaps keeping them from going to war.[37] Thus, it is possible that NATO will accept some new members who do not have sizable military or air forces, who are not capable of defending the alliance, and who still harbor intrastate rivalries.

Each PFP member has signed NATO's Framework Document, committing them to the basic principles of democracy and mutual security. Each country submitted Individual Partnership Programs (IPP) which list that nation's particular goals and plans for cooperation with NATO.[38] The IPPs address force modernization, air defense needs, equipment shortages, and other military matters, generally detailing a future course for each country.[39] Eighteen PFP countries have already established offices at NATO headquarters, and 20 have military representatives at the Partnership Coordination Cell at the Supreme Headquarters, Allied Powers Europe (SHAPE).[40] Thus far, the primary focus of early PFP military efforts have been in the area of peacekeeping and humanitarian assistance. In 1994 three major peacekeeping exercises were conducted with PFP participation; at least 10 such exercises were conducted in 1995.[41]

Upon joining, new NATO members must accept the full obligations of the 1949 Washington Treaty, and they will receive the full obligations of membership to include sharing risks, responsibilities, and costs. Obligations include contributing to decision making, the alliance military force, command structures, and infrastructure.[42] Alternatively, NATO accepts the burden of alliance protection for new members, and this in turn will affect NATO's military strategies and airpower doctrine. There is some room for alternate relations with NATO (variations on participation). French military contributions to NATO operations depend on internal political direction and are made in accordance with specific military agreements. The Spanish also have a unique relationship with NATO. Their participation is overseen by coordination agreements which form the basis for detailed planning between Spanish and NATO commanders. Spanish contributions are carried out through independent, coordinated, or combined operations.[43]

PFP force integration into tactical air operations poses a number of issues. The nations concerned possess widely diverse military forces. Additionally, peacekeeping operations could occur out of area, perhaps to assist PFP member-states; thus, the potential geographic area for NATO operations is large and varied. Military forces of PFP countries run the gamut from the small Latvian army to the Ukraine with its hundreds of strategic nuclear weapons.[44] Consequently, PFP members can be grouped roughly into four categories in relation to their likely effect on NATO tactical air doctrine.

Figure 1. Europe/Partnership for Peace Nations

The first group consists of the westernized nations, who have joined the PFP simply to better orient themselves to peacekeeping efforts and who generally do not aspire to NATO membership.[45] Finland, Austria, Sweden, and Malta joined the PFP to better coordinate with NATO for joint peacekeeping operations and to focus on contributions to humanitarian missions.[46] With mostly Western compatible military equipment and ample experience in previous UN peace missions (Sweden alone has already supplied more than 60,000 troops to the UN since 1948), this group should not present any significant issues for future NATO tactical air doctrine.[47]

The second group includes those countries far removed from NATO's borders and far from successfully implementing the principles of democracy and economic liberalism: Turkmenistan, Uzbekistan, Kyrgyzstan, Kazakhstan, Georgia, Armenia, and Azerbaijan. Some of these countries are dealing with issues of human rights abuses, rampant crime, and horrendous

economic problems. These countries have no interest in joining NATO but have joined the PFP in order to receive training, technical military assistance, and foreign funds.[48] They will not likely stimulate many changes to NATO tactical air doctrine in the near future, although their participation may require some thought when incorporating their (mostly ground) forces into NATO peacekeeping operations.

The third group of countries includes those that strongly desire to join the EU and NATO in order to gain defensive guarantees. Many countries realize that NATO membership translates into increased security and most importantly, access to Western monies. These countries include Hungary, the Czech Republic, Slovakia, Slovenia, Poland, Bulgaria, Romania, Albania, Latvia, Lithuania, and Estonia. These nations are most vocal about their desire to join NATO. They are concerned about a resurgent Russian threat, worried that if they are not among the first group of nations to be admitted into NATO, they will end up on the wrong side of a "new iron curtain."[49] Poland, the Czech Republic, Slovakia, Hungary, and perhaps Slovenia, will likely be the first to join NATO as full-fledged members. All have established civilian control of their militaries, and all are currently participating or cooperating with UN peacekeeping efforts. Poland and the Czech Republic have already hosted NATO-PFP exercises. Slovenia is trying desperately to distance itself from troubles in the Balkans, and while it is separated from Yugoslavia with few military forces, it has a stable government with a fast growing economy.[50] Each country is also taking great steps forward in resolving internal and external tensions. Hungary recently concluded bilateral agreements with Slovakia and Romania, guaranteeing the inviolability of borders and the rights of ethnic minorities.[51]

Poland, the Czech Republic, Slovakia, Hungary, and Slovenia present potential immediate changes to NATO tactical air doctrine.[52] NATO airborne warning and control system (AWACS) currently uses Hungarian airspace in order to support Bosnian peace operations, and NATO may soon find itself using bombing ranges located in Slovenia. Incorporation of these countries into training and exercises greatly expands the territory and airspace for exercises and training. Poland alone is one of Europe's largest nations in terms of its geographic size and population.[53] The addition of Poland, the Czech Republic, Slovakia, Hungary, and Slovenia will greatly expand NATO's area of responsibility.

In addition to the above countries, Bulgaria, Romania, and Albania also present special problems for close association and employment alongside NATO air forces. These countries also desire to join NATO; however, they have not progressed as far in political or economic reforms.[54] Corruption and slow privatization efforts afflict Romania. Even with recent signs of economic growth, Albania is still the poorest country in Europe.[55] Resurgent socialist parties, tension between civilian authorities and the military, and armed forces poorly equipped with Soviet armaments make incorporation of these forces into NATO problematic.

The Baltic countries are similarly struggling with reforms. They have small militaries with many lingering problems. In Lithuania, the former Communist Party regained government control.[56] The Baltics' strong desire to join NATO, coupled with Russia's equally vehement desire to keep them out of NATO. The Baltics' strategic coastal location relative to Russia also presents a special challenge for NATO.[57]

The final group consists of Belarus, Ukraine, Moldova, and Russia, and all could constrain or limit the employment of NATO air forces. None of these nations have expressed an immediate desire to join NATO. Moldova desires a neutral status, while Belarus wants closer ties to Russia.[58] Ukraine is struggling with democratic reforms and economic instability. Lingering border disputes with neighbors, quarrels with Russia, the presence of large military forces (to include nuclear weapons), in addition to their close proximity to NATO's eastern region make both Ukraine and Belarus potential areas of concern for NATO's airpower.[59]

Russia should be considered separately due to its military potential and historical threat to NATO. At various times, Russian politicians have expressed grave concerns over NATO enlargement, the stationing of NATO resources in eastern Europe, and use of NATO airpower in areas adjacent to Russia.[60] President Boris Yeltsin warned that expansion would "sow seeds of mistrust," possibly resulting in a "cold peace."[61] Endangered by Western expansion, Russia has threatened Conventional Forces in Europe (CFE) treaty noncompliance and denunciation of the strategic arms limitation talks (START) II.[62] Defense Minister Pavel Grachev stated in April 1995 that NATO expansion could cause Russia to foster military action "in the most threatening directions," also warning that Moscow might respond by strengthening the military capabilities of a "CIS bloc."[63] NATO strategists must carefully consider the use of airpower in eastern Europe to avoid encouraging Russian insecurities which might have unfavorable consequences on European stability.

In summary, NATO's tactical air doctrine will undergo extreme change in the next few years. Already, proposals have been made to completely revamp the tactical air doctrine structure, and work has slowly begun on updating present publications. Future tactical air doctrine must reflect the realities of the post-cold-war era. Airpower's usage will no longer be limited to a particular region against a specific foe with known capabilities. NATO airpower can and will be used out of area, presenting new challenges and new missions for NATO's air forces. The participation of outside countries in NATO operations demands immediate change to specific procedures and tactics, as well as a reexamination of the core airpower doctrinal concepts. Doctrine affects basic decisions regarding training, systems procurement, weapons development, and organizational structures—thus having a profound impact on the capability of forces. NATO must be proactive, addressing the full implication of employment issues before forces are committed.

Notes

1. Lt Col Steve Wallingford, NATO Air Board, interviewed by author via telephone, 23 February 1996.

2. David Stein, Kimberly Nolan, and Robert Perry, *Process and Problems in Developing NATO Tactical Air Doctrine* (Santa Monica, Calif.: RAND, 1988), 5.

3. *Report of the Custodial Meeting, 27–28 June 1995,* Minutes of the Tactical Air Working Party Custodial Meeting, Wunstorf, Germany, *1.*

4. Ibid.

5. The terms *tactical, operational,* and *strategic* in relation to airpower missions are defined in terms of the objective that the air strike is intended to achieve. A tactical mission would be prosecuted primarily to achieve a tactical objective, although it could also have some ancillary operational or strategic effects. A strategic attack aims to achieve overarching, strategic objectives. An example of a strategic strike might be an attack against command and control nodes intended to cut the enemy leadership off from the troops in order to destroy the enemy's ability to continue to fight.

6. David Stein, *The Development of NATO Tactical Air Doctrine: 1970–1985* (Santa Monica, Calif.: RAND, 1987), 14; Maris McCrabb, "The Evolution of NATO Air Doctrine" (Maxwell Air Force Base (AFB), Ala.: School of Advanced Airpower Studies, 1995), 16.

7. McCrabb, 6.

8. *Report to the Air Board of the 18th Meeting of the Interservice Tactical Air Working Party held on 24–28 April 1995* (Brussels, Belgium: Military Agency for Standardization, April 1995), c-2.

9. McCrabb, 3.

10. Lt Col Jay M. Vittori, Air Force Doctrine Center, Langley, Va., interviewed by author via telephone, 21 May 1996.

11. The British and Germans consolidate joint positions on proposed changes. Other NATO nations often use air personnel only in reviewing doctrinal iterations.

12. Stein, Nolan, and Perry, 12, 14.

13. McCrabb, 3–4.

14. Richard Kugler, *Commitment to Purpose: How Alliance Partnership Won the Cold War* (Santa Monica, Calif.: RAND, 1993), 495.

15. Ibid., 537.

16. *NATO Handbook*, "Partnership for Peace Invitation: Issued by the Heads of State and Government Participating in the Meeting of the North Atlantic Council held at NATO Headquarters, Brussels, on 10–11 January 1994" (Brussels, Belgium: NATO Office of Information and Press, 1995), 270–71.

17. Kugler, 541. This was a decision made independent of CFE mandated cuts and was mainly due to pressure for declining defense budgets.

18. Ibid., 542.

19. Ibid., 520.

20. Ibid., 539.

21. Willard Naslund, *NATO Airpower: Organizing for Uncertainty* (Santa Monica, Calif.: RAND, 1993), 32.

22. David LaSalle, *The New Strategic Concept and NATO Crisis Management* (Alexandria, Va.: Defense Technical Information Center, 1993), 23. During the Gulf War, seven WEU members deployed to support coalition efforts; however, a separate command and control organization or reporting structure was not established.

23. Naslund, 31; Richard Kugler, *US-West European Cooperation in Out-of-Area Military Operations* (Santa Monica, Calif.: RAND, 1994), 64–69. The members of the WEU are Britain, France, Germany, the Netherlands, Belgium, Spain, Luxembourg, Italy, and Portugal. In June 1991, the WEU ministers endorsed the goal of building a European specific security identity; however, they wanted to do so within the NATO framework. The EU Maastricht Treaty also declared a commitment to a separate European defense identity and claimed that the WEU would be the most appropriate organization for achieving it. However, the WEU has yet to be expanded or modified to take on such a role.

