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The Development of NATO Tactical Air Doctrine

1970-1985

David J. Stein

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This report analyzes the key doctrinal and operational interests of allied services in NATO. It addresses the major issues in the development of NATO tactical air doctrines from 1970 to 1985, and considers why progress in developing NATO air doctrine was often impeded by competing interests among allied nations and their individual services. The author suggests that improving NATO's warfighting capabilities and enhancing its force effectiveness cannot be accomplished solely by modifying its air doctrine. Disparate national, service, and budgetary interests underscore competing doctrinal preferences among the allies. A U.S. Air Force regional air doctrine consistent with [NATO Tactical Air Doctrine] (Allied Tactical Publication No. 33) could conceivably be the most useful response to the problems of reconciling Air Force and NATO doctrinal imperatives. Keywords: FLD 18

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The Development of NATO Tactical Air Doctrine

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A Project AIR FORCE report
prepared for the
United States Air Force

RAND

PREFACE

As part of a Project AIR FORCE study of "Allied Airpower in Europe: Problems and Prospects," this report undertakes an analysis of the key doctrinal and operational interests of allied services in NATO. The research is intended to enhance USAF efforts to improve understanding among allied air forces and to advance future force effectiveness in NATO. Conducted under the National Security Strategies Program in RAND's Project AIR FORCE Division, the study had the support of the Doctrine and Concepts Division, Director of Plans, Headquarters, United States Air Force.

This report addresses the major issues in the development of NATO tactical air doctrines from 1970 to 1985. It considers why progress in developing NATO air doctrine was often impeded by competing interests among allied nations and their individual services. The report should be of interest to those in the U.S. Air Force concerned with improving NATO's warfighting potential by promoting greater harmony between U.S. and NATO air doctrines. In addition, it may be of interest to those concerned with NATO's combined operations, particularly the command and control issues associated with offensive air support, the suppression of enemy air defenses, and follow-on force attacks.

SUMMARY

Among the major functions of military doctrine is guidance for planners of combat operations and provision of common procedures for those who execute operational plans. Since 1970, NATO's doctrine for planning and conducting combined air operations has been developed by national delegations joined by representatives from NATO's military commands, during the annual meeting of the Interservice Tactical Air Working Party (TAWP) at NATO headquarters in Brussels. The doctrine is contained in a series of Allied Tactical Publications that require national approval to be binding and incorporation into national service procedures and training operations to be effective. **The goal of the Tactical Air Working Party in developing combined air doctrine is to improve combat effectiveness by enhancing the interoperability of NATO's constituent forces.**

The Tactical Air Working Party initially drew heavily on the airpower concepts and procedures previously and separately developed by the 2nd and 4th Allied Tactical Air Forces, in NATO's central region. Those ATAFs had institutional and operational commitments to existing local command arrangements and aircraft control procedures that, when complicated by inventory differences among NATO's constituent forces, proved to be sources of friction in three areas important to the development of combined air doctrine for NATO:

- the command and control of allied airpower
- the organization and conduct of air operations in support of ground forces
- the suppression of enemy air defenses.

Britain's Royal Air Force in Germany (RAFG) and the U.S. Air Force in Europe (USAFE), the "lead elements" in the 2nd and 4th Allied Tactical Air Forces (ATAF) for NATO's Central Region, differ in their applications of the principles of "centralized command" and "decentralized execution." In particular, each favors its own approach in deciding which echelon of command should plan air operations and which should control their execution.

For example, to provide responsive air support to the Northern Army Group's four national Corps areas, **the British-led 2ATAF emphasizes coordinated decisions between air and ground elements at echelons of command that are close to the battle area,**

with airpower applications taking place beyond the range of organic ground force firepower. The 2ATAF concept of command and control encourages the local coordination of national air and ground forces whenever possible and for managing combat aircraft has adopted "procedural control" methods that reduce the need for costly infrastructures. Although sharing the doctrinal premise of "centralized command and decentralized execution," the USAF-led 4ATAF emphasizes making command decisions at "the highest practicable level," displaying a tendency toward a "top-down" managerial approach to airpower and favoring "positive control" methods that permit using air power in a flexible but centrally managed fashion. These arrangements and control facilities each have their own attendant virtues of simplicity and flexibility, drawbacks of restrictiveness and vulnerability, and costs.

The issues of command and control and the support of ground force operations are generally at the center of NATO's doctrinal debates. Great Britain and the United States both ratified *NATO Tactical Air Doctrine* and supported its statements of principle regarding the "centralized command" of air forces at the highest practicable level and the "decentralized execution" of air operations. But their agreement was made possible largely by adroit wording of key sections that in effect permitted each constituent air force and regional command to apply the "common" principles in its own fashion. Hence, 2ATAF could continue to follow the Royal Air Force's tradition of squadron autonomy in making command decisions without reference to higher echelons and could operate out of "pockets of control" throughout the region. Meanwhile, the U.S. and West German air force elements in 4ATAF could continue to conduct their air operations through a highly articulated, centralized control system where decisions regarding the flexible management of airpower were made at "the highest practicable level."

Textual compromises were common to the development of both *NATO Tactical Air Doctrine* (ATP-33), and *Offensive Air Support* (ATP-27). But the existence of compromises should not suggest that the documents are hollow accomplishments lacking operational significance. The negotiating process within the Tactical Air Working Party may be largely political, but it has identified the *functional* requirements for conducting air operations across sub-regional boundaries and helped pave the way for improving the flexible application of NATO's air power resources. NATO also requires effective regional and national cross-training under the terms of its air doctrine to ensure that the doctrine is more than a cosmetic declaration of allied "unity." Operational differences among the allies may not be removed by doctrinal negotiations, but that process can define issues and provide an opportunity for reconciling disparate concepts, capabilities, and procedures.

By the 1970s, the RAF in Germany and the British Army of the Rhine had developed a body of written and unwritten agreements that provided for closer coordination between air and ground forces than existed anywhere else in NATO. Eventually, other national air and ground forces in the 2ATAF sector adopted those cooperative arrangements. They allocated considerable influence to local ground force commanders in determining the applications of airpower. By contrast, the USAF centralized its control of air operations to ensure that first priority went to obtaining air superiority; it also sought autonomy in target selection for battlefield support missions, a position that was not generally favored by the U.S. Army.

Central to the revision of NATO's doctrine on Offensive Air Support operations were the issues of tasking air assets for conducting support missions, the influence of ground force commanders on target nomination and development, and the battlefield areas or "bands" for air-ground coordination. In this context, the eventually successful British proposal for including Battlefield Air Interdiction (BAI) as an air support mission tied USAF and other NATO air forces more closely to the interests and influence of ground commanders. NATO's acceptance of BAI as an air support mission, requiring the direct involvement of the ground force commander in its planning and coordination with ground force manuever in its execution, represented a major transition in the principles of airpower command and control. Although "back-channel" contacts between members of the U.S. and U.K. delegations were effective on the original proposal, obtaining an agreement demonstrated the British delegation's superiority in exploiting allied interests and greater unity of purpose in negotiations.

The concept of Follow-on Force Attack (FOFA) for interdicting Soviet second echelon forces emerged in 1983 from an array of operational concerns and controversial proposals for renewing NATO's conventional capabilities. Of more immediate importance, however, the FOFA concept reopened the issues of air-ground coordination. To successfully implement FOFA throughout the Central Region might require changes in the use of command-control facilities and procedures to integrate the necessary theater intelligence data and effectively manage air attacks deep into the Soviet-Warsaw Pact rear area of operation. FOFA might also provide a conceptual framework for incorporating emerging technologies for target identification, engagement, and attack into NATO's combat capability. At the least it might imply changes in the content of NATO's Offensive Air Support (OAS) doctrine in terms of establishing air-ground coordination across the several "bands" of interest to NATO's ground forces. And FOFA's

doctrinal development might also provide the Tactical Air Working Party with an opportunity for closing the gap between USAF and allied concepts and capabilities for air-ground coordination across these bands.

Early comments on FOFA by several of the NATO allies suggested that they variously viewed the concept as politically unacceptable, financially burdensome, or in need of clarification—and frequently all three. The importance of winning the "close in" battle dominated the tactical thinking of several allies, particularly the West Germans. They held that in levying new demands on existing capabilities for target acquisition, engagement, and attack, FOFA's emphasis on deep engagements could run counter to allied interests. Additionally, FOFA seemed to some allies to require American-made systems for the execution of an American-sponsored operational concept.

Starting in 1978, there was considerable doctrinal contention among the allies concerning repeated American proposals to promote the function of suppressing enemy air defenses (SEAD) from its original NATO status as a support activity to that of a major mission. Most of NATO's member air forces and their ground and naval counterparts view SEAD as a support activity. Although the USAF nominally accepted the NATO view, the USAF's own doctrine made SEAD a mission equal in importance to offensive and defensive counterair missions within the context of a counterair campaign.

Underlying NATO's internal debate on the doctrinal importance and status of SEAD were some very real differences between U.S. and allied capabilities for conducting such operations and between American and allied fiscal abilities to modernize their inventories. Moreover, among the NATO allies only the United States has access to electronics sophistication and the advanced munitions needed for the conduct of SEAD campaigns; and even the USAF capability was limited. The allies were reluctant to accept U.S. proposals for changing the status of SEAD because they feared that statements of operational need and force requirement would follow on the heels of doctrinal change, obliging them to spend money they did not have. Given constrained budgetary resources, they would either have to give up some other capability to acquire SEAD assets or obtain additional funds from unsympathetic ministries and parliaments. And to the extent that U.S. SEAD assets were made available theaterwide, the allies had little incentive to change their conception of SEAD as a support activity, and even less to duplicate U.S. capabilities through the purchase of costly electronic warfare systems.

Since 1970, the allies have sought doctrinal unity on the command and control of airpower, the conduct of air support missions and air-ground cooperation, and other operational or mission-oriented concerns. The goal of unity, however, has often been elusive. Current progress aside, the persistent obstacles to success in allied negotiations have been the diversity of national positions on the role of airpower, different service concepts of operation, the resilience of subregional operating procedures, and the budgetary pressures confronting member nations. Ideally, progress in developing allied air doctrine should not remain tethered to these constituent interests, which pull against NATO's common objectives.

Gaining allied support is made easier when U.S. proposals are part of a thoughtful plan by NATO commands and commanders assumed to be above competing secular interests. This raises the issue of coordination within the USAF and among the U.S. services regarding U.S. positions on NATO air doctrine. It may be more difficult to coordinate negotiating positions within the United States than it is within certain European services and states, but that is precisely what the success of U.S. proposals depends upon. If the purpose of the Tactical Air Working Party is to iron out peacetime operational differences that may deny success to allied operations during war, then the different interests of individual services are irrelevant.

Improving NATO's warfighting capabilities and enhancing its force effectiveness cannot be accomplished solely by modifying NATO's air doctrine. Disparate national, service, and budgetary interests underscore competing doctrinal preferences. A USAF regional air doctrine consistent with ATP-33 conceivably could be the most useful response to the problems of reconciling AFM 1–1 with the doctrinal imperatives of our NATO allies.

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CONTENTS

GLOSSARY

AAFCE	Allied Air Forces Central Europe
ACE	Allied Command Europe
AFCENT	Allied Forces Central Europe
AFM	Air Force Manual
AFNORTH	Allied Forces Northern Europe
AFXOXID	Air Force Plans and Operations, Doctrine and Concepts Division
ASCC	Air Standardization Coordinating Committee
ASOC	Air Support Operations Center
ATP	Allied Tactical Publication
ATAF	Allied Tactical Air Force
BAOR	British Army of the Rhine
C^2	Command and Control
CAS	Close Air Support
CENTAG	Central Army Group
CINC	Commander in Chief
CINCENT	Commander in Chief Central Europe
CINCHAN	Commander in Chief Channel
CINCNORTH	Commander in Chief Northern Europe
CINCSOUTH	Commander in Chief Southern Europe
CNO	Chief of Naval Operations
COMAAFCE	Commander Allied Air Forces Central Europe
COMMAIRCHAN	Commander Air Channel
FAC	Forward Air Controller
FEBA	Forward Edge of the Battle Area
FLOT	Forward Line of Own Troops
4ATAF	Fourth Allied Tactical Air Force
5ATAF	Fifth Allied Tactical Air Force
FSCL	Fire Support Coordination Line
GAF	German Air Force
JCS	Joint Chiefs of Staff
JCSPM	Joint Chiefs of Staff Policy Memorandum
J-SAK	Joint Attack of the Second Echelon
J-SEAD	Joint Suppression of Enemy Air Defense
MAS	Military Agency for Standardization
MNC	Major NATO Commander
MSC	Major Subordinate Commander
NATO	North Atlantic Treaty Organization
NORTHAG	Northern Army Group

OAS	Offensive Air Support
RAF	Royal Air Force
RAFG	Royal Air Force Germany
REDCOM	Readiness Command
SACEUR	Supreme Allied Commander Europe
SACLANT	Supreme Allied Commander Atlantic
SAM	Surface-to-Air-Missile
SEAD	Suppression of Enemy Air Defenses
SHAPE	Supreme Headquarters Allied Powers Europe
STANAG	Standardization Agreement
TAC	Tactical Air Command
TAWP	Tactical Air Working Party
TRADOC	Training and Doctrine Command
2ATAF	Second Allied Tactical Air Force
UK	United Kingdom
UKAIR	United Kingdom Air
US	United States
USAF	United States Air Force
USAFE	United States Air Force Europe
USMC	United States Marine Corps

I. INTRODUCTION

By 1985, NATO had once again directed attention toward improving its conventional defense capabilities, and American discussions of NATO defense had dealt with allied contributions (both monetary and materiel) as well as with the prospect of new technologies for defeating potential Soviet aggression.[1] But more money or new military hardware were not the only means of enhancing NATO's defense posture. Although the development of a common doctrine for employing NATO's combined forces might not draw much public attention, it constituted the framework for NATO plans to employ the combat forces at its disposal. All agreed that improving NATO's military doctrine could improve the utility of national forces.

Providing guidance on tactical force employment issues is but one of the many functions that modern military doctrines can serve.[2] Others include developing statements of overall strategic orientation; policy guidance on the organization, posture, and training of armed forces; and rationales that relate current military capabilities to external threats. For military planners and operators concerned with tactical employment issues, however, doctrinal statements that concern broad security policy or the principles of war are likely to be characterized as so much "boilerplate," unrelated to the requirements of warfighting.[3] Because "military doctrine" can serve a variety of functions, doctrinal statements often reflect the special interests of a particular audience. Therefore it is important both to note the intentions and the interests of those who generate a given military doctrine and to recognize the desires of the audience to whom it is addressed.

NATO's problems in drafting statements of military doctrine are compounded by the democratic nature of the alliance and the fact that its doctrinal authority derives from voluntary national agreement rather than from the command authority of a superpower. Lacking a single, central authority in such matters, NATO's military doctrine is the product of "least common denominator" calculations. Understanding NATO's military doctrine requires understanding the distinct

[1]See Weinberger, 1984.

[2]For a discussion of the multiple functions of modern military doctrine and their applications see Arnold L. Horelick, "Perspectives on the Study of Comparative Military Doctrine," in Horton, Rogerson, and Warner, 1974, pp. 192–200.

[3]For a sample of the current debate within the USAF on the role and relevance of doctrine see Watts and Hale, 1984.

political context in which it is developed. It is important, therefore, to know who writes and reads NATO doctrine, what effect it is designed to have, and what competing national and institutional interests it may reflect. As an ironic consequence of the need to accommodate competing allied interests, the content of NATO's formal military doctrine may say more about the subjects left unaddressed or unresolved than about those given full treatment.

The common doctrine for planning and conducting combined NATO operations is contained in a series of Allied Tactical Publications (ATPs) developed and promulgated under the aegis of NATO's Military Agency for Standardization (MAS). The purpose of NATO's combined doctrine is to provide common guidance to planners and common procedures for operators.[4] The MAS has three service boards (Air, Land, and Naval), each of which sponsors working parties to develop appropriate doctrinal guidance. The Interservice Tactical Air Working Party (TAWP) is sponsored by the Air Board of the MAS and is responsible for the development of combined air doctrine for NATO.

In its search for common NATO doctrine, the TAWP is often subject to constraints similar to those that inhibit the development of standardized NATO equipment. Indeed, just as the existence of nationalized or subsidized defense industries prompts the pursuit of national rather than alliance objectives in acquiring military systems, the realities of national military histories, service traditions, and mission priorities sometimes seem to have as much influence (or more) on formal NATO air doctrine as does either threat or the principles of war. The conceptual, procedural, and equipment differences that distinguish NATO's constituent military forces from one another are confronted in the annual meetings of the TAWP. Since 1970, national delegations and NATO military command representatives have met as the TAWP to draft and revise NATO's combined air doctrine. The three most contentious major issues have been: (1) the command and control of allied airpower, (2) the organization and conduct of air missions in support of ground forces, and (3) means of suppressing enemy air defenses (SEAD).[5] These issues are both recurring and persistent.