24. Naslund, 31–32; Kugler, *US-West European Cooperation in Out-of-Area Military Operations,* xii, 64, 68; LaSalle, 22. The WEU authorized out-of-area operations in the June 1992 Petersburg Declaration. Its mandate thus surpasses NATO's out-of-area operations; however, WEU members are obligated only to provide collective defense for direct attacks against member nations. For out-of-area threats, WEU states are only obliged to "consult" in dealing with the threat.

25. LaSalle, 22–23. The WEU has only a small military staff composed of less than 40 officers. They have decided to treat out-of-area operations on a case-by-case basis, thus, they do very little advance planning for these crises. They also have no operational control over any forces in peacetime. Thus, NATO's capabilities in out-of-area operations greatly surpasses those of the WEU.

26. Naslund, 31–32; Kugler, *US-West European Cooperation in Out-of-Area Military Operations,* xii, 62–63.

27. *Study on NATO Enlargement* (Brussels, Belgium: NATO Publications, September 1995), 7.

28. Ibid., 1–2.

29. Strobe Talbott, "Why NATO Should Grow," *New York Review of Books,* 10 August 1995, 2; *NATO Enlargement: Partnership for Peace Members—On the Road to Alliance Membership?* (Washington, D.C.: Congressional Research Service, March 1995), 1–3.

30. "NATO's Partnership for Peace: A Record of Success," Brussels, Belgium: EuroSec Fact Sheet, 1; Robert Hunter, "Enlargement: Part of a Strategy for Projecting Stability into Central Europe," *NATO Review*, May 1995, 6.

31. *Study on NATO Enlargement*, 3.

32. *NATO Enlargement,* 1; Talbott, 2.

33. Talbott, 1.

34. Robert Bailey, "NATO Moves East" (Maxwell AFB, Ala.: Air War College (AWC), 1994), 4–6.

35. Talbott, 2; Dale Fuller, "NATO's Out-of-Area Disputes: Prospects for Common Western Strategies in the Middle East" (Monterey, Calif.: Naval Postgraduate School, December 1992), 19–27. Initially, France was the sole supporter for offering alliance membership to Italy. Many, including statesmen in the United States, heatedly argued that the alliance should be restricted to the North Atlantic area in order to avoid "undesirable consequences" or strategic overextension. Italy's opponents' main argument was that Italy had insignificant military forces which would drain alliance military resources. Opponents also argued that historically, Italy was unreliable as an alliance partner (Italy had switched sides in the two world wars). However, the arguments that exclusion would only serve to push Italy towards the Communist Party eventually ruled the day, and Italy was offered membership.

36. *NATO Enlargement,* 2.

37. Talbott, 2.

38. Hunter, 6.

39. *NATO Enlargement,* 2–6.

40. "NATO's Partnership for Peace," 1; "Projecting Stability in an Undivided Europe: Partnership for Peace and a Pact on Stability in Europe," Subcommittee on Eastern Europe and the Former Soviet Union, NATO Publications, draft interim report, October 1995, 2.

41. Hunter, 6.

42. *Study on NATO Enlargement*, 15–16.

43. NATO Allied Joint Publication (AJP) 1, *Allied Joint Operations Doctrine* (Brussels, Belgium: Military Agency for Standardization, promulgated July 1994), secs. 232–33, 2.7.

44. *Jane's Sentinel, The Unfair Advantage: Ukraine* (Coulsdon, U.K.: Jane's Information Group, 1995), 19–20.

45. *NATO Enlargement,* 4–6, 9.

46. Ibid., 2–9.

47. Ibid., 4–6, 9–10. Finland still retains some Soviet-type equipment in its military inventories. However, since 1992 when Finland abandoned its relationship with Russia, Finland has begun purchasing Western equipment and procuring a large number of its fighter aircraft from the United States. Other nations in this group have built some of their own equipment but have done so with Western standardization and compatibility in mind.

48. Ibid., 12–14.

49. Talbott, 1.

50. *NATO Enlargement,* 8–9.

51. Ibid., 6.

52. Ibid., 1.

53. *DMS Market Intelligence Report: Poland*, Jane's Information Group (Newtown, Conn.: Forecast International, July 1995) , 5.

54. Thomas S. Szayna and F. Stephen Larrabee, *East European Military Reform after the Cold War* (Santa Monica, Calif.: RAND, 1995), 2.

55. *NATO Enlargement,* 3–4.

56. Ibid., 10–11.

57. F. Stephen Larrabee and Allen Lynch, *Russia, Ukraine, and European Security: Implications for Western Policy* (Santa Monica, Calif.: RAND, 1995), 17.

58. Krzysztof Osinski, *Poland: From Partnership for Peace to Membership in NATO* (Maxwell AFB, Ala.: AWC, April 1995), 7.

59. *NATO Enlargement,* 11–15.

60. Ibid., 9–10.

61. Ibid., 10.

62. Stanley Sloan, *NATO Enlargement and Russia: From Cold War to Cold Peace?* (Washington, D.C.: Congressional Research Service, May 1995), 2–5. The CFE treaty has the effect of scaling back the massive conventional forces maintained during the cold war. Treaty limits were agreed upon for military manpower, tanks and armored command vehicles, artillery, attack helicopters, and combat aircraft and serve as caps for both Allied and former Warsaw Pact nations.

63. Ibid., 2–6, 20. The CIS is the Commonwealth of Independent States, which some have referred to as the follow-on organization to the Warsaw Pact.

Chapter 3

Out-of-Area Implications for NATO's Air Doctrine

Wartime experiences, the international environment, available technologies, and force structures help shape airpower doctrine. Europe has experienced dramatic change in all of these areas in the last five years. The end of the cold war and the recent Gulf War experience are already influencing doctrine. In addition, modern weaponry now offers a degree of precision and long-range targeting capability never before available to the air strategist. Weapons costs are escalating while defense budgets continue to decline. The inventories of many NATO nations contain aging fighters and older transport airplanes while NATO is simultaneously cutting forces at a faster rate than ever before in its history.[1] The central and northern European NATO nations are reducing their active ground forces by 45 percent, mobilizable ground forces by 25 percent, air forces by 25 percent, and naval forces by 15 percent.[2] These realities affect future airpower doctrine while also providing both constraints and opportunities for the future employment of airpower.

Throughout the cold war, NATO expected conflict with the Warsaw Pact to be short but violent. Six western European corps were dedicated to a linear forward defense to counter the threat of a Soviet attack. Hopefully, ample warning time would permit quick deployment of NATO reinforcements in order to blunt the expected Warsaw Pact advance. Each NATO nation was assigned to defend a specific section of territory along NATO's border, and this imposed distinctive requirements on each national force. Some allies had large artillery forces, others had many tanks or numerous infantry assets, and each ally developed highly specialized employment doctrines. NATO action to counter a concentrated Warsaw Pact opponent who was advancing over known terrain relied upon tactical maneuver and firepower. With a defensive focus, NATO forces were unprepared for sustained operations, for offensive campaigns, or for extensive sweeping maneuvers.[3] Airpower strategists planned mainly to employ airpower in a supporting role to ground and naval forces.[4] Allied air forces were trained for close air support and limited interdiction missions rather than deep strike. Most NATO allies had no long- or even medium-range bombers. NATO fighters were, for the most part, short range assets designed to hit targets near forward battle lines. Air defense held first priority, followed by attack of the pact's second echelon

forces in order to shape the close battle. Airpower doctrine relegated third priority to support of the engaged ground forces.[5]

Today's security environment, with its potential for out-of-area operations, should influence cold war airpower employment plans. The cold war environment has been replaced by an unpredictable, uncertain climate. In the future, NATO might find itself faced with hostile countries threatening or actually using weapons of mass destruction against allied territory or interests.[6] Conflict on the periphery could spread into NATO territory or refugees could flow into Europe, disrupting alliance stability. The current security environment is characterized by rapid population growth in less developed countries, extreme religious and ethnic hostilities, and frustrations among minority groups. Increasing economic disparity between developed and developing countries surrounding NATO also helps to foster instabilities.[7] These problems are accentuated by the inability of many Third World governments to adequately deal with the resulting conflict and instability.[8] In addition, the proliferation of weapons of mass destruction may exacerbate these potential conflicts. By the year 2000, 20 nations will possess ballistic missiles, 30 will have chemical weapons, and eight may be close to acquiring nuclear weapons.[9] Undoubtedly, NATO will be forced to deal with conflict in some form on its perimeter.

The end of the cold war enabled NATO to expand its areas of interest. NATO's 1991 "Strategic Concept" declared the access to vital resources, prevention of terrorism and sabotage, and halting the proliferation of weapons of mass destruction to all be within the alliance's interest.[10] Future employment of NATO airpower must take potential threats in each of these areas into account and possess the ability to respond appropriately and effectively at each level of conflict. NATO forces might next encounter an unpredictable enemy in a long duration, low intensity conflict. Intelligence could prove more difficult in out-of-area operations as unknown opponents and relatively unfamiliar terrain take their toll on allied actions. Out-of-area operations may call for offensive actions and airpower might be more effectively used in a strategic role. Doctrine should address these scenarios before forces encounter them during conflict. Currently, out-of-area operations are conducted in a relatively ad hoc manner.[11] Today's doctrine does not adequately cover the range of threat scenarios in which airpower might be called to act. Out-of-area operations are a reality for NATO's forces. In 1992 alone, serious conflict elicited the participation of 25 percent of all nations, and there is no reason to think that European states will not continue to be involved in out-of-area crisis situations.[12]

Airpower doctrine is slowly changing to cover out-of-area contingencies and the probable employment of NATO's air assets. However, while the TAWP cautiously considers and debates changes and new wording, airpower planners in the field are grappling with the reality of new conditions in out-of-area operations. Many of the ATPs are currently undergoing revision, but garnering consensus on the new documents could take several years. ATP 33, for example, will no longer focus on tactical airpower. The new document

will become "NATO Airpower Doctrine," and it will cover the employment of all aspects of airpower, including command and control and the planning and targeting of joint air operations.[13] Supporting documents covering offensive air support, counterair operations, airspace control, and other topics are all under review for revision. And some topics of airpower doctrine are yet to be addressed. The following section discusses areas which deserve attention in the update of NATO's airpower doctrine to reflect post-cold-war realities.

Potential Areas for Doctrinal Revision

The first aspect of NATO's airpower doctrine that must be addressed in response to out-of-area operations is the defensive orientation of the alliance. The NATO ministers generally view the defensive focus as necessary in order to maintain alliance cohesion. NATO was founded and maintained on the principle of defense, and many nations might not accept an outright declaration otherwise. NATO's Strategic Concept carefully specifies that the alliance will continue to remain defensive in nature, and this need not necessarily conflict with the use of forces in out-of-area operations. While some might argue that any use of force in out-of-area operations represents offensive action, others would define offensive action in terms of the objectives pursued or protected. Operations in Bosnia could be termed "strategically defensive" in the sense that Europeans desire to contain the conflict and keep it from spreading into NATO territory. NATO operations in Turkey during the Gulf War were specifically defensive, and even coalition operations during the Gulf War could be labeled strategically defensive since Iraqi control of the flow of oil would threaten the economic stability of the European alliance. However, despite these differences in verbiage, the employment of forces at the tactical or even operational level in out-of-area operations will not resemble the clear-cut "defensive" employment of forces planned against the Warsaw Pact. Cold war forces were expressly tailored to march to NATO's borders but no farther.[14]

Cold war airpower focused on support of friendly forces, with only short-range incursions authorized across the forward edge of the battle area (FEBA). The use of airpower in out-of-area operations will thus require new thinking. Some NATO nations (e.g., Germany) must make constitutional changes in order to fully support out-of-area operations. NATO air assets must be able and ready to perform the core roles of military power: deterrence, defense, compellence, and demonstration.[15] To defuse crisis situations, NATO airpower should be capable of performing offensive strikes, maneuvering along a changing front, or supporting offensive-type forced entry operations. Airpower may be used to seize defended ports or other facilities out of area. Air assets may be needed to assist in blockade and quarantine operations or to control enemy air movements.