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[4]The MAS does not involve itself directly in matters of NATO strategy. This doctrinal function is reserved for the Military Committee and the Defense Planning Committee. The MAS is concerned with providing conceptual guidance on the operational implementation of flexible response. NATO's military doctrine does not, however, embody operational plans; it only serves to inform operational planners and individual unit-level operators on how to coordinate their activities.

[5]These are by no means the only doctrinal issues the allies have confronted since 1970. Others are Electronic Warfare, Support for Maritime Operations, the training of Forward Air Controllers, the management and control of airspace, the content and structure of Standard Message Formats (SMFs) for tasking air assets, etc.

Throughout the 1970s the issue of command and control was the chief topic of NATO's internal debates on the principles of use of air power. From the late 1970s until the present, concepts for the conduct of air-support missions and air-ground coordination have drawn the most attention. When the concept of Follow-On Force Attack (FOFA) for interdicting Soviet second echelon forces was first discussed in 1979, it generated new questions about the command and control of air-support operations. And since 1978 the TAWP has repeatedly considered (and rejected) American proposals to make the suppression of enemy air defenses a major counterair mission.

The Tactical Air Working Party's internal debates suggest the diversity of national interests and institutional perspectives on operational issues that affect both doctrinal development and the potential combat coordination and effectiveness of NATO's air forces. Thus the debates over the substantive issues of NATO air doctrine illuminate the competing interests of NATO's member nations, regional commands, and individual services. To illustrate the diversity of these perspectives on NATO air power, this report traces the evolution of the issues noted above as they have affected two of NATO's formal statements of air doctrine: *NATO Tactical Air Doctrine* (ATP-33), and *Offensive Air Support* (ATP-27). Section II provides background on the role of NATO's combined air doctrine and the interests of the major national and service protagonists in the doctrine development process. It also discusses the legacy of organizational structures and command and control arrangements that pre-date NATO's current strategy of flexible response. Section III treats NATO's internal debate on command and control between 1970 and 1977. Section IV addresses NATO's debate on Offensive Air Support between the years 1977 and 1980. Section V considers the emerging doctrinal issues resulting from SACEUR's 1983 directive on "Follow-on Force Attack" and 1982–1985 U.S. proposals to make SEAD formally an element of NATO Air Doctrine. Section VI comments on the process by which NATO's air doctrine is developed and the implications for American participation in future negotiations.

II. BACKGROUND

COMPETING ALLIED INTERESTS AND AIR DOCTRINE DEVELOPMENT

The most unadorned argument for standardization within NATO is that it makes good sense. Allied forces must prepare during peacetime for effective combined operations in war, and the logic of standardization applies whether its object is the munitions or equipment employed by NATO's constituent forces, or the common doctrine intended to guide them in combat. Since European states resumed the production of their own military materiel in the mid 1950s, the standardization of NATO equipment has been an elusive objective. The search for a common air doctrine has been somewhat more rewarding, although not without friction over the fundamental principles, concepts, and procedures for use of air power.

At first glance, it might seem that an account of the evolution of NATO's air doctrine must begin by assessing the interests of all the member nations and their armed services. But in fact, although each member nation's preferred operational concepts may reflect its own security needs, budget limitations, military history, service traditions, combat inventories, and associated mission priorities, these secular considerations rarely receive explicit attention in negotiating NATO air doctrine.

Since 1970 there have generally been four sources for NATO's tactical air doctrine: (1) the national interests of the United States, the United Kingdom, and West Germany; (2) the institutional interests of the United States Air Force, the Royal Air Force, and the Luftwaffe; (3) the operational interests of the several regional or sub-regional commands—i.e. Allied Air Forces Central Europe (AAFCE) and the 2nd Allied Tactical Air Force and the Northern Army Group; and (4) the overriding interests of the planning staff at Supreme Headquarters Allied Powers Europe (SHAPE). Each of these sources of doctrinal input has its own perspective on the employment of airpower and such differences of viewpoint have constrained the formulation of effective NATO air doctrine.

Competing interests regarding airpower are a fact of life in NATO, whether they are based on distinct national priorities, service practices and capabilities, or the tactical imperatives within a local area of operation. Negotiating combined air doctrine among joint national delegations and NATO command representatives provides a unique

opportunity for discovering the doctrinal preferences or divergent operational practices among the allied air arms. Indeed the negotiating process often involves accommodation among competing national interests, which can also facilitate resolution of interservice disputes and enhance operational coordination across NATO's sectors of responsibility.

Although the United States is the only NATO partner whose armed services traditionally issue formal statements of air doctrine, the three principal American and British armed services honor military traditions that reflect decades—or even centuries—of combat experience. Together with the Federal Republic of Germany, the United States and Great Britain have distinct perspectives on NATO airpower use. And whether influenced by operational experience, political imperatives, budget limitations, or less evident constraints, the three major NATO allies do not always agree on concepts and procedures.

For the American military the defense of Europe may be the most important, but still it is just one of several potential combat involvements, each of vital interest to the security of the United States. Each U.S. service issues doctrinal publications governing the organization and worldwide operation of its forces, but European requirements tend to drive the size and shape of American tactical airpower, and NATO-unique needs have often prompted the U.S. services to develop joint agreements for the conduct of specific missions. As a result, the joint U.S. delegation to NATO's working party on air doctrine often approaches its task with a rich set of service-generated force employment concepts and procedures already in hand.[1] But the United States is, after all, only first among equals at the conference tables where NATO air doctrine is developed, and except for providing U.S. delegations with a broad basis of doctrinal literature on which to formulate its own positions of advocacy or opposition, the extensive body of U.S. military doctrine and America's position as NATO's leader affords no insurmountable advantages when negotiating NATO air doctrine.

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[1]A recent example of a joint service concept for a specific mission is the Joint Attack of the Second Echelon or J-SAK concept. This operational concept provides guidance on the command and control of tactical air power in engaging second echelon forces before their arrival and contact with friendly ground forces in the immediate battle area. Although not initially developed to govern joint operations in the European theater, the J-SAK concept has obvious applications in the NATO arena. See USAF Tactical Air Command Pamphlet 50-26, 1982. See also U.S. Army Training and Doctrine Command Pamphlet 525-16, 1982. J-SAK began as a TRADOC/TAC initiative and became the basis for a 1984 Joint Service Agreement promulgating doctrine for the U.S. Army and U.S. Air Force. See Department of the Army and Department of the Air Force, 1984. Examples of individual U.S. service doctrines include Air Force Manual (AFM) 1-1, 1984; and the U.S. Army's new field manual, FM-100-5, 1982.

By contrast, Great Britain and West Germany are regional powers with distinct mission priorities and operational emphases that are mainly if not exclusively directed toward European security.[2] As regional powers confronting the prospect of another European war, the United Kingdom and West Germany are primarily concerned with insuring national existence, and their mission priorities and operational concepts are designed to meet this goal within budgetary and manpower resources that are limited by comparison with those of the United States. For example, U.K. air defense is a historical imperative dating from 1916. Consequently, a large portion of the Royal Air Force is dedicated to the air defense mission, and the only Briton among the three major NATO commanders, Commander-in-Chief Channel (CINCHAN), can also support this objective with such subordinate forces as the Allied Maritime Air Force Channel Command (COMMAIRCHAN).[3]

In spite of the general trend toward reduction and retrenchment in the size and number of British overseas commitments, the forward deployment of the British Army of the Rhine (BAOR) and the Royal Air Force in Germany (RAFG) represent a major British commitment to European security. But successive British governments have faced a variety of competing demands for services that constrain defense spending. The decision to base Britain's independent nuclear deterrent at sea also affects the British defense budget. As a result, the RAF has diminished in size since the 1950s and has lost much of its ability to procure sophisticated airframes and munitions in large numbers—although both force size and capability had begun to expand again in the mid-1980s.

For the Federal Republic of Germany, the territorial integrity of NATO is inseparable from the questions of West German sovereignty and state legitimacy; consequently the forward defense of NATO—including its air defense—is both a political and a military imperative for all elements of the West German armed forces. However, the West German government is also sensitive to the perception of its armed forces by both Eastern and Western Europe—particularly perceptions of the potential threat posed by West German forces and of their fealty to allied objectives and leadership. This sensitivity has led to strict

[2]For the British, the Argentine occupation of the Falkland Islands in 1982 was certainly unexpected and may have proved the extent of Britain's adherence to the principle of sovereignty, rather than the nominal scope of its defense interests. The short conflict demonstrated the effect of Britain's NATO commitment and postwar economic difficulties in constraining the United Kingdom's ability to support extra-theater engagements. For a discussion of British preparations for the Falklands War, see Bowie, 1985.

[3]Indeed, the headquarters of CINCHAN and COMMAIRCHAN are collocated at Northwood in the United Kingdom. See *NATO Handbook*, 1982, pp. 36–37, 54, and 56.

observance of the treaty provisions limiting West Germany's manpower contribution to NATO, and in some respects explains the Federal Republic's reluctance to confront such important issues as border crossing authority in early offensive counterair operations. Moreover, the West German government maintains no extra-European military commitments, and its armed forces always operate within NATO commands.

NATO'S STRATEGY CHANGE AND ITS AIRPOWER IMPLICATIONS

From 1954 until 1967, NATO's military strategy emphasized theater deterrence through the threat of prompt tactical nuclear retaliation, backed up by guarantees of American strategic nuclear employment. This strategy was adopted as a consequence of NATO's failure to meet the 1952 Lisbon Force Goals and in concert with the Eisenhower administration's "New Look" in defense planning, which emphasized less costly nuclear weapons over conventional forces.[4] In 1954, with the American decision to share its tactical nuclear capabilities with the allies, NATO planned for the use of tactical nuclear weapons from the outset of hostilities.[5]

When General Lauris Norstad assumed the position of Supreme Allied Commander of Europe in 1956, he helped popularize a "shield and sword" concept relating NATO's conventional and nuclear retaliatory forces.[6] Conventional "shield" forces were intended to serve merely as a trip-wire for NATO's theater and strategic nuclear response, so during the mid-to-late 1950s the airpower interests of the major NATO allies were primarily directed toward the "sword" forces and the delivery of atomic weapons by NATO's tactical air forces in Europe, the U.S. Strategic Air Command, and the U.K.'s Bomber Command.[7] As long as the deterrent value of a prompt nuclear response remained credible there was less pressing need to address the divergences among the national styles of operation, concepts of command and control,

[4]The Lisbon Force Goals established conventional force objectives for NATO at the combined level of some 92–95 divisions. These goals were never met. Instead, the alliance placed its operational emphasis on prompt tactical nuclear employment by stockpiling U.S. tactical nuclear weapons. See Futrell, 1971, p. 215; and Schwartz, "A Historical Perspective," in Steinbruner and Sigal, 1983, pp. 5–9.

[5]Futrell, 1971, page 215.

[6]Norstad, 1957, pp. 27–30.

[7]Indeed, when the decision for West Germany to "go nuclear" was made in 1957, the acquisition plan for the newly created Bundeswehr also emphasized nuclear munitions and delivery vehicles. See Kelleher, 1975, pp. 92–110.

tactical procedures, or the different inventories of airframes and conventional munitions that, before 1967, were developed independently within the member nation air and ground forces, and NATO's several ATAF/Army Group areas.

But during the late 1950s and early 1960s the threat facing NATO began to change. Advancing Soviet capabilities for delivering nuclear weapons against targets in the continental United States and the simultaneous growth in Soviet theater nuclear delivery capabilities undermined the assumptions on which the strategy of prompt tactical nuclear retaliation had been based. In conjunction with the Soviet's conventional force advantage in Europe, perceptions of these growing risks in the East-West balance made prompt nuclear retaliation seem not a credible deterrent policy and forced revisions in alliance thinking. The first proposals for a more flexible response strategy came from the Kennedy administration and generated heated debate within the alliance. The allies initially viewed the American proposals as simultaneously reducing the U.S. nuclear guarantee and imposing on them conventional force requirements that ran counter to their existing force acquisition plans. The internal debate on alliance strategy lasted from 1962 until 1967, when the new strategy of Flexible Response was adopted by the Defense Planning Committee on the recommendation of NATO's Military Committee.[8]

The adoption of flexible response did indeed generate new operational requirements for NATO's existing forces. The new strategy "envisaged that NATO would meet attacks with whatever force was required to defeat them" and depended "on having forces in being that would be able to meet these attacks at levels appropriate to them."[9] While retaining the capability for executing tactical nuclear strikes, NATO's forces had to prepare for engagements across a broad spectrum of conflict, but the rejection of prompt nuclear employment implied the conduct of sustained conventional operations. The adoption of flexible response also exposed serious limitations in NATO's defense structure, command and control capabilities, and interoperability for engaging in sustained conventional warfare. Some of these limitations resulted from the maldeployment of NATO forces in the Central Region, and others derived from the different command and control

[8]For a fuller treatment of the adoption of flexible response and its relation to NATO's conventional forces see Section I of Facer, 1985; and a companion piece by Legge, 1983. See also Kelleher, 1975.

[9]*The Military Balance, 1969-1970*, The Institute for Strategic Studies, London, 1970, pp. 15–16.

practices within the various operational areas of responsibility.[10] Other operational limitations derived from a lack of adequate conventional munition stocks necessary for a sustained conventional conflict and from the equipment differences among national forces.[11]

The "layer cake" assignment of national Corps areas within NATO's Central Region had been organized on a national basis that was partly the result of historical circumstance. (The British ended World War II occupying the Northern sector of Germany, and the Americans held much of the South.) It was also partly the result of political considerations that gave the smaller West European allies a role in the conduct of alliance defense. In terms of ground forces, the assignment of national Corps areas and Army Group areas of responsibility has evoked frequent criticisms. For example, the International Institute for Strategic Studies described this historical legacy in terms of "imbalances" and "a certain maldeployment":

> where the well-equipped and strong American formations are stationed in the southern part of the front, an area which geographically lends itself to defence, while in the north German plain . . . there is little depth and few major obstacles, [and] certain of the forces are less powerful.[12]

A similar historical legacy existed regarding the sectors of air power responsibility associated with the Central Region's British-led Northern Army Group (NORTHAG) and the American-German-led Central Army Group (CENTAG). In the North of Germany, command of the 2nd Allied Tactical Air Force (2ATAF) was held by the British; in the south, command of the 4th Allied Tactical Air Force (4ATAF) was held by the Americans. Although these ATAFs are NATO rather than national commands, they have historically borne the operational and doctrinal imprint of the "lead" air force within each sector. Beyond equipment and inventories, the differences between these ATAFs have principally reflected the philosophies of command and control held by the Royal Air Force and the United States Air Force.

Like its American counterpart, the Royal Air Force honored the doctrinal principle of *centralized command and decentralized execution*; but

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[10]See U.S. Army and U.S. Air Force, 1979, p. 4–4. See also Freeman, 1981, pp. 1–5 and 15–20.

[11]For a discussion of the problems arising from disparate equipment, tactics, procedures, and logistic systems see Komer, 1973, p. 26.

[12]*The Military Balance, 1970-1971*, International Institute for Strategic Studies, London, 1971, p. 92. Also see the issues of *The Military Balance* for 1971–1972, and 1972–1973, pp. 77 and 87 respectively. Also see Facer, 1985, pp. 26–27. And for an excellent discussion of the assessment criteria for defending the NATO's "maldeployed" forces in the Central Region see Mako, 1983, pp. 31–64.

unlike the USAF, the RAF emphasized making command decisions regarding air power at the "lowest practicable" echelons. The RAF preferred to operate out of "pockets of control" that were coordinated with local ground forces, and of otherwise leaving the management of air assets decentralized across the board. To a great extent this preference still exists and is supported by a British tradition of squadron autonomy in the execution of operations. In addition, the RAF's application of the principle of centralized command was closely tied to the tactical situation confronted by 2ATAF forces in the North of Germany.

Given the "imbalances" of capability among the various Corps within NORTHAG, a forward defense of the sector need not result in a classic, linear defense position. Because of terrain that presents little impediment to attacking forces and a lack of depth for secure rear-area maneuver, the leadership of the NORTHAG/2ATAF subregion developed means to ensure that NORTHAG's forces could absorb an attack of first echelon Soviet forces. To provide responsive air support, the RAFG and BAOR emphasized making coordinated decisions close to the battle area, with airpower applications taking place beyond the range of organic support. Indeed, as a recent U.S. study noted, "the 2ATAF concept of air employment was best represented by the British forces" and "this embraced the doctrine of using air power beyond the range of organic artillery fire to support ground forces."[13] One of the consequences of 2ATAF's approach to command and control, and the task of supporting four different national Corps areas with four national air forces, was to encourage the local coordination of national air and ground forces whenever possible.

Although sharing the doctrinal premise of *centralized command and decentralized execution*, the USAF has historically emphasized making command decisions at "the highest practicable level," and centrally managing aircraft control functions. Moreover, American forces confronted a very different defense problem in Southern Germany where the terrain provided less advantage for advancing Soviet forces, and the depth of allied territory provided a greater degree of rear-area security than in NORTHAG/2ATAF. One of the hallmarks of the American-led 4ATAF was the tendency toward a more "top-down" managerial approach to airpower. In conjunction with American leadership of the alliance, 4ATAF's view of NATO airpower as a flexible resource assumed a theater-wide perspective on airpower applications.[14]

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[13]U.S. Army and U.S. Air Force, 1979, p. 6–12.

[14]Interviews with Lieutenant Colonel C. Richard Frishkorn, Doctrine and Concepts Division, USAF, The Pentagon, Washington, D.C., 7 March 1985; and Colonel Thomas A. Cardwell, III, USAF, Strategy Division, Organization of the Joint Chiefs of Staff, The Pentagon, Washington D.C., 6 March 1985.

The distinct tactical situations confronted in NORTHAG and CENTAG led 2ATAF and 4ATAF to apply the principle of common command and control differently. Between 1954 and 1967 different practices for apportionment, allocation, and air-ground coordination matured within each command.[15] The historical circumstances and political considerations that determined the initial assignment of NATO's air sectors of responsibility served the alliance well enough during the days of the prompt nuclear employment strategy. But the change in NATO strategy was not reflected in a revised plan for deploying national forces, and the tactical situations of CENTAG/-4ATAF and NORTHAG/2ATAF remained unaffected. To compensate for this legacy from the era before flexible response, the alliance set in motion such organizational and institutional initiatives as the development of combined tactical air doctrine in 1970 and the creation of Allied Air Forces Central Europe (AAFCE) in 1974. The different emphases of 2ATAF and 4ATAF in applying the principle of centralized command and control became a point of contention in the doctrinal effort. From 1970 until the present, the most enduring questions have been the appropriate echelon for centralizing command and control functions and the conduct of air support for ground forces.[16]

Operating through both the United Kingdom's national delegation and the 2ATAF command representatives to NATO's working parties on air doctrine, the RAF sought to keep the emphasis on centralized command to a minimum in developing early drafts of NATO's tactical air doctrine. Underscoring British enthusiasm for "centralized control at the lowest practicable level" were the existing practices in 2ATAF that compensated with airpower for the different operational capabilities among NORTHAG's national Corps. Improving the command and control capabilities of 2ATAF along the lines envisioned by the USAF also was to some extent incompatible with the budgetary constraints

[15]The different command and control orientations are reflected in the Joint Standard Operating Procedures of the two central Region ATAF/Army Groups. In 1972, four years before the first promulgation of *NATO Tactical Air Doctrine* ATP-33 and two years before the creation of AAFCE, NORTHAG/2ATAF published a Joint Air Support Operations Manual. This document was revised in 1981 and authorized by then Brigadier General Perry Smith, USAF, during his tenure as Deputy Chief of Staff for Operations at Headquarters 2ATAF. 2ATAF also has a separate set of Standard Operating Procedures for conducting Offensive Air Support Operations written in terms of 2ATAF's General Defense Plan.

[16]Part of the bargaining on the command-control issue in the early drafts of NATO's keystone tactical air doctrine (ATP-33) was the existence of a separate publication on offensive air support (ATP-27). Instead of reconciling differences between 2ATAF and 4ATAF, however, the original edition of ATP-27 captured what was generic to them both. The Alpha edition of ATP-27 was promulgated in February of 1975 over a year before the first edition of ATP-33 was published.

that affected the British, Dutch, Belgian, and German services. Furthermore, although supporting the *concept* of centralized command, the RAF argued that a centralized command and control capability presented the Soviets with a highly lucrative target and that any loss of command connectivity as a result of Soviet attacks would force reliance on a decentralized operating capability. Finally, the RAF may also have viewed the advance toward greater centralization in theater air-power management as challenges to 2ATAF's command prerogatives and to the existing joint procedures in NORTHAG/2ATAF.[17]

INTERNAL DIVERSITY AND THE PROSPECTS FOR DOCTRINE DEVELOPMENT

Given the alliance's organizational structure and history and the diversity of air power interests before 1970, it is reasonable to speculate about the prospects for success for any effort to develop a common NATO tactical air doctrine. By itself, a common doctrine could not rectify allied inventory differences, nor could it compensate for U.S. political dominance and the material advantages held by the U.S. Air Force over many other allied air forces. Moreover, a major obstacle in developing a common NATO air doctrine would be the vested operational and procedural practices of the RAF and the U.S. Air Force in Germany. It is difficult to imagine that, in simply undertaking to develop a common air doctrine, either the USAF or the RAF would readily change longstanding views about coordination with friendly ground forces in generating tactical air support, or yield to the air power interests of the other allied services within NATO.

The prospects for successfully developing a common NATO air doctrine were also affected by NATO's adoption of flexible response in 1967. This turn away from a strategy of prompt tactical nuclear retaliation caught many allied air forces in the midst of long-term acquisition programs. Not only did the change in strategy remove the underlying rationale for such programs, it resulted in combat inventories and munition stocks that were inappropriate to the more intense conventional campaigns that the new strategy envisioned. In addition, the mere development of a standardized air doctrine could not remedy the problem of NATO's "maldeployment" in the Central Region, harmonize the command and control arrangements and tactical procedures

[17]Interview with Colonel Thomas A. Cardwell, III, USAF, Strategy Division, Organization of the Joint Chiefs of Staff, The Pentagon, Washington, D.C., March 6, 1985.

developed to meet the distinct tactical imperatives of each ATAF/Army Group area, or offset the various national budget constraints.[18]

By 1970 the fundamental air power issue before the alliance was what to make of the lack of uniformity in NATO's tactical capabilities. The British, for example, initially viewed the diversity among inventories and capabilities as a virtue in that it complicated Soviet planning and training by multiplying the various operational challenges NATO could impose. In contrast, the Americans viewed NATO's diversity as an impediment and sought to establish appropriate commonalities to ensure future combat effectiveness. Any attempt to draft a common air doctrine could, of course, simply paper over allied differences and codify existing operational concepts, or it could actually establish common tactics, procedures, and objectives for NATO's future combat capabilities. Ultimately, the prospects for success or failure would rest with the quintessentially political process of negotiating the different air power interests among the allies.

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[18]A *de facto* Central Region emphasis in many of NATO's ATPs is partly the result of the political-military prominence of the United States, West Germany, and Great Britain in the alliance and the successful bureaucratic efforts of their national delegations to the TAWP. Although always concerned to protect their own national interests, the U.S., West German, and British delegations sometimes act in concert, taking collective responsibility for drafting initial ATPs and their major revisions. As a result, the command and control procedures of the Central Region were often treated as standards while the particulars of other NATO regions were often ignored. For example, the Italian delegation complained that ATP-27 reflected command structures that existed only in the 4ATAF and 2ATAF sectors and did not match the organization in 5ATAF. Similar anomalies were often heard reported by the delegations from AFNORTH.

III. DEVELOPING NATO'S KEYSTONE TACTICAL AIR DOCTRINE

The impetus for developing a common NATO air doctrine on combined operations came in July 1970 from General Goodpaster (USA), then the Supreme Allied Commander for Europe (SACEUR). General Goodpaster requested that NATO's Military Agency for Standardization (MAS) form a working party to develop a tactical air doctrine that would provide a common understanding of the role of air power in allied operations, and a set of common procedures for successfully implementing air operations. After approving SACEUR's request in November 1970, the Air Board of the MAS set about structuring the necessary institutional apparatus. This involved identifying an agency within each NATO member nation that could best represent a national position in negotiating allied doctrine. The MAS first approached the USAF Standardization Office at USAF Headquarters as the most likely U.S. point of contact, but that office requested that the Air Staff's Doctrine Division accept primary responsibility.[1]

The first meeting of the combined working party was held at NATO Headquarters in Brussels in June 1971. The meeting was chaired by Major General Woodard E. Davis, USAF, from Allied Forces Central Europe (AFCENT); the U.S. delegation included three officers from United States Air Forces Europe (USAFE), and two from Tactical Air Command (TAC). No other U.S. services were represented at this first meeting whose product was a series of draft chapters on five air mission areas: Counterair, Interdiction, Close Air Support, Reconnaissance, and Airlift. USAF Doctrine Division and TAC reviewed these chapters; and following an exchange of comments with other national delegations, a second meeting of the working party was held in October 1971. Again, this meeting did not include other U.S. services as part of the U.S. delegation.

The product of the second working party meeting in October 1971 was an initial draft of an Allied Tactical Publication on NATO Tactical Air Doctrine, ATP-33. The draft was circulated for comment to all member nations, Major NATO Commands, Major Subordinate Commands, and Principal Subordinate Commands during November 1971. The U.S. Navy and U.S. Army were provided copies of the draft through routine channels within the MAS and were requested to

[1]See USAF Doctrine Division, April 1974, p. 1.

transmit comments to the USAF Doctrine Division. In general, the other U.S. services agreed with an overall USAF assessment that the draft required major additions and revisions.[2] In light of deficiencies identified during this national review period, the MAS convened a select panel of working party members in February 1973 to improve the format and content of a second draft of ATP-33.

THE U.S. JOINT ARENA AND NATO AIR DOCTRINE

The members of the working party's select panel included national delegations from the United States, the United Kingdom, Canada, and the Federal Republic of Germany; and command representatives from SACEUR and SACLANT. Indeed, because of SACLANT's objection to the omission of naval air-arm practices in the first draft of ATP-33, and because of its inconsistencies with naval command and control procedures, the MAS/Air Board requested that SACLANT provide "the required additional *naval* input."[3] SACLANT was joined by the U.S. Navy in determining there was a requirement to include existing and agreed NATO naval command and control arrangements in ATP-33. Additionally, the U.S. Navy cited a requirement to include doctrinal mention of attacks on surface targets at sea. Underlying this exchange was the dilemma of how best to reconcile the view that commanders at sea needed to be able to task naval air assets, with the view that a single airspace manager would enhancee the effectiveness with which air assets could be employed.

Based on the working party's experience in developing the first draft of ATP-33, the select panel decided at its February 1973 meeting to review the comments of its own members at a second session, initially scheduled for September 1973, before circulating a second draft to the other national delegations and NATO commands. In April 1973, however, the U.S. Navy informally suggested to the USAF Doctrine Division that it might be desirable to put the entire matter of ATP-33 before the Joint Chiefs of Staff (JCS) to establish a joint U.S. position on allied doctrine. The suggestion was declined on the grounds that

[2]Although each commentator must have had distinct institutional, organizational, or national interests as the motivation for recommending revisions, the consensus among the U.S. services corresponded with the perceptions of most member nations and NATO commands. Although the substantive comments no longer remain on file at the USAF Doctrine Division, a background paper on ATP-33 suggested that the draft was uniformly viewed as incomplete in scope and detail regarding principles of command and control and the roles and missions of tactical aviation. See USAF Doctrine Division, 1974, pp. 1–5.

[3]Ibid., p. 4.

JCS involvement would be premature because the select panel's draft was due to be revised at the September 1973 meeting. At this point, the U.S. Navy provided written recommendations on the second draft of ATP-33 and made sure its interests would be represented at the next select panel meeting.

The second select panel meeting was rescheduled for November 1973, and the U.S. delegation included a naval officer for the first time. During the meeting the U.S. representatives transmitted to the Chief of Naval Operations' staff substantial portions of those sections previously considered controversial. It was hoped that these efforts to keep the Navy closely informed about the progress and content of ATP-33 would facilitate the process of service coordination. By January 1974 a second draft of ATP-33 was prepared and transmitted for national comment and prospective ratification.[4]

The USAF Doctrine Division received notification of U.S. Army concurrence with the second draft on 5 March 1974. On 29 March 1974 U.S. Navy and USMC comments were received, but without concurrence. Indeed the U.S. Navy again tried to move the doctrine development process out of USAF hands and into the joint arena by circulating a Chief of Naval Operations Memorandum (CNOM) on 26 March 1974, requesting that the USAF Chief of Staff refer the staffing of ATP-33 to the Joint Chiefs. The USAF Doctrine Division cited a JCS policy memorandum to support the Air Force's claim on negotiating allied air doctrine, and recommended that the United States proceed with national ratification of ATP-33.[5] In light of the JCS policy memorandum, the Navy withdrew its CNOM. On 19 April 1974 the USAF Doctrine Division also received informal comments on the second draft of ATP-33 from Supreme Headquarters Allied Powers Europe and USAFE.

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[4]See NATO, 1973.

[5]The documentary authority that the Doctrine Division cited was JCSPM No. 147, which stated:

> The responsibility for the execution and management of standardization efforts within these policies rests with the Service or agency having primary responsibility for the item or category being standardized. In standardization, the primary responsibility for a particular item or category will be assigned to the Service or agency having cognizance in accordance with existing directives and policies governing roles and missions. In those instances where responsibility is not clearly defined, the Service or agency to which the matter was initially referred will initiate action to obtain agreement with the other Service(s) or agency(ies) concerned.

See Joint Chiefs of Staff Policy Memorandum No. 147, "Policy with Respect to Military Standardization Between the United States and Its Allies," (2nd Revision), Washington, D.C., 17 March 1967, paragraphs 23 and 24, pages 8 and 9.

COMMAND AND CONTROL IN THE FIRST EDITION OF ATP-33

At stake in the first phase of NATO air doctrine development was the establishment of a common concept for the command and control of air power. Competing conceptions of airpower management abounded, not only among the institutional "players" within the alliance such as 2ATAF and 4ATAF but also among the nations and their air services. For example, the competing concepts of command and control of the U.S. Navy and U.S. Marine Corps on the one hand and the USAF on the other complicated the task of managing the overall U.S. negotiating position.

The substantive differences regarding the control of air assets during combat operations were: *At what level should centralized command authority reside?* and *At what level of command, and to what extent, should the control functions governing combat aircraft be exercised?* The USAF, USAFE, and SHAPE supported centralization of control *functions* at the highest practicable level of command; the U.S. Navy, U.S. Marine Corps, and 2ATAF (largely reflecting the views of the Royal Air Force) stressed decentralized control of air operations at the lowest possible *level* of command. The contention over the principles of command and control stemmed from the intertwined nature of command *levels* and control *functions*, and the different command structures and control arrangements that had developed in each NATO subregion. Resolution of these issues would rest on determining what levels of command should engage in control functions for the execution of which air operations, and whether these arrangements would be entirely uniform throughout the alliance.

SHAPE's position on the matter reflected the continued interest of SACEUR in developing a common and coherent NATO air doctrine. Functioning as SACEUR's staff, SHAPE took a position on this "final draft" of ATP-33 that expressed the comments of SACEUR's three Major Subordinate Commanders (MSCs): CINCNORTH, CINCENT, and CINCSOUTH, and the Principal Subordinate Commanders (PSCs) at 2ATAF and 4ATAF. The choice for SHAPE was whether to present a conglomerate position or to impose a top-down view of what *ought to be.* In many respects SHAPE simply ratified statements supplied by the CINCs and ATAFs.[6]

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[6]SHAPE's report to the nations generally summarized the MSC comments and passed along the specific comments of the ATAFs. Notable in this regard were the extensive comments that came from 2ATAF, suggesting coordination within the RAF community to ensure their interests in the development of ATP-33. See "Combined SHAPE and MSC Comments on NATO Tactical Air Doctrine, Final Draft, December 1973," Enclosure 1 to Memorandum on "1st Draft STANAG 3700 (NAD)-NATO Tactical Air Doc-

The comments of the regional CINCs varied according to the threats they perceived, the national forces and capabilities they commanded, and the levels of organizational infrastructure and development in their regions. CINCNORTH expressed general satisfaction with the document and CINCSOUTH believed that the draft was "sufficiently broad to allow each air commander to apply his forces in unilateral roles."[7] CINCENT, however, held that the draft of ATP-33 was subjected to excessive compromises and philosophical controversies between the two Central Region ATAFs.[8] For example, 2ATAF air combat operations were managed from a Joint Combat Operations Center (JCOC) where allied air force and army officers could determine the best allocation of airpower and, through individual national cells, directly task the available air assets at the wing level. These air operations were largely preplanned and the command-control structure was streamlined to simplify the process and cycling time from target identification to engagement. Therefore, 2ATAF emphasized the *procedural control* of air assets that could ensure the continuity of operations under adverse conditions.[9] By contrast, 4ATAF achieved airpower flexibility and responsiveness through a complex array of command and control centers and an associated system for data processing and secure communication. This permitted the *positive control* of aircraft and the in-flight diversion of sorties to new targets.[10] However, like the staff at SHAPE, CINCENT was not in a position to impose a solution to the

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trine," SHAPE HQ, Belgium, 2160/14-4-1/74, 3 April 1974. Signed for the Supreme Allied Commander Europe by Major General Richard F. Shaefer, USAF, Assistant Chief of Staff for Operations, SHAPE HQ. Hereafter referred to as SHAPE/MSC Comments.