NATO's 1991 Strategic Concept reaffirms the defensive nature of airpower: "The Alliance is purely defensive in purpose: none of its weapons will ever be used except in self-defense."[16] But, out-of-area defensive operations will have to be redefined in light of the new threats likely to be encountered. Operations at the tactical level might be more offensive in nature, while still supporting a defensive strategic objective. Airpower's previous defensive orientation needs to be reinterpreted or modified as NATO follows a more active crisis management policy.

With the reduction of ground and naval forces, doctrine should address the use of airpower in a more independent role. Currently, the TAWP is working on this issue as it contemplates independent air actions.[17] The increased precision and lethality of modern air weapons may enable NATO airpower to gain the limited objectives typical of out-of-area operations before ground troops are even needed. Airpower also allows NATO to commit military force with lower risk than a similar commitment of ground forces.

NATO has already begun to use airpower somewhat exclusive of friendly actions on the ground. NATO's 1995 air strikes in Bosnia witnessed airpower in an independent role to compel the warring parties toward a peace settlement. The use of airpower in the Gulf War in the initial air campaign helped "prepare the battlefield" and minimized risk to friendly forces. Airpower can be used to signal NATO's political commitment, to illustrate intent, or to show determination. In some situations, it can coerce the enemy in order to achieve objectives. Airpower is inherently maneuverable, providing quick mobility for the projection of NATO force. In addition, NATO and the West have superior airpower capabilities. This provides an advantage against the threats that NATO is likely to encounter in out-of-area operations, allowing NATO to pit its strengths against probable enemy weaknesses. Many out-of-area operations will still require the use of ground personnel to enforce or obtain objectives; however, future doctrine should address the possibilities and potential benefits of using airpower in a more independent role.

The types of missions that airpower will be expected to perform during out-of-area operations will also greatly differ from those that were anticipated during the cold war. No longer can NATO plan to fight on a traditional linear front against a known threat. As occurred in Bosnia and Somalia, out-of-area operations may include the protection of enclaves as well as the presence of many, unrelated and perhaps unidentifiable threats. The TAWP recognizes the new out-of-area environment and characterizes it as a "less dense, very fluid, non-linear battlefield with greater difficulty in predicting contact between ground forces."[18] The procedures and doctrine to cover these battlefield conditions have yet to be written.

For conflicts with a rapidly changing FEBA or which have no clear-cut battlefield forward lines, new methods of control must be arranged. ATP 27, *Offensive Air Support Operations*, currently specifies the designation of a fire support coordination line (FSCL) which will be used to control and coordinate the attacks of air, ground, and sea-based systems.[19] Short of the FSCL, fires must be coordinated through the ground commander, while attacks forward of

the FSCL are coordinated through the designated supported commander (normally the air commander). Not only may the nonlinear battlefield invalidate the concept of an FSCL, but more fluid ground movement and longer range weaponry suggest that coordination between ground, air, and naval forces must be improved.

In addition to planning for conventional combat, NATO airpower forces are already involved in lower intensity tasks. Airpower doctrine does not yet fully address these types of missions. Doctrine for peacekeeping and peace enforcement must be thoroughly developed, to include the establishment and protection of free-fire zones and safe havens via airpower. These types of out-of-area operations also generally involve more restrictive rules of engagement. Airpower might be asked to protect civilians, separate warring parties, ensure the safe delivery of humanitarian supplies, or provide surveillance, reconnaissance, and monitoring of settlement agreements. These differing mission types that NATO forces are likely to encounter in out-of-area operations represent challenges for the future employment of airpower. New or different command organizational structures, force training methods, and systems procurement ideas may be appropriate. In addition to addressing the full ramifications of the nonlinear battlefield, future airpower doctrine for out-of-area operations must expand cold war thought to cover all probable types of NATO missions.

New technologies have greatly affected possibilities for the employment of airpower. Out-of-area missions may be conducted at a higher tempo than envisioned for airpower during the cold war. High speed data rates and communications connectivity allow information to pass more quickly than ever before. Targets can be fed in real time right into the cockpit and individual air assets can be directly controlled by senior-level military strategists. In general, the commander who is able to act and react quicker will have a battlefield advantage.[20] AJP 1 states that "all commanders and authorities involved in the planning of allied joint operations must strive to keep the reaction time as short as possible. Generic contingency planning in peacetime, forward positioning of forces, equipment and supplies, timely establishment of communications and the issue of warning orders are among the most essential means to achieve this goal."[21] While greater information rates provide opportunities for shorter spans of control and perhaps new command and control structures, there will also be opportunities for high-level micromanagement. Technology is allowing more and more near-real-time combat data to be available at multiple control elements (e.g., AWACS, air operations centers, home base, and task force headquarters). When things go wrong or when a high-visibility mission encounters the unexpected, there will be a powerful urge by each element to provide control inputs. This leads to confusion and command problems. New organizational arrangements, command and control procedures, and doctrinal concepts should support doctrinal concepts of command and execution. In the past, airpower has primarily focused on the principle of centralized control through decentralized execution. In the future, this concept may need to be altered for

some out-of-area situations.[22] Airpower doctrinal procedures must be established to effectively utilize the information capabilities now made available by modern communications rates.

Modern, long-range target acquisition and attack systems increase the tempo of warfare, as well as accentuate the problems associated with coordination between ground and air forces.[23] Improper coordination or rushed operations could exacerbate airspace control and separation issues, as well as increase the risk of fratricide. In addition the ability to target at night and during all kinds of weather serves to increase the potential for higher tempo operations. Concern over collateral damage may limit some missions, but as targeting systems become more reliable, more precise, and more capable, the tempo and intensity of air operations will increase. Airpower doctrine does not currently address the full ramifications of higher tempo operations. The TAWP is currently working on nighttime close air support procedures for inclusion in ATP 27, but other issues should also be addressed. For example, operations in Bosnia have been complicated by convoluted command structures located within the UN, NATO, the United States, and other participating nations. Portions of headquarters and control facilities have at times been located in Naples, Geneva, Vicenza, Ancona, Zagreb, and Sarajevo. New command structures may improve the speed and effectiveness of high tempo operations. Similarly, preplanned procedures and responses, as well as better communications and targeting methods, could enhance the decision-making process.

NATO airpower doctrine has always recognized the desirability of air superiority.[24] However, due to the expected sudden nature of a Warsaw Pact attack with their overwhelming forces, NATO recognized that air operations would probably commence without complete air superiority. Cold war doctrine (ATP 33) stated that "air supremacy is a desirable goal but may not be feasible or economical to attain. Where air supremacy cannot be achieved, the object of air power will be to establish and maintain a degree of air superiority that may be limited in both time and space."[25] NATO strategists hoped that *local* air superiority could be initially gained over critical ports and lines of communication, which NATO would rely upon during initial reinforcement movements.[26] Thus, doctrinal procedures for gaining and maintaining complete air superiority were not fully addressed.

The limited nature of out-of-area operations against less competent adversaries allows airpower doctrine to place a much greater emphasis on air superiority. Air superiority provides freedom of movement and security for friendly forces, facilitating other NATO air missions.[27] Against an inferior enemy who has lesser air capabilities, there are few reasons to risk ground forces before air superiority is achieved. Actions in the Gulf War supported the importance of air superiority when it helped minimize risks to friendly forces. NATO's new AJP 1A, *Allied Joint Operations Doctrine*, specifies only that the purpose of joint air operations will be "to gain control of the air and then to allow friendly forces to exploit this control."[28] It may be possible that air superiority alone could achieve some NATO objectives before other types

of force are even introduced. In any event, air superiority is a most desirable condition prior to the commencement of other operations. Airpower specific doctrine should espouse the necessity of achieving air superiority and clarify the intended means of doing so. It may still remain necessary in some crisis situations to take prompt actions before enemy air operations have been inhibited; however, it is unlikely that NATO will be willing to commit ground forces in many out-of-area operations before complete air superiority is achieved.

NATO air doctrine, due to its defensive nature, has always neglected the area of strategic attack. Strategic attacks are defined by their effects. An attack which contributes directly to the achievement of strategic goals would be dubbed a strategic attack. Due to its inherent long range and maneuverability, airpower is uniquely suited for direct attack in pursuit of strategic effects. The defensive orientation of the Washington Treaty meant that cold war airpower planners found it unacceptable to even consider conventional attacks deep into Soviet territory, regardless of the effects or objectives that might have been obtained. Strategic attack plans (to support deterrence) were completely reserved for US nuclear forces. As a result, European NATO members did not develop or field long-range air assets.

Until recently, NATO airpower doctrine recognized counterair, interdiction, reconnaissance, offensive air support, and tactical transport as valid airpower missions; but doctrine ignored the issue of strategic attack. In 1985 NATO accepted the idea of follow-on force attack (FOFA) in response to Soviet plans to move their forces forward in succeeding waves against NATO defenses.[29] Although FOFA was never officially incorporated into NATO air doctrine, it was the first significant deviation from airpower's historical role in direct support of ground troop movements.[30] FOFA involved attacking Warsaw Pact second echelon forces before they entered the main defensive area. FOFA attacks were not necessarily intended to achieve strategic objectives, but for the first time NATO had begun to consider the idea of early border crossing authority, perhaps with the idea of achieving longer term effects than could be achieved through tactical strikes.

With the end of the cold war, NATO air doctrine has begun to acknowledge the importance of strategic attack. AJP 1A, "Allied Joint Operations Doctrine"—the newest NATO draft doctrine—recognizes that direct attack against key enemy centers of gravity offers potential benefits much greater than traditional air missions flown in the tactical support role.[31] AJP 1 states that strategic targets may be conducted to "disable critical C^2 nodes, degrade offensive capabilities, and breach defences . . . conducted to attack centres of gravity deep in enemy territory . . . to produce strategic or operational effects."[32] Induced by recent experiences and new threat scenarios, these ideas are revolutionary in terms of NATO airpower doctrine. The rewrite of ATP 27 addresses battlefield air support, air interdiction, and strategic attack.[33] Germany, the custodial nation, proposes a layout and structure of the new publication at their next annual meeting.[34] The TAWP has begun the process of updating doctrine to include strategic ideas. However, while NATO

airpower is already prosecuting strategic attacks in out-of-area operations, specific strategic doctrinal concepts have not yet been fully developed.

One area of continued dispute in NATO airpower doctrine concerns the suppression of enemy air defenses (SEAD). SEAD is air activity which "neutralizes, destroys, or temporarily degrades enemy air defences by physical attack and electronic warfare."[35] USAF doctrine considers SEAD to be a mission coequal with offensive and defensive counterair. SEAD considerations have "driven [USAF] aircraft design, routing, force packaging, targeting and tactics."[36] NATO, on the other hand, relegates SEAD to a subordinate tasking.[37] ATP 33 states that "SEAD is not a specialized mission in its own right. . . . The mere presence of enemy air defence systems on the battlefield does not constitute a requirement to counter those systems."[38] NATO nations have continued to resist the acknowledgment of SEAD as a separate mission, fearing that it would translate into a requirement for them to buy SEAD platforms.[39] To overcome enemy air defenses, NATO strategists instead planned to either rely heavily on USAF SEAD capabilities or to practice threat avoidance via high speed, low-level flight in order to reduce the probability of radar engagement.[40]

Meanwhile, the importance of the SEAD mission has been repeatedly demonstrated in combat. During the 1973 Arab-Israeli conflict, large numbers of surface-to-air missiles (SAM) limited the effectiveness of air attack. By 1982 in Lebanon's Bekáa Valley, the Israelis had learned the value of SEAD and they orchestrated a sophisticated and successful SEAD campaign to counter enemy defenses.[41] Coalition operations in the Gulf War and in Bosnia relied upon American SEAD doctrine. During the Gulf War, more than 2,000 high-speed anti-radiation missiles (HARM) were launched against enemy air defenses, validating the usefulness of SEAD.[42] The *Gulf War Air Power Survey* claimed that "no single weapon was as significant as the HARM."[43] The HARM missile was the central component of efforts to defeat enemy air defenses. The missile effectively suppressed enemy SAM systems, allowing aircraft to fly above antiaircraft artillery altitudes. Among the major lessons learned during Desert Storm was the need for precision guided munitions, stealth, command, control, communications, and intelligence (C^3I), and SEAD.[44] Some NATO members argue that extensive SEAD campaigns either serve to expand political objectives beyond that intended or waste allied efforts.[45] Although the decision was contentious, recent NATO attacks against Bosnian Serb targets in Operation Deliberate Force were preceded by a comprehensive SEAD effort, and NATO's air component commander directed that all subsequent strike missions include SEAD support.[46] Even in the permissive threat environment over Bosnia, NATO aircraft required US SEAD protection to minimize their risk.

The demonstrated need for SEAD campaigns, the proliferation of the SAM threat even amongst developing countries, and the need to minimize casualties during out-of-area operations indicate that SEAD will continue to be a high priority in NATO operations. With the higher unit cost of individual weapons systems, the need for force protection increases. NATO countries are

unable or unwilling to afford stealth or other technologies which might preclude the need for SEAD, so it is likely that the requirement for SEAD will continue in the near future. In some cases, the alliance might by unwilling to use available stealth aircraft which could obviate the requirement for SEAD. This was the case when political factors caused Italy to refuse to allow F-117 stealth aircraft to base out of their country during the Bosnian campaign. This served to strengthen the argument for SEAD. In practice, due to force protection necessities and US influence, NATO air employment has somewhat acknowledged the priority of SEAD; however, doctrine has lagged behind. Recognizing this, European NATO nations have begun to independently develop SEAD capabilities. Spain now has an EF-18 capability available for air defense suppression, and the Royal Air Force air-launched anti-radiation missile development was expedited in time for use in Desert Storm. Germany's electronic combat and reconnaissance (ECR) Tornado aircraft with HARM capability is now operational, and Italy plans to purchase a similar system.[47] The development of these systems, particularly in light of shrinking defense budgets, seems to validate the serious need for SEAD. NATO airpower doctrine should reflect the prevailing importance placed upon the SEAD mission, and procedures should be developed to reflect current practices in out-of-area operations.

Out-of-area operations will require a new emphasis on airpower support and infrastructure systems. NATO airpower doctrine has never stressed the need for long haul mobility assets or large unit deployable support packages. Cold war forces had limited resources capable of bare base airfield construction and few deployable maintenance units. NATO also did not have deployable C^3I units that could perform in austere environments or transportation units to move ammunition and supplies over long distances.[48]

Out-of-area operations will almost certainly require upgrades in all of these areas. As an example, deployment of only one modern fighter squadron for 21 days to bare base conditions requires extensive logistics support: 24 fighters, 587 personnel, 72 vehicles, 1,485 tons of munitions, 1.09M gallons of fuel, and 472 tons of miscellaneous cargo.[49] The deployment of large numbers of ground troops would currently require extensive US lift resources. Many heavy lift airplanes would be necessary to supplement ground or sealift transportation, especially if NATO needed to respond quickly to the crisis area. Alliance participation in many conflicts, depending on the location and available infrastructure, will depend on airlift alone.[50] Out-of-area missions will require comprehensive logistics support which the Europeans do not presently have the capability to provide. Thus, many NATO out-of-area operations will be reliant on heavy US involvement. With extensive US commitments throughout the world, it would probably be wise for NATO to develop some alternative mobility capabilities.

Current airpower doctrine does little to address the need for logistics support of out-of-area operations. The 1991 Strategic Concept calls for the development of rapid and responsive reinforcement capabilities; however, airpower doctrine has yet to reflect these wishes.[51] The new AJP 1 stipulates

that mobility assets, transportation networks, and support infrastructure will be required in order for NATO to respond "to a wide range of possible contingencies."[52] Yet airpower doctrine as reflected in ATP 33 and other publications still fails to address strategic or operational transportation needs.[53] To adequately address out-of-area operations, airpower doctrine must stress the importance of the mobility and sustainability requirements. Prepositioned supplies, forward basing, and deployable units would help to support out-of-area missions. Equipment stocks, deployable command units, and supply controls need to be in place and operational prior to large scale out-of-area operations in order to reduce the confusion and complexity of deploying assets.

Out-of-area operations may also require different organizational structures for the control of logistics support. NATO logistics have always been a national responsibility with each ally responsible for their own supply needs. Out-of-area operations which may take place in many different locations with different force types might suggest the need to establish a more permanent support structure. Logistics coordination centers organized by region might be one possible solution. These more permanent organizations could plan for deployments, contingencies, and help to manage the supply infrastructure required for out-of-area operations.[54] Whatever the solution, NATO air assets will be forced to address the sustainability of forces to out-of-area locations. Airpower doctrine must emphasize the importance of strategic and operational sustainability, while also covering major procedures and controls for these missions.

In response to the out-of-area issue, NATO has begun to develop rapid reaction capabilities. In May 1991 the NATO ministers decided to create a corps sized NATO Ready Reaction Force (RRF) composed of three rapidly deployable divisions.[55] In addition to the ground component, the alliance created a subordinate Reaction Force Air. The subordination of the air component to the ground commander does not necessarily dictate a specific use for airpower, but certainly implies a continued tactical mentality for airpower (land-supporting). By June 1992 plans called for a "Reaction Force Air Staff" which would manage SAM units, a command and control element, and approximately 380 aircraft.[56] These air forces were later broken into two categories: immediate response (hours to days) and rapid response (days to weeks) forces. By late 1994, the planned responsibilities of the Reaction Force Air Staff had dwindled. There would be no major peacetime planning office, and air assets would be "plugged in" to whatever command and control arrangements were identified for each particular operation.[57] Employment plans would also be determined on a case-by-case basis. The Reaction Force Air thus provides separate air packages to support out-of-area operations; however, with no peacetime operational command arrangements and little wartime employment planning under way, force effectiveness may be in question.[58]

Plans for the Rapid Reaction Force are overly ambitious. The Allied Command Europe Rapid Reaction Corps (ARRC), which was activated in

October 1992, is supposed to be movable within seven days of receiving orders. However, with recognized deficits in lift, long-range communications, and self-contained deployable control elements, the RRF is somewhat of an unrealizable capability.[59] It is true that initial ARRC elements deployed rather quickly to Bosnia in mid-1995; however, many of the elements were already in place and US deployment assets were readily available. In general, national contingencies suffer from deficiencies. France's Force d'Action Rapide contains five divisions which are trained for out-of-area missions, but without transport and supply support, only one division of 9,000 soldiers is sustainable. The United Kingdom maintains three lightly configured brigades and has assets to move them, but none to adequately sustain them. The out-of-area forces of other nations are small. Most nations have assembled the personnel, logistics support, and lift capacity only for brigade size operations. Besides the lack of mobility support, there are problems with C^3I to control deployed forces. NATO's RRF thus promotes an impression of greater out-of-area capability than actually exists.[60]

Additionally, since troops assigned to the RRF are multinational, implementation delays may occur or some members may refuse to participate in out-of-area operations. Each out-of-area crisis will induce a national reappraisal of security interests and the need for participation.[61] NATO out-of-area operations can "consist only of capabilities volunteered by the member nations—a coalition of the willing, sanctioned by the collective organization."[62] Thus, it is possible that the complement of forces in each out-of-area crisis may be different. This may negatively impact force effectiveness.

Even with the RRF identified, there is still a need for realistic doctrine, training, and exercises for out-of-area operations. Airpower doctrine does not currently recognize possible employment of RRF or task organized forces. Doctrine must be developed and support structures built for rapid reaction capabilities to become a reality. Procedures must also be put in place to reflect the impact of voluntary participation of national forces in out-of-area operations. If the United Kingdom, Germany, or even the United States chooses either not to participate or to limit participation in the next out-of-area mission, NATO air strategists should have some type of plan in place to facilitate the achievement of NATO's objectives.

The high probability of future out-of-area operations suggests a re-assessment of NATO's planning process. Crisis action planning procedures should be refined and expanded upon. Crisis situations greatly complicate the once predictable cold war planning process. Crises generally require more immediate action. In a study published by the Center for Naval Analyses, nearly one-half of the 23 cases studied since 1983 indicated that Joint Task Force commanders had less than 72 hours to plan and prepare for military crisis action. In these cases, military forces often had to take immediate action in operations spanning the spectrum from humanitarian assistance to conventional combat operations.[63]

The initial stages of conflict generally are characterized by a lack of information, which serve to confuse the crisis situation. The greater time and

distance from NATO's planning staffs, the expected complications in out-of-area operations, restrictive rules of engagement, and the problems inherent in conducting a massive mobility operation in the midst of conflict are problematic.[64] Specific doctrine and crisis planning procedures should be developed and practiced—crisis activation is no time to become inventive with the planning process.

Since each out-of-area operation might potentially involve a different cast of contributing nations, the crisis planning cell needs to be flexible within known procedural parameters. Without a well-established crisis planning process in place, NATO forces will be placed at a disadvantage. The new AJP 1 provides for an allied joint force activation and specifies the most basic planning responsibilities of its commander.[65] Lower level airpower doctrinal manuals need to reflect crisis action planning methods as well as expand upon the procedural details and structure of the out-of-area planning process.

Conclusion

Overall, the TAWP has done a thorough job of highlighting areas for doctrinal revision. However, since the doctrinal update process is so slow, NATO planners have been forced to improvise during recent out-of-area operations. There are many potential areas for change in post-cold-war airpower doctrine. Airpower can play a larger role in crisis response, perhaps acting independently to achieve objectives. Since out-of-area operations will place new demands on airpower, doctrine must address new expected missions and employment of airpower. Finally, the ability to support forces in out-of-area operations will be critical. NATO forces are no longer organized along cold war defenses, and multinational forces will probably be integrated at lower levels. Coordination requirements will increase and even the TAWP recognizes that NATO forces need clearer, more "unambiguous and easily understood common doctrine."[66]

Airpower doctrine is moving in the right direction to cover the out-of-area domain, but there is still a long way to go. The integration of PFP countries into NATO operations will complicate doctrinal issues. NATO planners need to clarify and update current outstanding out-of-area doctrinal issues as soon as possible in order to ease PFP incorporation into NATO operations. Chapter 4 discusses the implications of PFP participation on NATO airpower doctrine.