[7]As noted, the command-control principles contained in the draft of ATP-33 represented a compromise between the procedures and the practices of the Central Region's dominant air elements. CINCSOUTH's comment reflects an appreciation that this compromise would not hobble the air, ground, and naval elements of his command where the command-control infrastructure differed considerably from that of the Central Region. See SHAPE/MSC Comments, p. 4.

[8]SHAPE/MSC Comments, p. 4.

[9]*Procedural control* manages aircraft by using weapons control orders limiting the time and place of release, and by segmenting airspace in terms of the time and volume of traffic. These techniques permitted 2ATAF to safely generate high sortie rates without a great deal of technological sophistication, command-control facilities, or their associated costs. Although this control method is restrictive, it is less vulnerable to electronic interference and direct attack, and can ensure the continuity of operations under adverse conditions. See NATO, 1979, pp. 3–5.

[10]*Positive control* manages air traffic through a complex network of electronic means for identifying, tracking, and directing aircraft to targets. It relies heavily on facilities for the real time data processing of radar, IFF, and target information, and on secure communication. The system's flexibility is considerably greater than procedural control techniques in applying airpower, but direct attacks or interference with the facilities and support systems can sharply degrade the network's ability to manage combat aircraft. See NATO, 1979, pp. 3–5.

operational differences within his command—only the nations could approve doctrine. CINCENT therefore expressed the hope that further revisions of ATP-33, and coordination with corresponding efforts on a doctrine for Offensive Air Support, would fill a longstanding need for the establishment of NATO-wide tactical air doctrine.

For its part, 2ATAF's extensive comments generally reflected RAF command and control principles and the existing practices and procedures within its area of responsibility. On the subject of *apportionment*, for example, 2ATAF commented that:

> *It is most unlikely that at the highest command level* [combined force commander] *it will be possible to determine a specific percentage breakdown of the total air resources. . . .* The force commander will normally only be able to issue a broad directive on employment priorities to his subordinate air commanders. *Percentage breakdown is more appropriate at a lower command level and in the consideration of allocation.*[11]

2ATAF was interested in protecting its preference for exercising control functions at the lowest practicable level by ensuring that ATP-33 did not elevate the prerogatives of command beyond the scope of existing national and subregional practices and capabilities.

2ATAF also commented negatively on a draft paragraph that sought to make the command and control of NATO's forces dependent upon "the establishment of a command and control organization composed of commanders, their staffs and facilities" that operated at the highest level.[12] In criticizing this idea 2ATAF argued that MSCs and PSCs—e.g., 2ATAF—were "authorized and do deal with national headquarters and incur responsibilities to them" and that "tactical units are subject to national direction in such areas as tactics, procedures, organization, all of which are within the scope of operations."[13] The substance of 2ATAF's argument was similar to points made by the U.S. Navy on command and local control procedures.

As CINCENT had noted, the "Final Draft" ATP-33 of December 1973 clearly contained compromises that appeared to be based on the differences between the command and control concepts of 2ATAF and 4ATAF; but in fact the draft represented a series of compromises between the USAF and 4ATAF on the one hand, and among the U.S.

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[11]Here 2ATAF is commenting on p. 3-3, paragraph 301k of NATO, 1973. See SHAPE/MSC Comments, paragraph 20.a, p. 7. Emphasis added.

[12]NATO, 1973, paragraph 304, p. 3-6.

[13]2ATAF commenting on p. 3-6, paragraph 304a of NATO, 1973. See SHAPE/MSC Comments, paragraph 29.a, p. 9.

Navy, Royal Air Force, and 2ATAF on the other.[14] Indeed, the USAF Doctrine Division called attention to a particular compromise on the Application of Operational Control that diffused interservice difficulties and helped determine that the command level having operational control would be considered the most practicable:

> *This paragraph is a result of compromise between Air Force concepts of centralized control/decentralized execution and USN/USMC thrusts toward decentralized control. It defuses the issue of centralization vs decentralization, provides guidance for implementation of the supporting/supported operations without impacting operational control. The "practicable level" discussed in paragraph 309b allows each air commander the flexibility to determine the level at which operational control should be exercised.*[15]

The full working party required major editorial changes in the final Draft before it was issued as *NATO Tactical Air Doctrine (ATP-33)* on 11 March 1976. According to the USAF Doctrine Division, the major achievements of ATP-33 were: (1) *Operational control of available air resources is exercised by a central, designated air commander at the "highest practicable level"* and (2) Under special "control" arrangements that gave command authority for selecting and assigning targets, ordnance loads and force employment decisions to the "assisted" commander, *ATP-33 represented a major accord concerning the control of all naval air assets made available by a naval air commander.*[16]

The 1976 edition of ATP-33 was not the last time the allies reviewed the principles of airpower or the last time that command and control issues arose in doctrinal debates.[17] Before the issuing of ATP-33 in 1976, the U.S. delegation, under the leadership of the USAF, began pressuring the allies to improve upon its content. At the working party meeting held in December 1975 the U.S. delegation assumed responsibility for a review of ATPs 33, 27, and 34[18] to identify and correct any inconsistencies. In a report to the MAS/Air Board of its findings, the U.S. delegation stated:

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[14]From "Resume: *Final Draft, ATP-33, NATO Tactical Air Doctrine,*" USAF Doctrine Division, Washington, D.C., paragraph 1, p. 1, n.d.

[15]See "Resume: *Final Draft ATP-33, NATO Tactical Air Doctrine,*" USAF Doctrine Division, paragraph 3, p. 1, n.d. Emphasis added.

[16]USAF Doctrine Division, "Talking Paper on *NATO Tactical Air Doctrine ATP-33,*" Washington, D.C., 3 pages, n.d. Emphasis added.

[17]A successor edition of ATP-33 was approved and issued in 1980 as ATP-33(A), and a Bravo edition has been under development since that time.

[18]ATP-27 covers the concepts and procedures for *Offensive Air Support Operations,* while ATP-34 covers the concepts and procedures for *Tactical Air Support of Maritime Operations.*

> In the detailed study of these three documents, it became apparent that there are inconsistencies not only between the documents, but to some extent within the documents themselves. This exists principally with ATP-33 and ATP-27. *Considering the compromises and intense negotiations surrounding ATP-33, it is understandable that attention to certain details in that document may have been subordinated. . . . However, the U.S. believes that it is within the spirit and intent of its task to propose changes that will better integrate and harmonize the concepts and doctrines in ATP-33 and between ATP-33 [and] ATP-27.*[19]

The process of integrating and harmonizing the operational concepts in ATP-33 and ATP-27 continued to occupy successive Working Parties.

THE LIMITS AND PROSPECTS FOR A COMMON NATO AIR DOCTRINE

Did NATO's first formal statement of tactical air doctrine represent a true conceptual agreement or was it merely a cosmetic treatment of such issues as command and control? The answer is, of course, both and neither. The *sources* of diverse allied capabilities, concepts, and procedures were not addressed in either the final document (ATP-33), or in the negotiations that produced it. Rather the *consequences* of diversity as embodied in the different command and control practices of specific commands and services were taken as a given. For example, despite the inherent opportunity for promoting a consensus regarding the competing concepts for command-control arrangements within the Central Region, the negotiations did not address the different inventories and capabilities that initially generated these "solutions" to airpower management in each subregion. As a consequence the USAF and RAF preferred existing procedures for positive and procedural control were simply codified in ATP-33. Of course the working party was dealing with difficult issues and was not inclined to step beyond its charter by proposing agreements that ran counter to the interests of the NATO command representatives and the national delegations. The lead service in each national delegation spent much of its time coordinating national service approval for each tentative proposal. In this respect the Tactical Air Working Party was often a secondary forum for interservice differences on the use of airpower.

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[19]The findings represented a national position developed through coordination among the U.S. services. See "Report to the MAS (Air Board) on The U.S. Analysis of ATP-33, ATP-27, and ATP-34," contained in *1st Meeting of the Interservice Tactical Air Operations Doctrine and Procedures (TADP) Working Party*, MAS(AIR)(77)325, 5 October 1977. Annex D to MAS(AIR)(77)239(DIRECTIVES), Air Board, Military Agency for Standardization, Brussels NATO HQ, p. D-2, paragraph 2. Emphasis added.

The textual compromises reached during the final negotiations on ATP-33 permitted each constituent air force and regional command to maintain its preferred set of operating procedures but also identified the procedural requirements for conducting air operations across subregional boundaries. NATO would require explicit provisions for regional and national cross-training under the principles and procedures of ATP-33 before the "common" doctrine for combined operations could be considered a complete success, but it was a meaningful first step in dealing with NATO's disparate capabilities. Ultimately, national approval and incorporation into existing service procedures was necessary for *NATO Tactical Air Doctrine* to have any authority or operational value.

Negotiations within the Tactical Air Working Party provided the major national, service, and command protagonists with an opportunity to air their differences, particularly regarding command and control. Although this first effort did not resolve the differences between the allies, the process identified and detailed the issues that separated them and provided broad guidance for coordinating combined operations. In this regard *NATO Tactical Air Doctrine* ATP-33 was a success and the Tactical Air Working Party proved one of the best forums for attending to NATO's operational diversity.

IV. THE EVOLUTION OF NATO'S OFFENSIVE AIR SUPPORT DOCTRINE

THE NEED FOR DOCTRINAL REVISION

In 1974 NATO created a new centralized command echelon, known as Allied Air Forces Central Europe (AAFCE), and vested it with *operational command* over the air forces of the Central Region. Operational command gave AAFCE the authority to assign missions or tasks to subordinate commanders, deploy units, reassign forces, and retain or delegate operational or tactical control over all Central Region air assets. With this change in command structure, and in conjunction with publication of ATP-33 in 1976, it became necessary for the allies to revise the existing doctrine on offensive air support operations (ATP-27) and bring it in line with the new principles of air doctrine and the emerging command and control arrangements.[1] A new edition of the OAS doctrine was expected to implement the principles contained in ATP-33 and to reflect the new responsibilities for apportionment being assumed by the Commander of AAFCE. From the perspective of both the American delegation and the AAFCE representatives it was particularly important that the revision of ATP-27(A) take into account changes in the organization of offensive and defensive control authority for both air and air-land engagements.

Both ATP-27(A) and its predecessor ATP-27 were written from a Central Region perspective and took the organization of NATO control facilities in 2ATAF and 4ATAF as givens. The local procedures and facilities in these sectors had their origin in the era when NATO's pre-eminent airpower missions were air defense of the Central Region and the execution of tactical nuclear strikes. Consequently, the early organization of Central Region control facilities were streamed into two separate lines of responsibility—one for air defense and one that served all other tactical operations.[2] With regard to offensive air support

[1]A major revision of the original Offensive Air Support doctrine had already resulted in the publication of an Alpha edition of ATP-27 13 months before ATP-33's first appearance. See NATO, 1975.

[2]The air defense control facilities included Air Defense Operations Centers (ADOCs), Sector Operation Centers (SOCs) and Control and Reporting Centers (CRCs). Other tactical operations were served by Air Command Operations Centers (ACOCs), Allied Tactical Operations Centers (ATOCs), Air Support Operation Centers (ASOCs) and Tactical Air Control Parties (TACPs). In 4ATAF joint Army-Air Force interfaces occurred at a several points in this network, the ASOC being the major point of contact with Army Corps for determining the application of support operations. 2ATAF preferred

operations the local command and control procedures within each sector were designed to serve allied air forces with different capabilities in support of allied ground forces facing different operational challenges. With the creation of AAFCE, NATO also introduced a new theater perspective on the use of airpower and began turning the "flexibility" implied by NATO's new strategy into a functioning command and control capability. However, the continued existence of two distinct subregional control systems limited COMAAFCE's ability to apportion or allot airpower responsively.[3]

At the 1977 meeting of the Interservice Tactical Air Operations Doctrine and Procedures Working Party (TADP) the U.S. delegation argued that "such fragmentation degrades the unified and flexible employment of tactical airpower in both offensive and defensive air operations."[4] The United States further argued that "NATO must seek to use *all* its assets in the most efficient, effective and flexible manner" and that "fundamental to the achievement of this objective is the integration and consolidation of the air defense and other NATO tactical air capabilities into a single system to better employ the total capability and avoid duplication of staffs and control elements."[5] Although the principle of centralized command at the highest practicable level was accepted as a formal NATO position, the disparate employment procedures and practical interests of the nations, services, and subregional commands continued to impede progress toward operational and procedural commonality.

The U.S. delegation believed that ATP-27(A) was in need of revision but recognized that immediate U.S. pressure for further doctrinal evolution would probably cause the allies to dig in their heels and resist. Moreover, as a result of participation in the smaller select panel that had produced the so-called "final draft" of ATP-33 in 1973, some members of the USAF Doctrine Division began to develop closer working relations with particular members of the U.K. national delegation and learned the importance of leveraging allied sensitivities and interests in pursuit of doctrinal objectives.[6] As a result, the U.S.

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having the ASOC directly task the air assets at the Wing level, by-passing much of the command-control structure associated with 4ATAF's concept of operations.

[3]See NATO, 1979, p. 3-1.

[4]See NATO, 1977, p. D-3.

[5]Ibid, p. D-3.

[6]From 1977 to 1980 this "back channel" arrangement would prove to be the necessary line of communication between the United States and United Kingdom for smoothing out national, service, or command difficulties regarding particular proposals for doctrinal amendment. The arrangement ended in 1980 largely because the particular Americans involved moved on in their service careers according to USAF personnel practices. However, their British counterparts generally retained their assignments and were able to

delegation thought it would be "politic to have someone other than the U.S., U.K. or FRG make the proposal to have ATP-27 rewritten,"[7] and certain proposals made by the Italian delegation created an appropriate opportunity for raising the need for revision. Furthermore, the U.S. delegation thought it would be "politic to have the U.K. and FRG volunteer along with the U.S. to produce a final working draft."[8]

Because of the Central Region emphasis of ATP-27(A) and the different organizational structure for command and control in the Southern Region, the Italian delegation submitted a series of proposals to the 1977 TADP that pointed out the inappropriateness of ATP-27(A) for guiding offensive air support operations in 5ATAF. The Italian delegation echoed a West German call for supplements to ATP-27 that took into account the regional differences for tasking and conducting air support. On the strength of these Italian proposals, the U.S. delegation recommended revision of ATP-27(A).

At the same meeting of the working party the West Germans distributed a report on the changing organization of command and control for Offensive Air Support in the Central Region.[9] The West German report noted that the recent creation of AAFCE would affect the organization and conduct of offensive air support, probably through the apportionment of airpower to missions, but that "details of the command and control structure of AAFCE are still in a formative stage."[10] Actually, some of the existing command and control facilities had already begun to change their position within the NATO command structure. For example, the newly designated ATOCs at Sembach, Maastricht, Messtetten, and Kalkar, which had previously operated as *nationally* funded cells, would now operate as part of a centralized command and control apparatus under AAFCE and the two subordinate Central Region ATAFs.[11] As the ATOCs came under AAFCE's

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exploit their knowledge and experience of NATO's bureaucratic operations. Interview with Colonel Thomas A. Cardwell, III, USAF, Strategy Division, Organization of the Joint Chiefs of Staff, The Pentagon, Washington, D.C., March 6, 1985.

[7]From an unsigned outline of the agenda, issues, and American objectives for the first meeting of the TADP. The document was probably written in late September 1977 by an Air Force member of the U.S. delegation just before the October meeting of the working party in Brussels. U.S. Air Force, 1977, p. 2.

[8]Ibid, p. 2.

[9]NATO, 1977.

[10]Ibid, p. G-1-1.