Notes

1. Mark Lorell, *The Future of Allied Tactical Fighter Forces in NATO's Central Region* (Santa Monica, Calif.: RAND, 1992), vi–vii, 38–41.

2. Richard Kugler, *US-West European Cooperation in Out-of-Area Military Operations* (Santa Monica, Calif.: RAND, 1994), 103–4. The downsizing nations include Britain, France, Germany, Belgium, the Netherlands, Denmark, and Norway.

3. Ibid., 106.

4. Maris McCrabb, "The Evolution of NATO Air Doctrine" (Maxwell AFB, Ala.: School of Advanced Airpower Studies, 1995), 19.

5. Ibid., 43–44.

6. Gregory Schulte, "Responding to Proliferation: NATO's Role," *NATO Review*, July 1995, 15.

7. John Galvin, "Conflict in the Post Cold War Era," in *Low Intensity Conflict: Old Threats in a New World,* eds. Edwin Corr and Stephen Sloan (Boulder, Colo.: Westview Press, 1992), 63; and eds. Edwin Corr and David Miller, "United States Government Organization and Capability to Deal with Low Intensity Conflict," in *Low Intensity Conflict: Old Threats in a New World,* eds. Edwin Corr and Stephen Sloan (Boulder, Colo.: Westview Press, 1992), 18.

8. Corr and Miller, 18.

9. Galvin, 63.

10. *NATO Handbook,* "The Alliance's Strategic Concept: 7–8 November 1991" (Brussels, Belgium: NATO Office of Information and Press, 1995), 237, para. 12.

11. Kugler, xiii.

12. Max Manwaring, "The Threat in the Contemporary Peace Environment: The Challenge to Change Perspectives," in *Low-Intensity Conflict: Old Threats in a New World,* eds. Edwin Corr and Stephen Sloan (Boulder, Colo.: Westview Press, 1992), 46.

13. *Report of the Custodial Meeting, 27–28 June 1995,* Minutes of the Tactical Air Working Party Custodial Meeting, Wunstorf, Germany, sec. 2.4.

14. Kugler, 106–7.

15. David LaSalle, *The New Strategic Concept and NATO Crisis Management* (Alexandria, Va.: Defense Technical Information Center, 1993), 27.

16. *NATO Handbook,* 242, sec. 36.

17. McCrabb, 19.

18. *Report of the Custodial Meeting, 28–30 June 1995,* sec. 2.1.

19. NATO Allied Tactical Publication (ATP) 27B, *Offensive Air Support Operations* (Brussels, Belgium: Military Agency for Standardization, May 1980), 2-5, sec. 210.

20. David S. Fadok, *John Boyd and John Warden: Airpower's Quest for Strategic Paralysis* (Maxwell AFB, Ala.: Air University Press, 1995), 13–15.

21. NATO AJP 1, *Allied Joint Operations Doctrine* (Brussels, Belgium: Military Agency for Standardization, July 1994), 2-4, sec. 213.

22. The author is not suggesting that the "centralized control-decentralized execution" principle is no longer appropriate—only that NATO planners need to carefully investigate the full implications of out-of-area operations on all aspects of airpower employment. It may be that certain types of missions (e.g., those requiring very restrictive rules of engagement) could call for a very centralized command and execution structure.

23. *Report of the Custodial Meeting, 28–30 June 1995,* sec. 2.2.

24. McCrabb, 19.

25. NATO ATP 33B, *NATO Tactical Air Doctrine* (Brussels, Belgium: Military Agency for Standardization, November 1986), 2-5 through 2-6, sec. 209.

26. Ibid., 43.

27. Ibid., 19.

28. NATO AJP 1A, 12-2, sec. 1203.

29. Air Vice Marshal Anthony Hawken, United Kingdom, "Follow-On Force Attack: Now and in the Future" (Maxwell AFB, Ala.: Air War College, April 1990), 4.

30. McCrabb, 27–28.

31. NATO AJP 1A, first preliminary draft, "Allied Joint Operations Doctrine" (Brussels, Belgium: Military Agency for Standardization, 1995), chap. 18, para. 1805; and McCrabb, 48.

32. NATO AJP 1, 12-2, sec. 1204–5.

33. *Report of the Custodial Meeting, 5–7 December 1995,* Minutes of the Tactical Air Working Party Custodial Meeting, Fürstenfeldbruck, Germany, 3–4.

34. Ibid., 3, sec. 3.

35. NATO ATP 33B, 4-2, sec. 406.

36. Air Force Manual 1-1, *Basic Aerospace Doctrine of the United States Air Force,* vol. 2, March 1992, 192.

37. McCrabb, 21.

38. NATO ATP 33B, 9-4, sec. 917.

39. David Stein, Kimberly Nolan, and Robert Perry, *Process and Problems in Developing NATO Tactical Air Doctrine* (Santa Monica, Calif.: RAND, 1988), 12, 16–17; and Peter C. Hunt, "USAF Capability and Requirements for Suppression of Enemy Air Defenses: The Impact on Multinational Operations" (Maxwell AFB, Ala.: School of Advanced Airpower Studies, February 1996), 6.

40. David Stein, *The Development of NATO Tactical Air Doctrine 1970–1985* (Santa Monica, Calif.: RAND, 1987), 45–49.

41. Hunt, 2–3.

42. Thomas A. Keaney and Eliot A. Cohen, *Gulf War Air Power Survey, Summary Report* (Washington, D.C.: Government Printing Office, 1993), 229.

43. Ibid.

44. Keaney and Cohen, 229–30; and Lorell, 42–43.

45. Political objectives in Bosnia were reflected in the UN resolutions. Some NATO members argued that SEAD missions went outside the boundaries established by the UN mission which specifically called for the protection of safe areas and did not focus on the elimination of air defensive facilities located outside of safe areas. Others argue that the principle of economy of force is violated by extensive SEAD efforts. For example, a small package of attack aircraft could be strengthened if the accompanying SEAD assets were used for operational targeting as opposed to SEAD. NATO strategists need to come to a consensus on this topic.

46. Hunt, 3–7; and Lt Gen Mike Ryan, "NATO Air Operations in Bosnia-Herzegovina: Deliberate Force 29 August–14 September 1995," 1995 Corona Conference slides. Operation Dead Eye preceded the Deliberate Force air strikes. The Dead Eye operations were conducted to disrupt enemy air defense systems in order to reduce risk to friendly aircraft. Air defense communications facilities, command and control nodes, early warning radars, SAM sites, and SAM support facilities were among the Dead Eye targets. The results of this operation were very good.

47. Charles Bickers, "Europe's Wild Weasels," *Jane's Defence Weekly*, 11 April 1992, 615; Hunt, 8.

48. Kugler, xiv, 106–7.

49. Willard Naslund, *NATO Airpower: Organizing for Uncertainty* (Santa Monica, Calif.: RAND, 1993), 14.

50. Ibid., 14.

51. LaSalle, 37–39.

52. NATO AJP 1, 2-6, sec. 227.

53. NATO ATP 33B, 8-1.

54. Naslund, 15.

55. Christopher Melhuish, "NATO Combined Joint Task Force" (Newport, R. I.: Naval War College, March 1995), 5; Richard Kugler, *Commitment to Purpose: How Alliance Partnership Won the Cold War* (Santa Monica, Calif.: RAND, 1993), 537–38; and Kugler, *US-West European Cooperation in Out-of-Area Military Operations,* 108–9.

56. LaSalle, 33; Kugler, *Commitment to Purpose,* 537–38; and Kugler, *US-West European Cooperation in Out-of-Area Military Operations,* 108–9.

57. Naslund, 28–32.

58. Ibid.

59. Melhuish, 5.

60. Kugler, *US-West European Cooperation in Out-of-Area Military Operations,* 108–9.

61. LaSalle, 36.

62. Paul Miller, *Retaining Alliance Relevancy: NATO and the Combined Joint Task Force Concept*, National Security Study 13 (Hollis, N. H.: Puritan Press, 1994), 52; and Melhuish, 14.

63. Melhuish, 7–8.

64. Naslund, 21.

65. NATO AJP 1, 4-1 through 4-4.

66. *Report of the Custodial Meeting, 28–30 June 1995,* sec. 2.4.

Chapter 4

Enlargement and the Implications for NATO's Airpower

Since PFP members are already participating in NATO exercises and operations, there is some need to make immediate adaptations to airpower employment in order to successfully integrate PFP forces. In the short term, NATO and the Partnership for Peace must overcome differences in employment philosophy, incompatible equipment, and variances in training and culture. Over time, with continued participation and coordination between NATO and PFP countries, many of these differences will diminish. However, NATO enlargement will still present new challenges for alliance air doctrine. Possibly because enlargement is still years away, the topic has not been fully studied at NATO headquarters, by NATO air planners, or within the Tactical Air Working Party.

This chapter does not present definitive answers to the open questions regarding enlargement but highlights many of the areas that need to be addressed. Since the specifics of PFP enlargement have not yet been determined by the North Atlantic Council, the discussions regarding implications for air doctrine cover broad concepts rather than specific doctrinal revisions. This chapter reviews immediate considerations for employment of PFP forces alongside NATO air assets, followed by long-term concerns for PFP integration into NATO. While much of the following information might apply to all PFP nations, this chapter concentrates on those PFP nations most likely to join NATO and thus most likely to have the greatest impact on its air doctrine.

Immediate Considerations for PFP Integration

With ongoing crisis and conflict operations, there is an immediate need to modify NATO procedures and operations to facilitate and enhance PFP participation. Cultural issues, cold war military philosophies, and PFP training and equipment incompatibilities must be considered now to ensure the effective integration of PFP forces. Cultural issues include linguistic differences, ethnic and interstate rivalries, and a history of conflict which must be taken into account when bolstering, supporting, or employing PFP forces. One immediate problem is the lack of English language skills by many PFP pilots and aircrew members. English is the internationally accepted language of aviation, and the extreme importance of reliable military communications dictates that a common language be spoken by all NATO and

PFP air personnel. In many eastern European countries, scandal and ethical issues have tainted the transition to civil control and parliamentary oversight of the military. In the Czech Republic, a group of Slovak soldiers propagated ethnic tensions within the military and secretly orchestrated the downfall of a defense minister.[1] In a bid to strengthen his own control over the military, Bulgaria's civilian defense minister attempted to illegally retire most of the senior officers.[2] Problems like these are compounded by the ethnic tensions and religious conflict that exist in some countries. Furthermore, many of the PFP countries share an outdated, common military legacy due to their involvement in the Warsaw Pact.

The Cold War Military Legacy

Effective integration with NATO forces will require both the PFP and NATO to overcome or accommodate deeply ingrained cold war military philosophies. Warsaw Pact militaries were subordinate components of the Soviet forces, controlled and dominated by the Soviet Union. As opposed to NATO forces, which were defensive in nature, the Warsaw Pact countries had offensive forces with appropriate support structures designed to expedite the movement of units into NATO territory.[3] Each former Warsaw Pact country had specific tasks assigned for conflict with the West. Poland's forces were specifically designed to wage war against West Germany and Denmark. Czechoslovakian forces planned offensive action against Italy, and Bulgaria was to pit its strengths against the southern NATO nations.[4] Warsaw Pact countries lacked individual military doctrines of their own, relying instead upon the direction of the Soviet General Staff. The Soviets, in turn, did not share plans for the use of their forces with their Warsaw Pact allies.[5] The Soviets planned, budgeted, and made all Warsaw Pact procurement decisions directly from Moscow. Thus, PFP countries inherited militaries with limited capabilities for autonomous action and virtually no independent planning abilities.[6]

After years of corruption and mismanagement, many eastern bloc military inefficiencies and outdated attitudes will be difficult to overcome. Within eastern European countries, the cold war communist regimes maintained firm control over their militaries. Militaries were thoroughly politicized and a complex structure of incentives, inducements, and punishments governed the behavior of personnel. Party membership was a prerequisite for advancement while prestige and material goods were routinely offered in exchange for loyalty. The officer corps was closely monitored via both formal and informal channels.[7] Since the end of the cold war and the cessation of Soviet sponsorship, the former Warsaw Pact countries are attempting to transform their militaries into appropriate and effective instruments of power. However, a deep distrust still exists between the politicians and the military. Immediately after the fall of Communism, open debates questioned the competence and loyalty of the officer corps, and civil-military relations began to break down.[8] The military was suspicious of new leaders who in general

had no experience or expertise in national security affairs. The new civilian leaders, on the other hand, were wary of a military which had formerly served the Communist Party.

Simultaneously, defense expenditures in the former Warsaw Pact countries plummeted. Forces were cut back, benefits disappeared and morale fell. In Hungary a lack of funds has cut training and wounded morale: One-third of military officers earn a salary below the national minimum wage standard while flight time has been drastically cut.[9] Procurement in most countries is essentially nonexistent, as budgets have dropped over 50 percent (in real terms) since 1989. Defense budgets are further strained by CFE-mandated cuts which require the expensive destruction of PFP heavy weapons.[10]

The PFP countries have been left with a legacy of military philosophy peculiar to the cold war. With an outdated strategy, inadequate command and control systems, inventories full of obsolete Soviet equipment, and no money to upgrade or modernize, PFP militaries are struggling. In the midst of this transition period, PFP nations are attempting to demonstrate military reform and competency in order to earn NATO membership. The effectiveness of NATO forces in the future will depend, in part, upon the West's ability to successfully integrate the PFP forces which are struggling to overcome weaknesses left behind by the cold war. Altering PFP employment philosophies and improving confidence in military capabilities will require patience and dedication. NATO exercises, training, education, seminars, joint operations, and day-to-day contact will aid and quicken the PFP military reform process. Efforts to fully incorporate PFP air resources into NATO employment plans should be increased. The sooner that doctrinal issues are addressed and resolved, the smoother the transition will be after enlargement.

Training and Equipment

While the cultural and historical military philosophies of the PFP countries must be overcome, existing differences in PFP training and equipment must also be addressed. Eastern European air forces and their associated equipment are generally outdated. During the cold war, armaments not purchased directly from the Soviets were manufactured under local license. But Soviet distrust of their own satellite states often caused them to deny information on their most modern weapons.[11] PFP militaries rely on Soviet equipment, much of which is obsolete and not interoperable with NATO equipment.[12] Some PFP countries are striving to update obsolete equipment. Hungary recently swapped Soviet debt for MiG-29s and is procuring some US-made equipment to update the aircraft.[13] Poland has initiated efforts to develop its own combat aircraft; however, it will likely be decades before Soviet-made equipment can be replaced by NATO-compatible platforms.[14]

In addition to the reliance on Soviet technologies, many PFP countries are desperately in need of replacement parts. Procurement budgets have waned, and many nations cannot afford to repair, replace, or modernize. In Hungary

equipment reserves are diminishing while two-thirds of all armaments need to be replaced due to poor maintenance.[15] Shortages in supplies afflict many countries, with ammunition stocks at seriously low levels.[16] PFP air forces are especially hard hit by the scarcity of fuel supplies. Many PFP pilots fly less than 100 hours a year, which greatly degrade their effectiveness in combat as well as their ability to cross-train to NATO standards. Hungarian pilots have averaged only 75 hours a year.[17]

While some Warsaw Pact satellite countries had an array of airpower capabilities, the smaller nations were assigned individual airpower tasks. During the cold war, Hungary's Warsaw Pact responsibility was aerial combat. More than 90 percent of their recent training has been devoted to outdated Warsaw Pact air combat techniques, making the use of these forces for other missions questionable.[18] The Baltic countries have a lack of trained officers and insufficient funds to increase or add training.[19] NATO is dedicated to incorporating PFP forces and supporting their transition towards NATO membership. Currently, NATO doctrine assumes all forces have like capabilities. In order to successfully integrate PFP air assets, NATO procedures, training, and exercises must take into account PFP shortfalls. Air doctrine should suggest effective employment methods for the use of these available forces which have widely varying capabilities.

The Cold War Deployment of Assets

The end of the cold war left the eastern Europeans with their armies and air forces still concentrated against the NATO threat. This leaves a widely skewed force deployment pattern as air bases and equipment piles are still consolidated in Western regions. With the Warsaw Pact disbanded, PFP nations were left with great gaps in air defense coverage.[20] Polish SAM sites and radar protection facilities are still concentrated in western Poland, since the Poles found obsolete air defense equipment too expensive to move.[21] Other PFP nations have similarly not had sufficient funds to restation assets or equipment. The threat to Eastern Europe no longer comes from NATO. The recent agreement between Belarus and Russia should focus some of their attention (and defenses) eastward. A lack of maintenance and parts shortages have further disrupted PFP air defense capabilities. The number of Poland's operational SAMs has fallen more than 50 percent since 1989.[22] In addition, PFP air defense systems are also supported by inadequate command and control systems and outdated communications technologies. To effectively defend NATO after enlargement, these issues must be addressed now.

Suggested Solutions

There are several possible propositions for the upgrade of PFP capabilities in order to more closely conform to NATO standards. Besides the obvious solution of providing Western funds for military modernization programs, international military education and training programs could be further increased. Western powers could arrange for licensing and coproduction

agreements to eventually replace obsolete Soviet equipment. Weapons sales programs might also serve to increase PFP capabilities, or outdated NATO equipment which is currently being replaced could be transferred to PFP countries.[23] All of these ideas have merit, but several drawbacks prevent their implementation. Providing ample funds for PFP force modernization does not have many political supporters. Weapons transfer or sales programs which serve to decrease reliance on former Soviet parts and equipment could antagonize or exacerbate financial problems within Russia. The possibilities of democratic reversals in eastern Europe which could leave Western equipment in the hands of an unfriendly state discourages transfer programs. In addition providing equipment or sales to PFP countries must be carefully considered to avoid provoking preexisting rivalries between PFP states.

In the short term, NATO and the PFP must overcome differences in employment philosophies and variances in training. Equipment incompatibilities and cultural differences must be addressed to facilitate the employment of PFP assets alongside NATO forces. The current participation of PFP forces in NATO operations will aid in cooperation, coordination, and integration, but many differences will not be overcome in the short term. Perhaps NATO air planners will find that the former Warsaw Pact orientation of forces could be used to advantage. The offensive characteristics of the PFP militaries could supplement NATO capabilities in out-of-area operations. National expertise in one area of airpower might be expanded upon and exploited, instead of trying to develop expertise in unfamiliar mission areas.

In the short term, the PFP will continue to fly Soviet-made equipment which has, at best, limited compatibility with NATO. Soviet fighters cannot receive the full complement of joint surveillance, target attack radar system data, identification of friend or foe becomes complex, and even refueling from Western tankers is problematic for those with Soviet inventories. PFP forces will probably not grow in quantity or capability in the short term. It will be up to NATO to address military discrepancies in order to employ the assets that the PFP can provide in the most effective manner possible. Instead of handling incompatibilities as they arise in an ad hoc manner, NATO air doctrine planners need to provide a vision for the short- and long-term employment of PFP air forces.

Long-Term Implications for PFP Integration

There are many possible paths towards incorporating PFP countries into NATO air doctrine. The current strategy is to treat the PFP nations as out of area until asked individually to join NATO, with each PFP nation separately responsible for upgrading their military and political processes. Alternatively, PFP states could be divided into sectors and assigned sponsoring nations to help develop defensive capabilities. Or PFP nations could be encouraged to develop their forces individually, with NATO compatibility in mind, until a level of modernity is reached that merits NATO inclusion. Besides the

changes required of PFP forces, most of these courses of action will involve some changes to NATO's own air doctrine. The NATO ministers are dedicated to the enlargement concept; putting off the study of enlargement implications only delays the eventual process. The integration of PFP air forces should be deliberated upon now and a cohesive course for PFP integration determined so that the most effective and efficient methodology is embarked upon.

The first concept that must be addressed is the question of whether all PFP countries should be treated equally. If NATO neglects the development of those PFP countries that are most likely to join NATO, these nations might not receive the training or acquire the best possible force-mix to later contribute to NATO defenses. Those PFP countries nearest to NATO's borders and those who will eventually join NATO will have the greatest impact on air doctrine. The Baltic states, Czech Republic, Poland, Hungary, Slovakia, Bulgaria, and Romania all fall within this group. Should NATO concentrate on the near-term capabilities of these nations or continue to treat all PFP states equally?

Another issue to be addressed is how air doctrine should deal with those countries which have limited self-defense capabilities and/or no air force. Each of the Baltic nations, for example, have no air force, but they are eager to join NATO and they are strategically located. If air defense capabilities are not developed by the Baltic nations, how might NATO plan to defend Baltic territory if they are asked to join the alliance? A doctrinal analysis of possible strategies might determine that NATO could be divided into spheres, with sponsoring NATO nations independently assigned to help defend the Baltics and other PFP nations. Or perhaps Hungary could augment Baltic air defense while the Baltics bolster Hungarian ground forces. Russia might view Hungarian or PFP activity in the Baltics with less trepidation than a permanent NATO deployment.[24] The important point to remember is that an early investigation of possible strategies might facilitate or ease the eventual inclusion of PFP territories into NATO.

Any proposed change to NATO's air doctrine regarding PFP should consider the effects on the former Soviet Union. The integration of PFP countries into NATO operations or later into the formal NATO structure could affect Russia's political stability. NATO's policies and air doctrine must not develop too aggressively or encourage the growth of another Warsaw Pact-type alliance. Russian politicians recently expressed aspirations towards increasing ties with former Warsaw Pact countries. In March 1996, Russia's lower house of parliament voted to denounce the 1991 accord which led to the dissolution of the Soviet Union.[25] Russia initiated an alliance with Belarus, which stops just short of merging the two governments.[26] Russia, though no longer a world superpower, continues to be the strongest military nation in Europe. They still maintain 75 percent of the Soviet strategic nuclear forces, 50 percent of all maneuver divisions, and 85 percent of its defense industry.[27] Russia cannot disappear from NATO's scope. The West must consider implications for Russia when evaluating potential airpower doctrine and employment plans for the PFP.

NATO has always relied upon a concept of forward defense. Forward defense during the cold war meant that NATO would only grudgingly give up territory. NATO defenses were stationed at the forward edge of the alliance's borders and any violation was grounds for NATO retaliation, which could include a nuclear response. In November 1991, the allies agreed to relinquish the concept of forward defense in favor of a "reduced forward presence."[28] Does this mean that NATO might be now willing to give up territory rather than resort to nuclear force? Or does this indicate that NATO is placing new emphasis on deployable assets, which might include longer range strike capabilities? The idea of forward defense may have become obsolete altogether with the dissolution of the Soviet Union. How will this concept change as new territories are added, especially in light of a reduced threat from the east? PFP defenses could be based on a hub system where clusters of fighter bases surround large embarkation ports, much as Ramstein and Aviano now serve as hubs for operations in Bosnia. Perhaps a Krakow mobility hub surrounded by PFP fighter bases and supported by NATO assets could serve as an eastern extension of this model. Aid to PFP defenses and the stationing of NATO supplies or forces on PFP soil could help to support a reduced forward presence, but the implications of the new concept need to be fully investigated.