[11]4ATAF contains two ATOCs: one at Sembach operated by the United States and one at Messtetten operated by the West Germans. The West Germans also operate an ATOC in 2ATAF located at Kalkar. Both the Messtetten and Kalkar ATOCs are collocated with West German intelligence capabilities. 2ATAF has another ATOC located at Maastricht. Although considered to be the most *allied* of the four Central Region ATOCs (its Commander is a Belgian), the ATOC at Maastricht is collocated with the

command, the tasking authority for offensive air support was beginning to approximate the USAF's theater-wide perspective on airpower. In this context the U.S. delegation sought to revise ATP-27 as a way of standardizing the control procedures for offensive and defensive tactical air support operations throughout the Central Region.[12]

COMPETING U.K. AND U.S. VISIONS OF OFFENSIVE AIR SUPPORT

The difference between U.S. and U.K. approaches to the conduct of offensive air support operations had at its origins the different perspectives of their national air forces on the management of airpower and air-ground coordination. The USAF and its elements in the Central Region had a theater-wide concept of airpower employment. They viewed air assets as a flexible means of supporting ground forces but one that required a highly centralized command point for effectiveness. Although the RAF and its elements in the Central Region might agree with the USAF regarding the flexibility of airpower, it certainly did not favor a top-down managerial style. Indeed, the RAF and its forward-deployed units in Germany viewed the air support requirements of ground forces in NORTHAG as sufficiently different from those of CENTAG to require a more direct and immediate means of coordination and implementation, and the RAF maintained that *national* chains of command provided a better instrument for that coordination than did NATO direction.[13]

Therefore, as the Americans sought to have the command and control concepts for offensive air support operations modified to serve the theater perspective of COMAAFCE, the British sought to ensure the

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Joint Operations Center for NORTHAG/2ATAF, and its operations are directly overseen by these superior command entities. Interview with Lieutenant Colonel C. Richard Frishkorn, Doctrine and Concepts Division, USAF, The Pentagon, Washington, D.C., 7 March 1985.

[12]Before the creation of AAFCE in 1974 there was no region-wide command perspective on the support role of airpower. Under ATP-27(A) the highest level of joint planning was the JCOC at the ATAF/Army Group level. Subordinate to the JCOC was an ACOC for each ATAF. Additionally, there were Air Support Operations Centers (ASOCs) normally subordinate to the ACOC at the Army or Corps level and identified with the name of the army formation it supported. ATOCs were intended to support the operations directed by the ATAFs by implementing the allocation order as a tasking for sorties generated at the Wing level. In 2ATAF the ATOC was usually by-passed in favor of direct tasking of the Wings by the ASOC.

[13]The JCOC in 2ATAF provided a point of contact with the national command chains as each nation in the subregion maintained an on-site, jointly manned national cell that could provide more immediate direction to subordinate air force elements. See NATO, 1973, 2ATAF comments on paragraph 304, p. 3–6. See SHAPE/MSC Comments, p. 9.

continued effectiveness of existing joint operational procedures and agreements within 2ATAF/NORTHAG.[14] In negotiating the revisions the British delegation initially sought to retain the two primary definitions found in ATP-27(A):[15]

- Close Air Support—Close air support is an air action against hostile targets *which are in close proximity to friendly forces and which require detailed integration of each mission with the fire and movement of those forces*; and
- Air Interdiction—Air operations designed to destroy, isolate, neutralize or delay the enemy's military potential before it can be brought to bear effectively against friendly forces, *at such distance from friendly forces that detailed integration of each air mission with the fire and movement of friendly forces is not required.* Interdiction missions are considered a part of offensive air support when specific targets attacked have a direct bearing or influence on the operation of land forces.

The U.S. delegation objected to the inclusion of air interdiction in the definition of offensive air support operations largely on the basis that in USAF doctrine air interdiction was a mission conducted outside the domain of the ground force commander and not appropriately an offensive air "support" operation. In its report to the MAS/Air Board submitted for the 1977 working party meeting, the American delegation argued that: "The objectives of an air interdiction campaign *are derived from the overall objectives of the combined force*," that "air interdiction missions *are not targeted by the land force commander*," and because "*air interdiction does not require detailed integration of each air mission with the fire and movement of ground forces*" it "therefore *occurs outside the direct scope of land force operations*".[16] After some debate the British delegation accepted the position that air interdiction was an air force mission unconstrained by the influence of the ground force commander or the need for coordination with friendly ground force actions. The British also agreed to remove it from the basic definition of offensive air support operations in ATP-27. But

[14]Since 1972, NORTHAG/2ATAF had a Joint Air Support Operations manual outlining the procedures for tasking the sector's airpower and embracing the sector's general defense plan and organizational structure.

[15]In their initial proposals to amend ATP-27(A) the U.K. delegation retained the original NATO definition of offensive air support as comprising three missions: Close Air Support, Air Interdiction, and Tactical Reconnaissance. For examples of U.K. use of this definition see NATO, 1977, p. E-2-3, paragraphs 5a, 5b, and 5c.

[16]NATO, 1977, p. D-6. Emphasis added.

this had consequences for the effective coordination of 2ATAF support of NORTHAG ground forces, and for their existing joint practices.

Concerned that the "maldeployment" of NORTHAG's national Corps might lead to a nonlinear front and sudden Warsaw Pact breakthroughs, the leadership of 2ATAF/NORTHAG sought to capitalize on the high degree of coordination between national air and ground forces that regularly exercised under national rather than NATO command. This meant keeping 2ATAF's command and control capabilities for offensive air support based on a close coordination between air and land forces at appropriate echelons to ensure prompt engagement of targets nearing the front.[17] Without an ability to coordinate air support beyond the depth defined by CAS, it might be difficult for 2ATAF's airpower to relieve pressure on NORTHAG's ground forces. Moreover, there was a concern that the evolving network for requesting air support was too cumbersome for a prompt response to priority calls for air support. Therefore, in an effort to protect operational interests in 2ATAF, the U.K. delegation proposed a new offensive air support mission that would ensure responsive and direct applications of air support: *Battlefield Air Interdiction.*

The U.K. delegation proposed that Battlefield Air Interdiction (BAI) be conducted beyond the range of Close Air Support—where coordination with land forces was an agreed upon and obvious necessity—but short of the depth of field where air interdiction missions could be conducted without previous coordination with ground forces. The proposal was made in part because NORTHAG's ground forces gave high priority to the destruction of Warsaw Pact armored units in an area some 15–50 kilometers beyond the Forward Edge of the Battle Area, although their organic capabilities for engaging such targets were generally limited to a range of some 20–25 kilometers. Therefore, some form of air interdiction was needed to attack armored formations not already engaged directly.

The U.K. delegation proposed close coordination between air and ground force commanders in both the target planning for BAI missions and the execution of BAI sorties. Under the original U.K. proposal any allocation of sorties to BAI missions would retain the high degree of cooperation and coordination that was already common practice in NORTHAG/2ATAF joint OAS operations. However, representatives from various USAF commands within the U.S. delegation objected to the British BAI proposal.

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[17]Interview with Colonel Thomas A. Cardwell, III, USAF, Strategy Division, Organization of the Joint Chiefs of Staff, The Pentagon, Washington, D.C., March 6, 1985.

Instead of engaging in an internecine battle with the U.K. delegation before the entire working party, the United States proposed the formation of a Drafting Committee to address the revision of ATP-27. Just as the U.S. delegation's "Gameplan" for the 1977 meeting had anticipated, the working party accepted the U.S. proposal for a drafting committee composed of representatives from the United States, the United Kingdom, and the Federal Republic of Germany. In revising ATP-27 this committee would address the two main issues that stemmed from the British proposal regarding BAI: (1) How far beyond the line for Close Air Support was BAI to take place; and (2) Under what control and coordination procedures would BAI be conducted?

THE RISE AND REVISION OF BATTLEFIELD AIR INTERDICTION

To make up the Tri-Nation Drafting Committee, 20 representatives were drawn from the air and land services of the United States, United Kingdom, and West Germany.[18] The committee first met in Washington D.C. in June 1978 and produced an "ATP-27(B) Draft" that—with the exception of proposals on Battlefield Air Interdiction—was developed largely on the basis of the existing ATP-27(A). A "panel of experts" at SHAPE Technical Center reviewed this draft between the 18th and 22nd of September 1978; the drafting committee then revised it. Following a second meeting of the "panel of experts" in February 1979, a proposed draft ATP-27(B) was put before the entire working party at its May 1979 meeting in Brussels.

The initial draft of ATP-27(B) that emerged from the June 1978 meeting contained compromises among national services and among the member nations. In forwarding an initial copy for review the committee noted "that this draft does not reflect agreed national positions, nor does it necessarily reflect complete agreement among the drafting committee."[19] In developing the BAI proposal for the draft of ATP-27(B), British representatives had added a further suggestion to include the Reconnaissance Interdiction Planning Line (RIPL) as an outer

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[18]The drafting committee included four USAF officers, three U.S. Army officers, two USMC officers, one U.S. Navy officer, four RAF officers, two British Army officers, three German Air Force officers, one German Army officer, and one civilian advisor, Willard E. Naslund of The RAND Corporation.

[19]Memorandum by US/UK/FRG Drafting Committee on *ATP-27(B)(DRAFT), Offensive Air Support Operations (OAS).* Written between June and September 1978. Signed by Colonel H. A. G. Brooke, U.K. Principal; Colonel C. W. Eberlein, FRG Principal; and Lieutenant Colonel M. D. Smith, U.S. Principal. Archives, U.S. Air Force Doctrine and Concepts Division, The Pentagon, Washington, D.C..

boundary for both *planning and conducting* Battlefield Air Interdiction. However, a Fire Support Coordination Line (FSCL) already defined the depth of field for close air support operations beyond the Forward Line of Own Troops (FLOT).[20] Because BAI missions were to take place beyond the FSCL that defined the outer boundary for CAS operations, the British proposal for using the RIPL as the outer boundary for planning and conducting BAI had the effect of making the entire domain of BAI missions dependent on air-ground coordination. During combat operations, however, there was no way to ensure that the depth of field for either the FSCL or the RIPL would remain consistent across Corps areas or constant over time, especially as the FSCL was coordinated with local ground force commanders in each Corps. In the words of one American participant in the Washington meeting, this British proposal would have compounded the already massive command and control problems by confusing planning lines with fire support coordination lines.[21] Indeed, a common position among the U.S. members of the panel was that the RIPL was an acceptable coordination line *only for planning* BAI, but that it should not be treated as a rigid or fixed line for the *conduct* of offensive air support.

As the memorandum forwarding the draft to the panel had stated, the document did not reflect either national accords or agreement within the drafting committee itself. The June 1978 draft was circulated for comment throughout the Air Staff, USAFE, and TAC, and these elements within the USAF undertook to reshape the original British BAI proposal to their own liking.[22] Most USAF tactical aviators with attack experience initially rejected the British BAI proposal because it imposed air-ground coordination in mission execution across a terrain band-width, beyond the FSCL, where none had previously been required. Moreover, the British BAI proposal represented a close degree of coordination with Corps—at least in target nomination and development—and again many in the USAF community judged this an inappropriate echelon from which to determine the best allocation of a theater-wide asset such as airpower. Finally, many within the USAF viewed the British proposal for air-ground coordination in both the

[20]An FSCL is normally established by a Corps commander and coordinated with an ASOC. Although the establishment of the FSCL by a Corps commander is a common practice in the Central Region, it is not formally NATO doctrine. The FSCL is supposed to be established by the "appropriate" ground commander; who is often, but not necessarily, a Corps commander. See NATO, 1983.

[21]Interview with W. E. Naslund, The RAND Corporation, Santa Monica, California, January 1986.

[22]Interview with Colonel Thomas A. Cardwell, III, USAF, Strategy Division, Organization of the Joint Chiefs of Staff, The Pentagon, Washington, D.C., March 6, 1985.

planning and the execution of BAI as an unnecessary intrusion on the prerogatives of the Air Force—an intrusion that portended the extension of the sort of army influence or control over tactical airpower that was essential in conducting CAS.

In general, USAFE, TAC, and Air Staff comments all reflected an interest in distinguishing BAI from CAS in terms of operational control, and in distinguishing BAI from Air Interdiction in terms of the echelon at which air-ground coordination should take place.[23] At stake was the credibility of the USAF's theater perspective on airpower management, and the USAF representatives perceived a need to protect the flexibility of tactical airpower by preventing the introduction of BAI as a separate, special mission to which airpower might be apportioned to echelons below Army Groups. As the lead U.S. element in the Tri-nation Drafting Committee, the USAF Doctrine and Concepts Division funneled the service comments they received into a revised draft known as "Final Preliminary 1st Draft ATP-27(B)" that was distributed to the nations for comment in November 1978.[24]

Following a five month period for review of ATP-27(B) by the nations, AAFCE, and the Major NATO Commands, individual comments were compiled and distributed to all the members of the newly reorganized TAWP before its May 1979 meeting.[25] Most of the national comments were editorial in nature and sought to insure agreement between ATP-27(B) and ATP-33. The Italians commented that although their Air Staff concurred with the new format and content of the document in general terms, the ATP-27(B) failed to take into account the different command and organizational structure in the Italian/5ATAF area. The Dutch were insistent that an explicit distinction between CAS and BAI be made in terms of their control arrangements and also that Corps commanders be encouraged to use their OAS allocations in the high payoff BAI mission, rather than in CAS.

Of far greater significance was the absence of substantive comments and critiques from the United States, United Kingdom, and Federal Republic of Germany, which reflected the high degree of coordination that had already taken place among national representatives on the drafting committee—especially among representatives from the two English-speaking countries—and the efforts made by these individuals to anticipate objections within and among their national services before

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[23]Interview with Colonel Thomas A. Cardwell III, USAF, Strategy Division, Organization of the Joint Chiefs of Staff, The Pentagon, Washington, D.C., March 6, 1985.

[24]NATO, 1978b.

[25]NATO, 1979, Annexes A through H.

passing the draft on for comment.[26] As a result, the national review phase for ratifying the revised doctrine went quickly. From the time that the TAWP approved the draft of ATP-27(B) in May 1979 until the MAS formally promulgated the document as NATO doctrine, only one year passed.

ACCOMMODATION AND ACCOMPLISHMENT IN REVISING ATP-27

Although it took six years to produce the first edition of ATP-33, it took the TAWP and its predecessors only half that time to draft, coordinate, and approve the Bravo edition of ATP-27 for national ratification.[27] That edition met the original objectives for revision that were set for it in 1977: (1) it implemented the broad guidance contained in ATP-33; and (2) it furthered the development of COMAAFCE's ability to centrally manage the alliance's Central Region airpower. Throughout the text ATP-27(B) provided standardized terminology and common air employment methods and procedures for conducting OAS operations. Although it made great progress over its predecessor through incorporation of procedures for Forward Air Controllers (FACs) in controlling Close Air Support sorties, clearly the most significant change in ATP-27(B) was the addition of BAI as an Offensive Air Support operation.

The United States was able to put forward a reworked version of the original British proposal on Battlefield Air Interdiction that accommodated British interests in retaining some form of offensive air support tied to land force requirements beyond the FSCL while preserving USAF interests in both the theater-wide aspect of airpower management and the autonomy of airpower in executing support operations. The new doctrine defined the two attack operations within OAS as:

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[26]As they had since the first tri-nation meeting of the drafting committee in June of 1978, representatives from the U.S. Army, U.S. Navy, and U.S. Marine Corps participated in this stage of ATP-27(B)'s development.

[27]Several American participants in the process have commented that much of the speed and success in managing the contentious issues surrounding ATP-27's revision was due to the back-channel cooperation between the American and British personnel who staffed their national delegations to both the TAWP and the tri-nation drafting committee. Through their close and informal coordination these individuals identified issues and terminology that might exacerbate concerns within their own services. Their tacit cooperation led to the removal of potential points of friction before they emerged in the TAWP. An important consequence was that by-passing the more formal working party process increased the opportunity for individuals to compromise and accommodate on the issues.

- **Close Air Support (CAS).** Close Air Support is air action against hostile targets which are in close proximity to friendly forces and which requires detailed integration of each air mission with the fire and movement of those forces (ATP-33). This means that the aircraft is under positive or procedural control.
- **Battlefield Air Interdiction (BAI).** BAI is air action against hostile surface targets which are in a position to directly affect friendly forces and which requires joint planning and co-ordination. While BAI missions require co-ordination in joint planning they may not require continuous co-ordination during the execution stage.

The two operations were differentiated by the proximity of the targets to friendly forces and the control arrangements that were necessary for execution. Although both CAS and BAI missions were intended to be responsive to the requirements of the ground forces, only CAS was to be conducted under ground force direction. Hence, ATP-27(B) asserts that CAS missions continue to require detailed control to integrate them with the fire or movement of friendly forces. In this regard, the inclusion of standardized FAC procedures was a great improvement over ATP-27(A).

Although the tasking for CAS can originate at any level of command within the Army's field force, the tasking for BAI is generated only at the ATAF/Army Group level. Moreover, following the land commander's request for BAI support, BAI missions are conducted under air force direction. ATP-27(B) also makes it clear that although BAI missions may be flown to satisfy a portion of the land commander's request for OAS, BAI *missions* may also be flown in response to air force direction against targets not yet detected by the land commanders but that will directly affect the land battle. Therefore, BAI missions might be flown *on either side of the FSCL* and require fire support coordination only when the targets fall within an area of friendly maneuver or ground fire.