Airpower doctrine should take a more active role in addressing the threat posed by weapons of mass destruction (WMD). With four members of the PFP now home to over 2,350 nuclear warheads and the greater threat of proliferation on NATO's periphery, the issue of WMD cannot be ignored. At the January 1994 summit, the NATO ministers declared that WMD and their delivery methods constitute a "threat to international security and is a matter of concern to NATO."[29] They promised to develop policies to fight proliferation. The former Soviet republics (Ukraine, Belarus, and Kazakhstan) are plagued with a shortage of funds and trained personnel to adequately maintain the nuclear weapons on their territories.[30] Even Russia is experiencing a shortage of adequate security and storage space for the additional weapons being transferred to its soil. Additionally, growing political instabilities and internal conflict make an accidental launch or even proliferation to outside forces more likely than ever before.[31] NATO and especially the PFP countries might encounter proliferation problems that expand into friendly territory. It is in NATO's best interest to address the proliferation problem before it arises. Airpower has many inherent capabilities that would be useful in counterproliferation efforts. At little risk or cost to NATO, airpower can be used for deterrence, defense, defusing, or destruction.[32] Since NATO has dictated that counterproliferation policies be developed, NATO air planners should investigate the implications of counterproliferation policy on air doctrine for both NATO and the PFP.

Incorporation of PFP countries into NATO merits an investigation of the division of responsibilities in the defense of NATO interests. During the cold war, the defense of NATO was mainly accomplished by sector, with a general focus placed on the central area. The sector division recently lost favor within

NATO as many felt it was no longer necessary in the absence of the cold war threat. Out-of-area operations and crisis situations will now generally see the formation of a task force-type organization. The Combined Joint Task Force (CJTF) concept is well suited for the integration of PFP units since each CJTF is individually tailored to the crisis situation. In the long term, however, airpower doctrine must determine how best to integrate PFP forces into NATO's command structure. The long-term defense of NATO territory would call for a more permanent command structure. NATO territorial defense after enlargement raises the issue of how responsibilities will be divided up between NATO and new NATO members. The incorporation of PFP nations into NATO will greatly expand NATO's boundaries, exposing a larger and more vulnerable area to attack. The PFP countries currently have widely varying air capabilities. Perhaps in the short term, it may be best to use mission type taskings in order to effectively utilize PFP assets. In the long term, NATO air planners must design a defensive program to either utilize these existing PFP capabilities or develop needed ones.

PFP incorporation into NATO will also require new airspace designations. Airspaces are ordinarily designated to facilitate command and control of air assets, thus improving effectiveness and reducing the chance of air mishaps. With inadequate radar control coverage in PFP states, eastern European airspace delineations during crisis situations become more critical. Extensive procedures for air separation during large scale combat and integrated airspace coordination concepts should be developed for NATO and PFP forces which are flying incompatible airplanes. NATO air doctrine should also address airspace control standardization for both overland and overwater operations.[33] Airspace control is currently specified in two NATO publications, ATP 40, *Doctrine for Airspace Control* and ATP 34, *Tactical Air Support of Maritime Operations*. These two documents need to consistently specify procedures for the control of both NATO and PFP air assets.[34]

Additionally, today's modern, long-range weaponry operated by ground and naval forces reach into the domain which was previously limited to air and strategic systems. This significantly complicates NATO targeting and air coordination.[35] Future NATO air doctrine must address airspace coordination issues for long-range weaponry, for dissimilar forces, and for the large increase in territory presented by the PFP nations which are likely to join NATO.

NATO has appropriately placed a new emphasis on standardization. Incorporation of PFP nations, who have different capabilities, different systems, and differing doctrinal philosophies places unique demands on standardization. There are some standardization requirements which PFP countries simply cannot meet in the short term. Currently, NATO is undergoing a review of all publications in order to determine the minimum requirements necessary for operational effectiveness. NATO will then need to complete a country-by-country assessment, as well as develop education and training programs to aid the PFP nations develop standard, interoperable capabilities.[36] In 1992 NATO initiated efforts to develop comprehensive

standardization requirements for the PFP countries. The Standardization Organization was established and assigned responsibility for all standardization issues and collaboration matters. Standardization items to be addressed include planning, policies, and operational procedures.[37] These issues, however, are currently worked at a high level and have yet to address lower force level issues.

NATO standardization priorities include doctrinal and procedural commonality, equipment interoperability, command and control compatibility, and combat support adaptability. However, with over 1,200 NATO agreements and publications in existence, PFP compliance with NATO standards will be expensive (in terms of funds, materials, resources, training time, and other PFP assets). Complete standardization will probably not be possible in the medium term.[38] Standardization is not a strict requirement for NATO membership. Airpower is not specifically addressed by the standardization committee. Air doctrine planners need to investigate the full implications of compliance and noncompliance with standardization requirements. Standardization efforts might also include the PFP industrial sectors. Perhaps, if PFP factories could manufacture NATO armaments, NATO members could purchase them, PFP could use them, and the PFP would receive a cash infusion to help modernize their own forces. NATO should prioritize standardization prerequisites in terms of immediate PFP participation as well as in light of NATO enlargement.

Another area that NATO air doctrine planners should devote more thought to is the PFP planning process. The Partnership Coordination Cell located in Mons, Belgium, was established to plan the implementation of PFP military programs.[39] This planning currently occurs in the short term as the immediate details of exercises and exchanges are worked out between NATO and the PFP. However, longer term planning must be coordinated in order to effectively integrate PFP assets into NATO air operations. NATO members need to be more involved in the PFP's design processes. For example, the alliance would suffer if Poland builds airplanes that will not hold German pallets or cannot shoot NATO-supplied missiles. Many PFP initiatives are intended for the long term, and NATO planners need to get involved early in the PFP decision process to ensure later compatibility for all types of air missions.

Conclusion

PFP and eventual enlargement will influence future NATO air doctrine. Although there are many initial obstacles to overcome, integration and assets from the PFP may offer NATO flexibilities and capabilities not previously available to airpower strategists. Air planners must vigorously attack differences in training, military philosophies, and unique cultural issues in order to most effectively employ PFP resources alongside NATO air assets.

Analysis of the long-term implications of NATO enlargement will affect the future direction of air doctrine. It is important to establish broad concepts for the future defense of NATO so that PFP capabilities can be strengthened and developed now.

Notes

1. Thomas Szayna and F. Stephen Larrabee, *East European Military Reform after the Cold War* (Santa Monica, Calif.: RAND, 1995), 33.
2. Ibid., 22.
3. Ibid., ix.
4. Ibid., 27.
5. Ibid.
6. *NATO Enlargement: Partnership for Peace Members—On the Road to Alliance Membership?* (Washington, D.C.: Congressional Research Service, March 1995), 16–17; Szayna and Larrabee, 19.
7. Szayna and Larrabee, 6–9.
8. *NATO Enlargement,* 16–18; Szayna and Larrabee, 10, 20.
9. *Jane's Sentinel, The Unfair Advantage: Hungary* (Coulsdon, U.K.: Jane's Information Group, 1995), 13.
10. Szayna and Larrabee, 30.
11. Ibid., 29.
12. *NATO Enlargement,* 13–18.
13. *Jane's Sentinel,* 14.
14. *DMS Market Intelligence Report: Poland* (Newtown, Conn.: Forecast International, July 1995), 7–9.
15. *Jane's Sentinel,* 13.
16. Szayna and Larrabee, ix.
17. Ibid., 32.
18. *Jane's Sentinel,* 19.
19. *NATO Enlargement,* 10–12.
20. Ibid., 13–15.
21. Szayna and Larrabee, 28.
22. *DMS Market Intelligence Report: Poland*, 9.
23. Szayna and Larrabee, xii, xiii.
24. Russia might oppose PFP activity in the Baltics, especially if that activity is sponsored or subsidized by NATO. However, the point remains that Russia is likely to be somewhat less fearful of PFP activities in eastern Europe than they would be if actual NATO troops were to take actions in eastern Europe.
25. "Russians Enter into Alliance with Former Soviet Republic," *Charleston Post and Courier*, Sunday 24 March 1996, 16-A.
26. Ibid.
27. John Galvin, "Conflict in the Post Cold War Era," in *Low Intensity Conflict: Old Threats in a New World,* eds. by Edwin Corr and Stephen Sloan (Boulder, Colo.: Westview Press, 1992), 64.
28. *NATO Handbook*, "The Alliance's Strategic Concept: 7–8 November 1991" (Brussels, Belgium: NATO Office of Information and Press, 1995), 243, sec. 40.
29. Karl-Heinz Borner, "Proliferation of Weapons of Mass Destruction and International Insecurity: NATO's Approach to a New Threat" (Maxwell AFB, Ala.: Air War College, April 1995), 16–17.
30. Ibid., 11.
31. Ibid., 11–13.
32. Ibid., 17.

33. *Report of the Custodial Meeting, 28–30 June 1995*, Minutes of the Tactical Air Working Party Custodial Meeting, Wunstorf, Germany, 3.

34. Ibid., 4, comment 71.

35. Ibid., 4.

36. *Study on NATO Enlargement* (Brussels, Belgium: NATO Publications, September 1995), 25–26.

37. Gunner Lange, "The PCC: A New Player in the Development of Relations between NATO and Partner Nations," *NATO Review*, May 1995, 34.

38. *Study on NATO Enlargement*, 24, 25–26.

39. *NATO Handbook,* "Partnership for Peace Invitation: Issued by the Heads of State and Government Participating in the Meeting of the North Atlantic Council held at NATO Headquarters, Brussels, on 10–11 January 1994" (Brussels, Belgium: NATO Office of Information and Press, 1995), 266.

Chapter 5

Findings and Conclusions

For 50 years NATO has served as a bedrock of stability. As we enter the next century, NATO may continue to function as a stabilizing force in Central Europe. With the dissolution of the cold war threat, NATO can now project power and stability into areas that might before have previously caused an east-west confrontation. Involvement in out-of-area operations and cooperation with the states of the PFP may serve to promote Europe's long-term defense. Every attempt in the twentieth century to reshape the European continent has been hamstrung by a poor compromise between competing powers. NATO now enjoys a unique opportunity that is time sensitive. Positive engagement with border states will enhance stability on NATO's periphery.

The process by which NATO derives its airpower doctrine positively affects on airpower. The Tactical Air Working Party provides a forum for reassessment and analysis for the best use of airpower. Doctrinal revision stimulates discussion and cooperation. With the changing security environment, NATO has decided to revise many cold war airpower documents. The new AJP 1, *Joint Operations Doctrine*, is a keystone document, providing direction in many areas that doctrine had not addressed during the cold war. However, the lower level airpower documents do not yet reflect or expand upon many of the changes in AJP 1. The TAWP has begun the long, drawn out process of revising air doctrine, but in some cases is still at the stage of discussing format for the new doctrinal manuals. The most important contextual issues have yet to be fully debated and evaluated. The product of the TAWP should be a set of principles which outline the most effective employment of airpower in combat. When airpower employment plans must be improvised during out-of-area operations, occurring in the absence of written doctrine, this indicates that the system may have become administratively bogged down. The TAWP process served NATO well in adequately revising doctrine in the more static cold war environment. But today, the international environment has drastically changed: both the nature of the threat and the use of NATO airpower during conflict have changed. The current TAWP process has proved too slow and cumbersome to provide adequate direction for air strategists during ongoing operations.