ATP-27(B) also made joint planning a necessity for all Offensive Air Support operations at all levels of command. CAS sorties would normally be allocated down to Corps level, and joint planning would take place at the Corps/ASOC. BAI, however, would be maintained at the air component level—the ATAF in the Central Region—and coordination would take place at the ATAF/Army Group level only as neces-

sary.[28] In codifying these command and control arrangements for Offensive Air Support, ATP-27(B) incorporated the emphasis on centralized command of airpower and decentralized execution common to the USAF and the RAF and established as a principle of NATO tactical air doctrine in ATP-33. ATP-27(B) also furthered the principle of unity of command, allowing NATO airpower to be used flexibly and responsively in wartime.[29]

OBSERVATIONS ON THE EVOLUTION OF ATP-27(B)

Of the many lessons to be drawn from the evolution of ATP-27, of greatest importance are those demonstrating how the negotiating process and the structure and organization of the Tactical Air Working Party shaped the substance of NATO's Offensive Air Support doctrine. For example, consider the U.S. delegation's stand against the British interest for including air interdiction as an OAS mission. Nominally, that mission does not require either direction from or coordination with ground forces, whereas offensive air support operations clearly do require joint planning and coordination during their execution. However, some RAF and 2ATAF air-ground operations were already coordinated with ground force interests at the JCOC sub-regional command level. Therefore, *it is not surprising that the British* would nominate battlefield air interdiction as a new OAS mission to maintain this connection in the 2ATAF/NORTHAG area. The informal coordination between members of the U.S. and U.K. delegations were both effective and efficient in moving forward on the revisions of ATP-27, but what of the *functional and operational* aspects of the BAI doctrinal initiative? Could not the introduction of BAI have been used as an argument for narrowing the gap, rather than merely accommodating the

[28]There is some suggestion that in 2ATAF the application and coordination of BAI remains similar to that of CAS, with ASOCs providing the target information and sorties being allocated to particular Corps areas. Interview with Colonel Thomas A. Cardwell, III, USAF, Strategy Division, Organization of the Joint Chiefs of Staff, The Pentagon, Washington, D.C., March 6, 1985.

[29]One year after ATP-27(B) was issued, the U.S. Army and U.S. Air Force signed a Memorandum of Agreement on the apportionment and allocation of Offensive Air Support. It was precipitated by "changes to the definition and description of OAS in ATP-27(B)" and provided "for the maximum utilization of limited tactical air assets while still being responsive to the land forces' operations." The joint agreement recognized that the Combined or Joint Force Commander had overall operational command of air assets and could determine their priority application. But consistent with the USAF perspective on theater war it reserved the apportionment decision to the air component commander. See Department of the Air Force, 1981. Signed by Lieutenant General Jerome F. O'Malley, USAF, and Lieutenant General Glenn K. Otis, USA. Attachment 2 to their cover letter contains the actual terms of agreement.

differences between 2ATAF and 4ATAF command-control capabilities, facilities, and practices?

The BAI initiative tied USAF and other NATO air forces more closely to the interests and influence of ground commanders, if not to their immediate direction. But it did not prompt efforts to normalize, modernize, or improve the different command-control facilities and practices within the Central Region. The BAI initiative and the events surrounding it also demonstrated the superiority of the British delegation in exploiting allied interests in the TAWP and their greater unity of purpose and effort in NATO's internal negotiations regarding wartime operations. The unique history and position of the USAF relative to the U.S. Army made its operational independence from ground force interests and command influence a matter of special concern. The issue of air power's autonomy did not hold the same degree of concern for the RAF and many other NATO air forces. Although air-ground coordination and "jointness" subsequently became watchwords for the U.S. military, this was not necessarily the case during the development of ATP-27(B). And although the efforts of the U.S. delegation to the TAWP have little direct effect on the activities of the Tactical Air Command, the outcome of allied negotiations certainly affect tactical airpower interests and the prospects for the successful use of offensive air support operations in European combat scenarios.

Coordination within the USAF regarding NATO doctrinal initiatives may be more difficult than it is within the RAF simply because of the differences in the size and structure of the two services. NATO's doctrine development may also be viewed as a matter of lesser importance to the individual services that make up the U.S. delegation to the TAWP. But neither point explains why greater effort was not made to exploit the British BAI initiative as a rationale for making functional improvements in theater-wide command-control capabilities for target identification and engagement beyond the range of organic ground force firepower. Indeed, the original BAI initiative represents a lost opportunity for harmonizing and improving Central Region command-control functions and capabilities. The introduction of BAI and the evolution of ATP-27 did more to accommodate the operational differences between the Central Region ATAFs than it did to remove them.

V. NEW DOCTRINAL INITIATIVES AND UNRESOLVED DOCTRINAL ISSUES

During the late 1970s NATO's doctrinal efforts emphasized revising ATP-27 and ATP-33,[1] but the Tactical Air Working Party has also dealt with other issues of importance. One issue that has come up repeatedly since 1978 is the suppression of enemy air defenses, or SEAD. Another doctrinal issue that bears directly on air-ground coordination is the concept for follow-on force attacks (FOFA), proposed by SACEUR as a doctrinal initiative in 1983.

THE INITIATIVE ON FOLLOW-ON FORCE ATTACK

This section describes the origins of the FOFA concept as a NATO doctrinal initiative. It briefly covers FOFA's points of similarity and difference with both the U.S. Army's AirLand Battle doctrine[2] and the joint U.S. Army-U.S. Air Force doctrine on attack of the second echelon (J-SAK)[3]. It also deals in passing with some allied concerns regarding the deep attack aspects of AirLand Battle, as well as some of FOFA's political and operational implications. Some of the unresolved command and control issues raised by the FOFA concept may occupy NATO's TAWP in the future.

In the late 1970s and early 1980s Western defense analysts and military leaders took renewed interest in improving NATO's conventional defense capabilities. This interest was based on new assessments of the Soviets' conventional capabilities,[4] heightened concern regarding the pressures for early NATO nuclear use because of the weaknesses of its conventional defense,[5] and the general need to maintain alliance

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[1]ATP-33 was revised in May of 1979 and reissued as ATP-33(A) in 1980 along with the revised edition of ATP-27(B). Efforts to draft a Bravo edition of ATP-33 are underway.

[2]U.S. Army Training and Doctrine Command, 1982.

[3]See Department of the Army and Department of the Air Force, 1984. See also USAF Tactical Air Command, 1982; and U.S. Army Training and Doctrine Command Pamphlet 525-16, 1982.

[4]See U.S. Army, 1978, pp. 3-1 to 3-34; U.S. Army, 1982, Volume V; and Donnelly, 1982, pp. 1177-1186.

[5]See interview with General Rogers in Beecher, 1984, p. 26.

cohesion on the strategy of flexible response.[6] The improvements in Soviet conventional capabilities might be met by simply increasing NATO's conventional forces or by adopting alternative conventional defense postures; however, many promising options would probably entail increased expenditures, thereby removing much of their attractiveness for the European allies.[7] Instead, new operational concepts were proposed for dealing with the Soviets' conventional challenge within the existing context of allied budgetary commitments. Some of the proposed concepts seemed to portend a wholesale change in NATO's approach to warfare, and others offered technological solutions for interdicting Soviet second echelon forces.[8] To maintain alliance cohesion on NATO's overall strategy, however, any proposals for new operational concepts would need to be seen as consistent with flexible response.

This renewed emphasis on improving NATO's conventional defense capabilities developed at roughly the same time the U.S. Army was preparing to publish its new operational doctrine.[9] In its nine year effort to revise its doctrinal precepts, the U.S. Army considered the steady growth in Soviet capabilities since the 1960s and the prospects for integrated operations involving conventional, chemical, and nuclear forces. Additionally, the U.S. Army directed attention toward the vulnerabilities and opportunities inherent in the Soviets' operational style. As a result, AirLand Battle emphasized the counteroffensive and the conduct of a maneuver-oriented form of warfare.

To exploit the Soviets' combat organization and its mode of tactical advance and to disrupt the reinforcement of their engaged forces and reduce their capabilities, the new U.S. Army doctrine also emphasized deep attacks beyond the range of organic assets. These deep attacks were intended to be conducted in conjunction with engaging enemy forces in the close-in battle. The authors of AirLand Battle retained some aspects of the Army's classic attrition concept by recognizing that Soviet second echelon forces provided lucrative targets for air

[6]See interview with General Rogers in Middleton, 1981; Apple, 1981, p. E-1; and Bundy et al., 1982.

[7]Among the plausible options were an increase in NATO's standing forces, improvement in NATO's rapid reinforcement capabilities, an increased use of operational reserves within the theater, and a reorganization of NATO's overall defense structure. See Brigadier Kenneth Hunt, "Alternative Conventional Force Postures," in Myers, 1981, pp. 133–148.

[8]For an example of a call for a wholly new approach to NATO security see Huntington, 1982, pp. 1–52; and Schemmer, 1982, p. 51.

[9]U.S. Army Training and Doctrine Command, 1982. For a brief history of the U.S. Army's post-Viet Nam search for improved doctrinal guidance see Romjue, 1984a, pp. 4–15; and Romjue, 1982, pp. 51–71.

interdiction. However, three things are worth noting about AirLand Battle in terms of NATO airpower: (1) it was written from a Corps perspective, rather than a theater perspective, which would present problems for the coordination of airpower at echelons above Corps; (2) the emphasis placed on the Corps' "area of interest" rather than its "area of influence" meant that ground forces would require air support for target identification and engagement to offset limitations in organic capabilities; and (3) despite the attention paid to NATO-like contingencies, AirLand Battle was the U.S. Army's doctrine and did not apply to the organization and operations of allied forces.[10]

But AirLand Battle's doctrinal implications could not be ignored by the European allies. Indeed, to the extent that an emphasis on deep attack suggested a NATO response beyond the previously understood limits of forward defense, AirLand Battle and similar statements of operational principle have proven difficult for many European allies to accept. In particular, the Europeans tended to view AirLand Battle's *operational* emphasis on the counteroffensive as if it represented a *strategic* initiative.

Additional efforts at doctrinal innovation, with similar emphases on deep engagements, were also underway during this period. For example, since 1979, the staff at SHAPE had been working on a concept for interdicting Soviet ground forces that was initially entitled "Attack and Destroy Second Echelon Forces." An analogous doctrinal effort initiated between the U.S. Army's Training and Doctrine Command at Fort Monroe Virginia and the U.S. Air Force's Tactical Air Command at Langley Air Force Base was leading in 1982 to the publication of the "Joint Operational Concept: Joint Attack of the Second Echelon (J-SAK)."[11] By late 1982, concepts calling for the engagement of enemy forces in depth were variously known in NATO as the Rogers Plan, Deep Attack, or Deep Strike, and they were sometimes paired with considerations of emerging technologies for target identification and interdiction.[12]

There were, of course, some similarities between these concepts intended specifically for NATO and those developed by the U.S. Army for its AirLand Battle doctrine. Both the Army's new doctrine and the

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[10]For a brief discussion of the USAF's early concerns with AirLand Battle see White, 1983, pp. 1–2.

[11]Two years later, the J-SAK concept became the basis for a joint USAF-USA Memorandum of Agreement on doctrine. See Department of the Army and Department of the Air Force, 1984. See also the original J-SAK document in either: Tactical Air Command Pamphlet 50–26, Tactical Air Command, Langley Air Force Base, Virginia, 1982; U.S. Army Training and Doctrine Command Pamphlet 525–16, U.S. Army Training and Doctrine Command, Fort Monroe, Virginia, 1982; or U.S. REDCOM Pamphlet 525–7, U.S. Readiness Command, Macdill Air Force Base, Florida, 1982.

[12]Rogers, 1983, p. 39.

Rogers Plan stressed fighting the "deep battle," and both emphasized the importance of interdicting Soviet second echelon forces. But AirLand Battle represented the U.S. Army's vision of how to fight the Corps battle, while the Rogers Plan represented a broader perspective on theater war. The J-SAK concept that began as a TRADOC-TAC initiative also dealt with second echelon interdiction. However, the J-SAK described a joint command and control organization based on the Army's AirLand Battle precepts, not necessarily consistent with the organization found in NATO. Taking AirLand Battle as its starting point, J-SAK was developed as a concept for operations in South West Asia and emphasized providing air support to the Corps and to echelons below Corps, rather than adopting a theater perspective on air support at the echelons above Corps. Like AirLand Battle, J-SAK was a unilateral American initiative that had no official sanction within NATO as either an operational concept or a doctrine for theater warfare. In particular, however, the emphasis on the offensive made in AirLand Battle (with its implications for tactical counteroffensive operations into enemy-held territory) raised serious anxieties in Western Europe about the future course of NATO strategy.[13] Indeed, the potential for confusing the deep attack concept of the Rogers Plan with the politically controversial aspects of AirLand Battle jeopardized allied support for concepts of second echelon interdiction and raised new concerns regarding allied support of flexible response.[14]

Although some European defense officials could support the logic of interdicting the Soviet second echelon with conventional weapons, their political interests required that a distinction be drawn between such attacks and the offensive attack elements of the U.S. Army's AirLand Battle doctrine.[15] In particular, because NATO is a *defensive*

[13]Counteroffensive deterrent strategy and operations were the subjects of two successive meetings of the European-American Workshop in 1982. One American participant described the European defense officials and analysts as responding to these proposals viscerally and negatively. For an example of these proposals see Huntington, 1982; 1983/1984, p. 32. For further discussion of European anxieties regarding AirLand Battle see Martin, 1985, p. 117.

[14]See "Clarification of Public Confusion on NATO Defense Doctrine: Aggressive Plans Denied," JPRS Western Europe Report, 85-008, 24 January 1985, p. 78, an abstract of an article by Heinz Magenheimer, "Rogers Plan, 'AirLand' Battle and NATO Forward Defense," *Aus Politik und Zeitgeschichte*, a supplement to *Das Parliament*, Bonn, 1 December 1984, pp. 3-17; and also "'AirLand' Battle Clarified," JPRS Western Europe Report, 85-008, 24 January 1985, p. 79, an abstract of an article by K.-Peter Stratmann, "AirLand Battle—Distortion and Reality," *Aus Politik und Zeitgeschichte*, a supplement to *Das Parliament*, Bonn, 1 December 1984, pp. 19-30.

[15]Some allies also sought assurances that the American call for an increased conventional force buildup, in conjunction with AirLand Battle's implications of an *independent* American conventional capability, did not represent a weakening of American nuclear guarantees. See "Woerner Rejects U.S. Air-Land Battle Concept," *Suddeutsche Zeitung*, September 8, 1983.

alliance, politically committed only to *respond* to aggression, and then only to *restore* lost allied territory, there was a clear need to disassociate NATO's evolving concept for second echelon interdiction from the U.S. Army's new counteroffensive aspirations and any claims that they might represent a new NATO strategy.[16]

In 1983 General Rogers formally advanced the "Follow-on Force Attack" as a tactical subconcept to NATO's General Defense Plan.[17] Based on the work done at SHAPE since 1979, the FOFA concept emerged from potentially divisive discussions of the Rogers Plan and Deep Strike as a codification of developing concepts and current capabilities for second echelon interdiction, and as a conceptual framework to guide the acquisition of emerging technologies in the future. Some USAF officers familiar with FOFA's development and its introduction to the NATO arena have suggested that by incorporating second echelon interdiction as a tactical subconcept, SACEUR's ACE directive deftly avoided exposing FOFA to potential challenges and permitted it to stand apart from broad debates about NATO strategy and doctrine.[18] In a sense, the ACE directive saved the concept of FOFA and the potential for acquiring new emerging technologies from the prospect of allied dissension.

THE CONTINUING DEBATE ON FOFA

Despite SACEUR's ACE directive in 1983, confusion has dogged the interrelationship among deep attack concepts, emerging technologies, the follow-on attack concept, and NATO's basic strategy of flexible response. For example, in 1985 the West German magazine *Der Spiegel* ran an unflattering and highly critical article on General Rogers and his ACE Directive on FOFA, imputing much of what some allies had originally found offensive about AirLand Battle to the FOFA concept for interdicting Soviet second echelon forces. The article further suggested that the Rogers Plan risked heightening the arms race between East and West by promoting the procurement of costly

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[16]See Doe, 1983, pp. 19–20. See also the interview with General Rogers in Bohle, March 1985, p. 29.

[17]FOFA was formally introduced into the NATO arena through SACEUR's 1983 Directive 80–31 to Allied Command Europe (ACE). FOFA was also contained in SACEUR's NATO Long-Term Planning Guideline of 1984.

[18]Interviews with Lieutenant Colonel Roger Pierce, Doctrine and Concepts Division, U.S. Air Force, The Pentagon, Washington, D.C., January 1985; and Lieutenant Colonel Kenneth Sublett, USAF, NATO Headquarters, Brussels, May 1984.

"emerging technology" weapons.[19] To some degree this position echoed the doubts of several British authors regarding the operational feasibility, political utility, and implications for trans-Atlantic trade associated with Deep Attack initiatives.[20]

Criticism of FOFA also came from allied military officials who variously viewed the concept as politically unacceptable, financially burdensome, or in need of clarification. In particular, the Bundeswehr's Chief of Staff, General Wolfgang Altenburg, stated, "Our priority is the battle against the first echelon. . . . For what use is it to me if the second echelon is stopped, but [not] the first. . . . Consequently, from the German perspective, I must insist on the following priorities: Battle against the first echelon, air defense, [and then] destruction of the second echelon."[21] Altenburg also suggested that FOFA may draw air power away from the air defense role—limiting the freedom of action of NATO forces—and gave his verbal priority to improving firepower on the battlefield to a depth of 20 or 30 kilometers.[22]

Nevertheless, at the 15th meeting of NATO's Land Force Tactics Working Party during September 1984 representatives from SHAPE proposed that FOFA be included in a revision of NATO's ATP-35(A) *Land Force Tactical Doctrine.* With effective coordination between the USAF and U.S. Army members of the U.S. delegation, the SHAPE proposal was seconded, and after some debate with allied delegations, the proposal was accepted. In 1985, ATP-35(A), with FOFA included, was circulated for national ratification.[23] Meanwhile, at the direction of the Joint Chiefs of Staff, efforts to clarify the relationship between FOFA and Counterair operations began at U.S. European Command (USEUCOM). These efforts were coordinated with the U.S. CINCs and services.[24]

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[19]See "NATO 'Follow-On Force Attack' Doctrine Criticized," *Der Speigel*, Hamburg, West Germany, 26 November 1984, pp. 158–160. Translated in JPRS, West Europe Report, 85–006, 18 January 1985, pp. 79–83.

[20]See Williams and Wallace, 1984, p. 70; and Martin, 1985, p. 118.

[21]"Bundeswehr Chief Assesses Pact Threat, Forward Defense," JPRS West Europe Report, 84 118, 27 September 1984, p. 79. Originally published in German in *WELTWOCH*, Zurich, 30 August 1984, pp. 9–11.

[22]"Bundeswehr Chief Reviews Manpower, Procurement Problems," JPRS West Europe Report, 84 20, 22 February 1984, p. 85. Originally published in German in *Europaische Wehrkunde*, Munich, January 1984, pp. 7–10.

[23]Interview with Lieutenant Colonel Roger Pierce, Doctrine and Concepts Division, U.S. Air Force, The Pentagon, Washington, D.C., January 1985. See also MAS, 1984.

[24]See Lieutenant Colonel Roger Pierce, "Position Paper on Follow-On Forces Attack (FOFA)," USAF Doctrine and Concepts Division, Washington, D.C., 27 January 1985, p. 1.

Given the numerical superiority of Soviet-Warsaw Pact forces in Europe and the political and operational imperative of defending NATO territory as far forward as possible, attacking second echelon forces before they can join the close-in battle implies engaging them deep within the enemy's tactical and operational rear. In its own words, FOFA entails *delaying, destroying, and disrupting* enemy forces during their advance and before their engagement with friendly ground forces—a classic definition of air interdiction. To effectively impede the Soviets' *initial* tactical advance, however, FOFA will require an early decision by NATO's political authorities to mount attacks across the prewar political boundaries. The timeliness of this political decision to initiate FOFA is, of course, in addition to providing adequate means for target identification, engagement, and attack.

Obtaining early border crossing authority is an operational necessity for both FOFA and Counterair operations, but it remains a highly sensitive political issue within NATO, particularly for the West Germans. In discussing the planning considerations for offensive counterair operations, ATP-33(A) states that such operations "may be restricted by political considerations during the initial and possibly during subsequent stages of conflict."[25] Some NATO allies may seek to impose similar restrictions on the conduct of follow-on force attacks to the extent that the "offensive" character of FOFA runs counter to certain European political sensibilities. Moreover, the need for conducting FOFA operations early on in a theater conflict may compete with the existing need for conducting Offensive Counter Air operations to achieve air supremacy. Therefore, the timing of FOFA operations, the appropriate apportionment of effort across competing mission areas, and the available assets and infrastructure for conducting FOFA missions will all need to be determined.

Allied concern regarding the FOFA concept has surfaced periodically in TAWP meetings despite efforts by the SHAPE representatives to distinguish FOFA from AirLand Battle doctrine. For example, at the 6th meeting of the TAWP in May of 1983 the SHAPE representatives, supported by the U.S. delegation, noted that some nations misinterpreted the use of the term FOFA. In response, the SHAPE representatives suggested that "with respect to Air Forces, the involvement of FOFA is generally covered by the ATP-33 defined mission of air interdiction," and the working party recommended that the nations and commands take note of this fact.[26] But FOFA does more than

[25]See NATO, 1980, p. 4-2, paragraph 411a.

[26]See NATO, 1983, p. I-9, paragraphs 36 and 38b. For an excellent discussion of whether the command and control requirements for FOFA are already covered by existing NATO doctrine on Air Interdiction and Battlefield Air Interdiction see Cardwell, 1986, pp. 4-11.

represent a challenge to the political sensitivities of some NATO allies. In particular the British and West Germans have doubts about the FOFA concept based on their existing operational practices and capabilities—doubts that can be traced through the record of earlier TAWP discussions of offensive air support and interdiction.

At the 1981 TAWP meeting, for example, the West German delegation presented a paper on the use of tactical aviation in the defense of Europe. The Germans argued that the weight of allied air power should be concentrated on the "close-in battle," a preference that parallels General Altenberg's comments and one that may partly explain any reservations the Germans may have about FOFA.[27] At the same 1981 TAWP meeting, the U.K. delegation presented a briefing on a concept for "Rear Area" CAS operations that illustrates a similar emphasis on conducting air support operations "close in."[28] The basic British position was that there were three forms of CAS: CAS1, which corresponded to the NATO definition in extending from the FLOT out to the Fire Support Coordination Line (a distance of approximately 20–30 kilometers); CAS2, which corresponded to NATO's working definition of BAI in covering the area from the FSCL out to the Reconnaissance Interdiction Planning Line (some 100 to 130 kilometers beyond the FLOT); and CAS3, which corresponded to a portion of what NATO would define as Air Interdiction. U.S. delegates noted that the U.K. position was not unlike the U.S. position on defining the operational depth of CAS, BAI, and AI. However, the British placed their main emphasis on CAS1 and CAS2, and less so on CAS 3, arguably to support Corps close to the battle lines. The British interest in CAS1 and CAS2 during 1981 may also suggest a source of their concern with the deeper attacks often associated with FOFA. Additionally, the RAFG normally prefers that ASOCs task Wings directly, effectively by-passing the ATOC. This RAFG practice suggests that implementing FOFA in 2ATAF would require greater use of "theater" intelligence at a higher echelon of command than is currently practiced, and this portends either an increase in current sensor capabilities or better coordination for employing intelligence made available on a theater basis.

FOFA's future position in NATO air doctrine will depend in part on how the TAWP manages the competing interests among national air

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[27]The actual area for employing airpower "close-in" was given by the West Germans in terms of the area designated for BAI—that is, an area from the FSCL out to 100–130 kilometers beyond the FLOT.

[28]The briefing had been prepared by the British 1st Corps and was coordinated between BAOR and RAFG. Interview with Colonel Thomas A. Cardwell, III, USAF, Strategy Division, Organization of the Joint Chiefs of Staff, The Pentagon, Washington, D.C., March 6, 1985.

forces and subregional commands. The TAWP's internal debates may soon emphasize the appropriate command and control arrangements for FOFA. As noted, some of the major issues that may need to be addressed are the "bands" for air attack operations to be established for the conduct of FOFA, the command and control facilities that are to be associated with managing airpower in these bands, and the operational requirements for interdiction within these bands as considered across subregional commands.

Current discussions of these command and control issues at SHAPE and USEUCOM suggest that Band 1 would extend from the FSCL to a distance established by a subregional commander (a Principal Subordinate Commander); Band 2 would extend beyond Band 1 to approximately 400 kilometers (under the probable direction of a Major Subordinate Commander); and Band 3 would extend out beyond 400 kilometers and fall within SACEUR's direction.[29] In 1985 it still was unclear how these proposed bands would fit into the existing command and control arrangements for CAS, BAI, and AI in the two Center Region ATAF/Army Group areas, or whether FOFA required different allocation procedures from those already used. Indeed, FOFA's inherent requirement for target identification, acquisition, and engagement at great distance was not necessarily served by the existing command and control system of ATOCs and ASOCs, and the procedures for using these facilities differed from 2ATAF to 4ATAF. How the existing sensor-to-attack cycle of target development and interdiction would accommodate FOFA was also uncertain; so were questions of at what echelon of command FOFA allocation decisions will be made and to what degree coordination between air and ground forces was required. But it was clear that the willingness of European allies to procure new systems of sensors or command and control facilities was limited. If the information product of new U.S. sensor systems could be made available to NATO allies without their having to procure additional hardware, then one major impediment to FOFA might be removed. The operational priorities and budgetary constraints of many European allies would presumably not permit acquisition of new sensors, command and control facilities, or engagement systems at costs above earlier planned levels.[30]

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[29]As with NATO's nuclear forces capable of reaching "deep" targets within the Soviet Union or along the Soviet-Polish border, the control of such targeting has always been within SACEUR's operational domain. See Sutton 1984, p. 68.

[30]One possibility for a new control facility was the Ground Attack Control Center (GACC). The concept for the GACC stemmed from the same time and joint context as the development of J-SAK. In 1982 a joint studies group at TAC was concerned with improving the coordination of air-ground activities. The GACC was intended as a *centralized control facility* to be used in managing real-time target information, and available and appropriately armed aircraft, in the *decentralized execution* of air-ground attack mis-

Ultimately, the effort invested in the close-in battle as opposed to the battle in-depth (or FOFA) would be decided by NATO's operational commanders. The emphasis placed by British and West Germany delegations on the importance of conducting air support of the close-in battle and their reluctance to spend heavily on new command and control facilities could affect the willingness of allied services or subregional commands to accept new American-sponsored concepts or control facilities. Indeed, the operational constraints placed on FOFA's implementation by allied interests conceivably could affect the USAF's own air doctrine and any joint agreements it might make with the U.S. Army.[31]

THE UNITED STATES, NATO, AND THE SUPPRESSION OF ENEMY AIR DEFENSES

Successive U.S. delegations to the TAWP urged expansion of NATO's doctrinal treatment of SEAD to meet the evolving nature of its applications in modern air warfare. U.S. proposals for revising the treatment of SEAD were generally supported by representatives from SHAPE, but in contrast to the usual success of American initiatives, the U.S. proposals on SEAD were regularly rejected by the allies. Continued advocacy by the U.S. delegation, however, caused SEAD to remain an agenda item of some controversy but without resolution. A review of the recent history of U.S. SEAD proposals, and a brief consideration of possible allied motivations for rejecting them, may help explain the failure of these American efforts.

THE USAF POSITION ON SEAD'S IMPORTANCE

Although the U.S. Army and USAF practiced joint suppression of enemy air defense in applying close air support during the Korean con-

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sions. TAC raised the prospects for introducing GACC facilities to the European theater, but the appropriate locations for a GACC could differ from region to region—whether to collocate the GACC with an ATOC, ASOC, or some other control facility—and questions remained on how best to configure a GACC to take full advantage of extant and planned theater intelligence capabilities.

[31]Following a six month joint study effort, a series of 31 initiatives intended to coordinate Army and Air Force acquisition programs were put into effect by the Chief of Staff of the U.S. Army General John A. Wickham, Jr., and by the Chief of Staff of the U.S. Air Force General Charles A. Gabriel. See "Memorandum of Agreement on U.S. Army-U.S. Air Force Joint Force Development Process," Headquarters U.S. Army and U.S. Air Force, Washington, D.C., 22 May 1984.

flict,[32] the U.S. Air Force learned the general importance of air defense suppression in its operations over North Viet Nam.[33] In that conflict, Soviet-made air defense systems of anti-aircraft artillery and surface-to-air missiles imposed a considerable toll in attrition. The importance of suppressing enemy air defenses was also made dramatically obvious during the 1973 Arab-Israeli War when Soviet-made air defense systems again scored a higher-than-expected kill rate against Israeli fighters. The ultimate lesson of these engagements was not lost on the USAF.

To increase the probability of successfully operating over hostile territory in the future, the USAF developed countermeasures, munitions, operational concepts, and tactics for engaging air defense systems. By the late 1970s the importance of conducting a campaign to suppress enemy air defenses began to emerge as an operational and doctrinal imperative for the U.S. Air Force.[34] With the cooperation of Tactical Air Command, the U.S. Army's Training and Doctrine Command (TRADOC) developed a joint concept for defense suppression (J-SEAD) to ensure its freedom to maneuver on the battlefield and the prospect of obtaining close air support. Indeed, the requirement for engaging an enemy's entire electronic order of battle was becoming a major element of American preparations for modern combat.

As an example of the rapid evolution in American thinking on SEAD, the 1984 edition of Air Force Manual (AFM) 1–1 cited SEAD as a Counter Air mission equivalent in importance to Offensive and Defensive Counter Air.[35] By contrast, although ATP-33(A) treated SEAD in a section on counterair operations, it did not relate its status to the conduct of either offensive or defensive counterair tasks. ATP-33(A) simply described SEAD as an "activity which neutralizes, destroys or temporarily degrades enemy surface-based air defense systems in a specific area by using electronic warfare and/or physical attack." At best, ATP-33(A) noted that SEAD was required in conducting CAS, air interdiction, and counterair operations.[36] For its part, ATP-27(B) treated SEAD in a single paragraph in a chapter on "Related Activities."[37]

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[32]See Alberts, 1979, p. 4.

[33]USAF air operations in Southeast Asia that included SEAD as a support activity included: *Iron Hand* in 1965, *Rolling Thunder* between 1966 and 1968, and *LineBacker II* in 1972. SEAD as an explicit campaign was conducted through "protective reaction" strikes, particularly Operation *Louisville Slugger* in 1971. For greater detail see Jacob Van Staaveren, "The Air War Against North Vietnam," in Berger, 1977.

[34]See Department of the Air Force, 1984, p. 3–3.

[35]Ibid.

[36]See NATO, 1980, p. 4–1, paragraph 322.

[37]See NATO, 1980, p. 3–8, paragraph 322.

U.S. delegations to the TAWP repeatedly sought to change NATO's doctrinal position on SEAD to have it more closely mirror USAF thinking. Attempts at introducing an American perspective on SEAD were made during the revisions to ATP-33 and ATP-27 in 1978 and 1979.[38] The TAWP did produce an Allied Tactical Publication on electronic warfare (ATP-44) in 1981, and another on counterair operations (ATP-42) also dealt with SEAD. But neither of these NATO doctrines gave electronic warfare, particularly SEAD, the same degree of importance or mission status imposed by USAF doctrine.

Throughout the early 1980s, the United States Air Force, supported by the other U.S. services, remained interested in having SEAD addressed in the TAWP's continuing efforts to revise ATP-33(A) and ATP-27(B). Indeed, at the 6th TAWP meeting in 1983, the drafting panel working on producing a Bravo edition of ATP-33(A) agreed to accept American input on the requirement for SEAD and to "take note" of a report on the Major NATO Commander's Tactical subconcept for suppression of enemy air defenses in the proposed rewrite of NATO tactical air doctrine.[39] But such diplomatically phrased acknowledgments did not translate into doctrinal acceptance of the American position. In fact, at the 6th TAWP meeting, the U.S. delegation acknowledged receipt of numerous allied criticisms of a paper on joint suppression of enemy air defenses that had been previously submitted for allied consideration. This paper reflected USAF-U.S. Army thinking on SEAD and had been forwarded as part of a U.S. effort to upgrade the content of ATP-42 on counterair operations. The allies' negative comments were sufficient "to preclude the inclusion of the paper into ATP-42," and the United States and SHAPE agreed to submit a change proposal covering SEAD doctrine and procedures at a later meeting.[40]

Recognizing the increasing importance of SEAD for all successful air operations, the SHAPE representatives proposed the development of a separate ATP on air defense suppression to the 6th meeting of the TAWP. Although this proposal was supported by the U.S. delegation, the rest of the working party rejected it, arguing that although the conduct of air defense suppression applied to many mission areas, SEAD was primarily a counterair *activity*. In brief, the TAWP considered a separate ATP on SEAD to be inappropriate although it allowed the

[38]Allied opposition to these U.S. proposals was considerable, and U.S. interests in timely revision of ATPs 27 and 33 took priority over changes regarding SEAD.