Eight years ago, NATO's pressing concern was an attack from the Warsaw Pact. The current issue of how to include the air forces of the former Warsaw Pact in NATO air doctrine raises the very complicated issue of the purpose of NATO in a post-cold-war Europe. While NATO rushes to define its new role,

the advantage of effectively enlarging the alliance cannot be ignored. The cost is enormous in monetary terms, but the cost of lost opportunity may be even larger. The historic trend of isolationism by victorious powers following conflict has never proved effective. Countries ignored in times of peace usually do not prove to be effective war fighters. Incorporation of the PFP countries into NATO's airpower framework could provide capabilities and flexibilities not previously available to the alliance. The probable enlargement of NATO will have implications for all European nations including states that do not eventually join the organization.[1] There are many areas that need to be thoroughly addressed so that NATO can chart a course towards effective integration of PFP countries. Specifically, a bold NATO staff must address a new world. Out-of-area operations for NATO are already a part of its dynamic history. Whether this history will be written as a success depends on an aggressive adaptation to new realities. Doctrine for the engagement and integration of new countries to the east must be investigated in-depth and debated now. The framework which replaces the Warsaw Pact can be influenced and shaped by NATO. The opportunity exists, albeit at a cost of money and effort, to weave a new and stronger blanket of security across the European continent. At the end of 1995 Dr. Sheila Widnall, secretary of the USAF, summarized the importance of forward-thinking action when she stated that "without a vision we become incrementalists, adjusting and reacting to the world environment as it unfolds. With a vision, we can become proactive, anticipate the changing environment, and shape it to benefit our nation."[2] This is precisely what NATO desires to do—shape the environment if at all possible to provide a more favorable European security environment into the twenty-first century. NATO strategists can aid the process by fully addressing the implications of out-of-area operations and enlargement and envisioning the best use of NATO's airpower for tomorrow's world.

Notes

1. *Study on NATO Enlargement* (Brussels, Belgium: NATO Publications, September 1995), 6.
2. "Air Force Executive Guidance" (Washington, D.C.: Air Force Strategy Division, Headquarters USAF/XOXS, December 1995), 6.

Bibliography

"Air Force Executive Guidance." Washington, D.C.: Air Force Strategy Division, Headquarters USAF/XOXS, December 1995.

Air Force Manual 1-1. *Basic Aerospace Doctrine of the United States Air Force,* 16 March 1984.

_____. Volume 1, March 1992, vii.

_____. Volume 2, March 1992, 192.

Bailey, Robert. "NATO Moves East." Maxwell Air Force Base (AFB), Ala.: Air War College (AWC), 1994.

Bickers, Charles. "Europe's Wild Weasels." *Jane's Defence Weekly*, 11 April 1992.

Borner, Karl-Heinz. "Proliferation of Weapons of Mass Destruction and International Insecurity: NATO's Approach to a New Threat." Maxwell AFB, Ala.: AWC, April 1995.

Cohen, Eliot A., and Thomas A. Keaney. *Gulf War Air Power Survey, Summary Report.* Washington, D.C.: Government Printing Office, 1993.

Corr, Edwin, and David Miller. "United States Government Organization and Capability to Deal with Low Intensity Conflict." In *Low Intensity Conflict: Old Threats in a New World.* Edited by Edwin Corr and Stephen Sloan. Boulder, Colo.: Westview Press, 1992.

DMS Market Intelligence Report: Poland. Newtown, Conn.: Forecast International, July 1995.

Fadok, David S. *John Boyd and John Warden: Airpower's Quest for Strategic Paralysis.* Maxwell AFB, Ala.: Air University Press, 1995.

Fuller, Dale. "NATO's Out-of-Area Disputes: Prospects for Common Western Strategies in the Middle East." Monterey, Calif.: Naval Postgraduate School, December 1992.

Galvin, John. "Conflict in the Post Cold War Era." In *Low Intensity Conflict: Old Threats in a New World.* Edited by Edwin Corr and Stephen Sloan. Boulder, Colo.: Westview Press, 1992.

Hawken, Air Vice Marshal Anthony. "Follow-On Force Attack: Now and in the Future." Maxwell AFB, Ala.: AWC, April 1990.

Hunt, Peter C. "USAF Capability and Requirements for Suppression of Enemy Air Defenses: The Impact on Multinational Operations." Maxwell AFB, Ala.: School of Advanced Airpower Studies (SAAS), February 1996.

Hunter, Robert. "Enlargement: Part of a Strategy for Projecting Stability into Central Europe." *NATO Review*, May 1995.

Jane's Sentinel, The Unfair Advantage: Hungary. Coulsdon, U.K.: Jane's Information Group, 1995.

Jane's Sentinel, The Unfair Advantage: Ukraine. Coulsdon, U.K.: Jane's Information Group, 1995.

Kelley, Charles. *Admitting New Members: Can NATO Afford the Costs?* Santa Monica, Calif.: RAND, 1995.

Kugler, Richard. *Commitment to Purpose: How Alliance Partnership Won the Cold War.* Santa Monica, Calif.: RAND, 1993.

_____. *US-West European Cooperation in Out-of-Area Military Operations.* Santa Monica, Calif.: RAND, 1994.

Lange, Gunner. "The PCC: A New Player in the Development of Relations between NATO and Partner Nations." *NATO Review*, May 1995.

Larrabee, F. Stephen, and Allen Lynch. *Russia, Ukraine, and European Security: Implications for Western Policy.* Santa Monica, Calif.: RAND, 1995.

LaSalle, David. *The New Strategic Concept and NATO Crisis Management.* Alexandria, Va.: Defense Technical Information Center, 1993.

Lorell, Mark. *The Future of Allied Tactical Fighter Forces in NATO's Central Region.* Santa Monica, Calif.: RAND, 1992.

Manwaring, Max. "The Threat in the Contemporary Peace Environment: The Challenge to Change Perspectives." In *Low Intensity Conflict: Old Threats in a New World.* Edited by Edwin Corr and Stephen Sloan. Boulder, Colo.: Westview Press, 1992.

McCrabb, Maris. "The Evolution of NATO Air Doctrine." Maxwell AFB, Ala.: SAAS, 1995.

Melhuish, Christopher. "NATO Combined Joint Task Force." Newport, R.I.: Naval War College, March 1995.

Memorandum for Tactical Air Working Party Agencies. "Offensive Air Power in Support of Land Forces Operations." Koln, Germany: German Air Force Command, 19 December 1995.

_____. "US Paper on Joint Air Operations." Langley, Va.: Air Force Doctrine Center, 27 July 1994.

Miller, Paul. *Retaining Alliance Relevancy: NATO and the Combined Joint Task Force Concept.* National Security Study 13. Hollis, N.H.: Puritan Press, 1994.

Naslund, Willard. *NATO Airpower: Organizing for Uncertainty.* Santa Monica, Calif.: RAND, 1993.

NATO Allied Joint Publication (AJP) 1. *Allied Joint Operations Doctrine.* Brussels, Belgium: Military Agency for Standardization (MAS), July 1994.

_____. AJP 1A. First Preliminary Draft. "Allied Joint Operations Doctrine." Brussels, Belgium: MAS, 1995.

NATO Allied Tactical Publication (ATP) 33B. *NATO Tactical Air Doctrine.* Brussels, Belgium: MAS, November 1986.

_____. ATP 27B. *Offensive Air Support Operations.* Brussels, Belgium: MAS, May 1980.

_____. ATP 40A. *Doctrine for Airspace Control in Times of Crisis and War.* Brussels, Belgium: MAS, December 1994.

_____. ATP 42B. *Counter Air Operations.* Brussels, Belgium: MAS, August 1992.

NATO Enlargement: Partnership for Peace Members—On the Road to Alliance Membership? Washington, D.C.: Congressional Research Service, 24 March 1995.

NATO Handbook. "The Alliance's Strategic Concept: 7–8 November 1991." Brussels, Belgium: NATO Office of Information and Press, 1995.

_____. "Declaration of the Heads of State and Government Participating in the Meeting of the North Atlantic Council Held at NATO Headquarters, Brussels, on 10–11 January 1994." Brussels, Belgium: NATO Office of Information and Press, 1995.

_____. "Partnership for Peace Invitation: Issued by the Heads of State and Government Participating in the Meeting of the North Atlantic Council Held at NATO Headquarters, Brussels, on 10–11 January 1994." Brussels, Belgium: NATO Office of Information and Press, 1995.

"NATO's Partnership for Peace: A Record of Success." Brussels, Belgium: EuroSec Fact Sheet, 30 May 1995.

Osinski, Krzysztof. *Poland: From Partnership for Peace to Membership in NATO.* Maxwell AFB, Ala.: AWC, April 1995.

"Projecting Stability in an Undivided Europe: Partnership for Peace and a Pact on Stability in Europe." Draft Interim Report. Subcommittee on Eastern Europe and the Former Soviet Union, NATO Publications, October 1995.

"Release of Unclassified NATO STANAGS/AP for PFP." *USDELMC Brussels Message Traffic,* 151516Z June 1995.

Report of the Custodial Meeting, 27–28 June 1995. Minutes of the Tactical Air Working Party (TAWP) Custodial Meeting, Wunstorf, Germany.

Report of the Custodial Meeting, 28–30 June 1995. Minutes of the TAWP Custodial Meeting, Wunstorf, Germany.

Report of the Custodial Meeting, 5–7 December 1995. Minutes of the TAWP Custodial Meeting, Fürstenfeldbruck, Germany.

Report to the Air Board of the 17th Meeting of the Interservice Tactical Air Working Party Held at NATO Headquarters from 16–20 May 1994. Brussels, Belgium: MAS, 24 May 1994.

Report to the Air Board of the 18th Meeting of the Interservice Tactical Air Working Party Held on 24–28 April 1995. Brussels, Belgium: MAS, April 1995.

"Russians Enter into Alliance with Former Soviet Republic." *Charleston Post and Courier*, 24 March 1996, 16-A.

Schulte, Gregory. "Responding to Proliferation: NATO's Role." *NATO Review*, July 1995.

Sloan, Stanley R. "Combined Joint Task Forces (CJTF) and New Missions for NATO." Washington, D.C.: Congressional Research Service, 17 March 1994.

_____. *NATO Enlargement and Russia: From Cold War to Cold Peace?* Washington, D.C.: Congressional Research Service, 15 May 1995.

Stein, David. *The Development of NATO Tactical Air Doctrine: 1970–1985.* Santa Monica, Calif.: RAND, 1987.

Stein, David, Kimberly Nolan, and Robert Perry. *Process and Problems in Developing NATO Tactical Air Doctrine.* Santa Monica, Calif.: RAND, June 1988.

Study on NATO Enlargement. Brussels, Belgium: NATO Publications, September 1995.

Szayna, Thomas S., and F. Stephen Larrabee. *East European Military Reform after the Cold War.* Santa Monica, Calif.: RAND, 1995.

Talbott, Strobe. "Why NATO Should Grow." *New York Review of Books*, 10 August 1995.

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