[39]See NATO, 1983, p. I-6, paragraphs 18 and 21e.

[40]Ibid, p. I-7, paragraph 23.

U.S. delegation and SHAPE to draft and forward change proposals relative to SEAD for ATPs 33, 27, 34, 42, and 44.[41] But successive U.S. SEAD proposals at subsequent TAWP meetings failed to persuade the allies to adopt the American view.

SOURCES OF CONTINUING ALLIED OPPOSITION TO SEAD

Although the allies were aware of the importance of SEAD, their resistance to American arguments for including it as a major counterair mission derived from several factors. First, in the early 1980s the allies had no appreciable capabilities for conducting SEAD operations. Second, competing demands for scarce defense dollars constituted difficult barriers, and third, the commitment of USAF SEAD assets and other electronic warfare capabilities to the theater lessened the allies' incentive to acquire their own SEAD capabilities.[42] As a result, whenever the U.S. delegation to a TAWP pushed for the inclusion of SEAD as a mission equivalent to offensive or defensive counterair, or whenever the United States stressed the importance of addressing SEAD more fully in the conduct of offensive air support, the allies insisted on retaining the current doctrinal references to SEAD as a *support* activity.[43] Another explanation for allied resistance to U.S. SEAD proposals was that they feared that statements of operational requirement would follow on the heels of any TAWP upgrading of SEAD's doctrinal status.

In 1985, the problem of obtaining doctrinal unity between NATO allies and the U.S. view on SEAD seemed unlikely to be resolved. Given the costly nature of the electronic gear involved in SEAD and other aspects of electronic warfare, the allies probably would not procure a full complement of the necessary equipment. One USAF officer caricatured the attitude of the British with the comment, "If something is too expensive, well, stiff upper lip, go faster and lower and expect

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[41]Ibid, p. I-8, paragraphs 28 through 30c.

[42]Of course, the allies exhibited no reluctance in accepting U.S. SEAD support. They have learned that they need not procure a system to benefit from its operation by another.

[43]Belgium, the Netherlands, and Great Britain were the principal nations objecting to the "elevation" of SEAD from a supporting operation to a counterair mission. The RAF was planning to acquire *ALARM* antiradiation missiles to provide some self-protection for its penetrating aircraft, but in 1985 there was no plan to create a dedicated electronic warfare division with a full complement of active and passive suppression capabilities. The French also had a small number of dedicated SEAD assets resembling U.S. models.

losses."[44] It was also important that in 1985 U.S. policies restricted the transfer of critical technologies to Europe while the costs of developing appropriate systems and technologies in Europe was probably prohibitively high. In any event, the outcome was a doctrinal standoff.

Unfortunately, the USAF did not have a sufficient number of SEAD systems to cover the entire range of applications in NATO, let alone the remainder of its global commitments.[45] Therefore, and given the general American monopoly on the capability, the most likely use of U.S. SEAD assets in NATO would be to open points for NATO air to cross into hostile territory.

DRAWING COMPARATIVE LESSONS FROM THE FOFA AND SEAD PROPOSALS

The most telling difference between the doctrinal initiatives for FOFA and SEAD was in their prospects for acceptance and approval by the allies. Although both were essentially American-sponsored initiatives, FOFA was properly associated by the allies with SACEUR's efforts to improve NATO's capabilities for succesfully defending the Central Region, and the U.S. delegation's proposals regarding SEAD were largely viewed by the allies as expressions of a parochial USAF interest. Whether these allied views were accurate or not, they clearly affected the prospects for doctrinal agreement. The different treatment accorded FOFA and SEAD within the TAWP also implied that carefully presented rationales based on operational necessity and alliance-wide interests had a better chance of gaining allied acceptance than those seeming to require the acquisition of costly American-made capabilities.

To successfully apply FOFA throughout the Central Region would require changes in the use of command and control facilities and procedures so as to integrate the necessary theater intelligence data and manage the operations. Therefore FOFA also implied changes in the content of NATO's Offensive Air Support doctrine, at least in terms of establishing appropriate concepts for air-ground coordination across the several "bands" of interest to ground forces. This would provide the TAWP (in conjunction with the commanders of the ATAFs) with an opportunity to develop the necessary concepts of operation for using tactical airpower across these "bands." It also implied an opportunity

[44]Alberts, 1979, p. 4.

[45]The range of applications include suppressing air defenses on route to rear area targets and at the target areas in addition to conducting SEAD at or near the FLOT.

for closing the gap between USAF and RAF concepts of air-ground coordination.

Despite joint U.S. Army-USAF support for the U.S. SEAD proposals, the allies had not been persuaded that any doctrinal change was necessary. But the allies were aware of the need for defense suppression capabilities, and they were not unwilling to do something about it. The RAF, for example, had plans to proceed with the production of an air-launched antiradiation missile (ALARM), and the West Germans were considering the production or modification of *Tornados* to perform SEAD and other electronic countermeasure tasks. Such efforts suggested that the allies were taking serious steps to address the need for defense suppression and that the failure of U.S. proposals to win allied support might depend more on their specific content than on the operational necessities for defense suppression itself.

The record of allied negotiations regarding SEAD demonstrated that the USAF viewed NATO air doctrine and its structure, and the TAWP as its forum, as an appropriate place for establishing requirements. In this regard, the USAF might be taking NATO's air doctrine and its development process more seriously than the other NATO partners. Nonetheless, the consistent presentation of U.S. SEAD proposals was a manifestation of the belief that doctrinal forums were proper places for presenting one's case. As the example of FOFA suggests, gaining allied support was easier when U.S. proposals were part of a well-thought-out plan that involved the active participation of NATO commands and commanders presumably immune to competing secular interests.

VI. CONCLUSIONS AND OBSERVATIONS

Since 1970, allied efforts to develop NATO air doctrine have proceeded slowly, attention being paid iteratively to such key issues as the principles of command and control and the organization of offensive air support. This has led to incremental changes in combined doctrine rather than rapid evolution. This slow, iterative process also reflects the bureaucratic difficulties in having to negotiate doctrine among many national delegations and command representatives each with its own institutional or organizational perspectives. Principal among these coordination constraints are divergent views of the Soviet threat as perceived by various member nations and regional commands; different operational experiences, force structures, and capabilities among the participating national forces; and the fact that allied air doctrine must be developed cooperatively without appeal to a central authority. Although these coordination constraints are not the subject of Tactical Air Working Party deliberations, they combine to impose a least common denominator approach in negotiating air doctrine.

This approach lessens the leverage available for the U.S. delegation to pursue American air power interests within NATO. Accordingly, the potential scope of operational change imposed by doctrinal evolution narrows and limits the need for the allies to procure American-made systems to perform particular air missions—i.e. SEAD. As a result, coordinating allied air power interests within the TAWP often involves accommodations that impose the *least* national effort or additional cost, and the *least* net change to current operating procedures.

The majority of the aforementioned constraints derive from the democratic nature of the TAWP's organization, the asymmetries in allied interests and capabilities, and the range of available and affordable technologies. However, NATO's air doctrine is also subject to influences that arise from outside the immediate context of the TAWP, for example SACEUR's initiative on Follow-on Force Attack and the U.S. Army's doctrine on the AirLand Battle. Occasionally such externally generated doctrinal initiatives impose a need for NATO doctrinal innovation that must confront the coordination constraints listed above.

For facilitating either incremental doctrinal change or wholesale innovation, the experiences of previous U.S. delegations to the TAWP contain valuable negotiating lessons. For example, the seeming impasse on command and control encountered during the development

of the first draft of ATP-33 led to the formation of a smaller select panel. With fewer delegations involved, allied officers from the United States, United Kingdom, and West Germany were better able to identify points of discord and contention and to "smooth out" differences in terminology that might cause difficulties within the national services they represented. Employing select panels has periodically been an expeditious means of avoiding the constraints of the larger working party and of reaching accommodation among the protagonists.

An additional bargaining dividend deriving from the use of select panels is the familiarity gained by individual allied officers with the bureaucratic limitations that confront other national delegations. To fully exploit the advantages of these informal liaisons, however, the individual officers involved must remain assigned to their national delegations for long periods. British and West German delegations have an advantage over their American counterparts in that U.S. officers rotate more frequently through their career assignments.[1] Neither select panels nor the development of informal communications between the United States and allied delegations was ever adopted in the case of SEAD, and this may provide an additional perspective on the failure of previous American SEAD proposals.

The TAWP has obvious utility as an instrument for doctrinal change within the alliance, but it also has potential as a forum in which the allies may discover and compare their operational and procedural differences. Understanding the idiosyncrasies of allied forces often takes second place to understanding a potential adversary, but it is essential for maintaining a successful coalition. As a bureaucratic institution, however, the TAWP rarely examines the broad origins of operational diversity and divergence within NATO. Instead, the annual sessions ordinarily address the narrow requirements of improving the text of particular publications. Recognizing NATO's internal diversity and the bureaucratic constraints this places on the TAWP is essential to developing a successful approach to doctrinal innovation. But rectifying the underlying differences within the alliance is not TAWP's task, which may explain why developing a common air doctrine is at best only a partial solution to the task of preparing for coalition warfare.

A "full" solution to NATO's defense problems does not include imposing American perspectives on NATO's concepts of operation and operational procedures. Indeed, a review of USAF's early difficulties in

[1]It is unlikely, however, that the allies' advantage in "corporate memory" can be compensated for by changing USAF personnel management practices and extending the tour of duty spent by USAF officers assigned to address NATO's doctrine development. It may also be unnecessary.

coordinating with the other U.S. services is sufficient evidence to suggest that there is no uniform "American" perspective on air doctrine. Ultimately the effectiveness of NATO's combined operations and the future course and content of its air doctrine will remain tethered to the diverse interests and capabilities of NATO's constituent forces and the distinct challenges confronting the various subregional commands. Dodging this "challenge of the obvious" cannot improve NATO's effectiveness, while awareness of NATO's internal diversity can only assist in gaining agreement on common doctrinal principles and procedures.

THE PAST AS PROLOGUE: OBSERVATIONS FOR THE FUTURE

Although progress in developing NATO air doctrine was affected by the procurement and force structure implications of NATO's strategy change in 1967 and by the "maldeployment" of its Central Region ground forces, the major obstacle in developing a common NATO air doctrine has been the distinct operational capabilities and procedural practices of the Royal Air Force and the U.S. Air Force. Their influence on the two Central Region ATAFs has overshadowed NATO's dominant doctrinal issues, often complicating the position of the West Germans (who serve in both 2ATAF and 4ATAF) and equally often ignoring the interests of the other nations and regional commands. As a result, the critical question surrounding the efforts of the TAWP is whether doctrine itself, or the process of its development, can successfully address diversity in NATO's tactical capabilities.

As the lead element in their national delegations to the working party, neither the Royal Air Force nor the U.S. Air Force has proven overly eager to divest itself of its perspectives on the role of air power in the theater, command-control, or the air support of ground operations. Any attempt to draft a common air doctrine must struggle between the incentives for papering over their existing differences and those for establishing common standards for all of NATO's combat forces. Contending with these options also raises the question of whether the diversity in NATO's tactical capabilities is, as the British view it, a virtue that complicates Soviet planning or, as the Americans have seen it, an impediment to NATO's own operational coordination. Weighing these choices is ultimately conducted in the political process of negotiation where, surprisingly, the concept of an effective division of labor never seems to come up and, not surprisingly, the problems of the Central Region tend to dominate discussions.

The common principle of centralized command and decentralized execution was agreed to in ATP-33, but its implementation differs from ATAF to ATAF and from service to service. As a consequence, the procedures for positive and procedural control, as preferred by the USAF and RAF respectively, were largely codified in ATP-33, and the textual compromises reached during the final negotiations permitted each constituent air force and regional command to maintain its preferred set of operating procedures. Nonetheless, ATP-33 identified the procedural requirements for conducting air operations across subregional boundaries, and in this respect ATP-33 represented a major achievement. However, regional and national cross-training under the principles and procedures of ATP-33 would perhaps be a better measure of NATO's seriousness of intent regarding combined operations. The TAWP negotiations for ATP-33 also provided the major national, service, and command protagonists with an opportunity to identify and explore their disparate concepts of command and control, which is prerequisite to their resolution.

Perhaps the most important substantive lesson to be drawn from the evolution of ATP-27 is in the reasonableness and realities of ground force involvement in the planning and control of air-to-ground attacks. Current USAF air doctrine acknowledges the need for joint coordination in planning offensive air support operations; the development of ATP-27(B) made a major contribution to that development. But the U.S. delegation to the TAWP missed opportunities for using the British proposal on Battlefield Air Interdiction as a rationale for either functional improvements in theater-wide command-control capabilities, or normalizing the differences within and among the several NATO ATAFs. While the "back-channel" contacts between members of the U.S. and U.K. delegations were both effective and efficient in moving forward on the revisions of ATP-27, they did not extend to narrowing the gap among various command-control capabilities, facilities, and practices in respect to offensive air support.

Similar issues are likely to re-emerge when the TAWP begins to develop doctrinal concepts for the execution of follow-on force attacks. How assets are allocated to the close-in battle and the battle in depth will ultimately be decided by NATO's operational commanders, but the emphasis placed by British and West German delegations on the importance of air support for the close-in battle may affect the willingness of allied services or subregional commands to accept new American-sponsored concepts or control facilities. When negotiating the air-ground coordination aspects of FOFA, for different "bands" of the battlefield, future U.S. delegations might exploit the opportunity to improve command-control functioning in NATO's Offensive Air

Support doctrine. The fate of U.S. proposals on SEAD would also suggest that a well structured plan is necessary to ensure that U.S. proposals for FOFA-related improvements to the command-control facilities of NATO are not interpreted as self-serving acquisition of American-made systems to support American-developed concepts of operation.

This raises the issue of coordination within the USAF and among the U.S. services regarding negotiations over NATO air doctrine. It may be more difficult to conduct such efforts within the United States than it is within certain European services and states, but the success of U.S. proposals depends heavily upon effective interservice coordination.

CONSIDERATIONS FOR IMPROVING U.S. PERFORMANCE AT THE TAWP

Although meetings of the Tactical Air Working Party can sometimes approximate a conference of lexicographers, the debates concern more than mere words. Each delegation has its own interests to protect and each has its own limitations and constraints in pursuing those interests. The coherence and clarity of doctrinal publications is essential to their having value and meaning for all allied planners and operators. If for no other reason than that doctrine is a key to the alliance's success in efforts to plan for and engage in coalition warfare, the language of common doctrine necessarily assumes a degree of uncommon importance.

Understanding allied interests and antipathies regarding combined air doctrine can only make U.S. efforts to persuade or dissuade them of various positions more effective. If the U.S. delegation to the Tactical Air Working Party is to succeed in providing conceptual and material leadership in drafting common procedures and operational practices, then the U.S. Air Force must take the lead in understanding allied interests and operating constraints and develop an accurate assessment of what can and cannot be accomplished within the Tactical Air Working Party.

The actual duration of working party sessions is quite short, and some allied delegations have a bureaucratic advantage over the United States because they include officers with longer years of experience in negotiating NATO air doctrine. Furthermore, American doctrinal initiatives are often developed without sufficient consideration for what is politically, financially, and operationally feasible given allied constraints. It is not surprising, therefore, that American initiatives often encounter allied opposition. The United States has actually been most

successful in gaining allied support and acceptance of its doctrinal initiatives under two conditions *outside* the formal confines of the working party: (1) through frequent, informal discussions with negotiators from key allied countries; and (2) in small trilateral or bilateral select panels authorized by the working party to develop additional materials for consideration. This was the case in the mid-1970s in terms of the command and control principles in ATP-33, and in the late 1970s in terms of Battlefield Air Interdiction and ATP-27B. In both cases individuals from the British and West German delegations were involved, and promoting American interests was more effective and immediate than it had been during previous negotiations.

Adopting the use of select panels and maintaining a direct but informal back-channel dialogue with key officers from major allied delegations can also enhance cohesion by avoiding displays of discord or disagreement before the full working party. The most important results of select panels and back-channel negotiations are:

- improved coordination on potentially contentious issues and early identification of possible solutions
- greater continuity in doctrine development
- development of appropriate "gameplans" for the presentation of doctrinal initiatives to other allies and
- enhanced appreciation of allied operational concerns and institutional constraints.

As the principal U.S. agency in negotiating NATO air doctrine, the U.S. Air Force should improve its use of existing sources of information regarding allied interests. The record of previous TAWP sessions is an obvious and invaluable tool in this regard as are many sources within the Air Staff and elements of the USAF operating in allied countries. Additional sources of information on allied air power interests might include reports from:

- U.S. Air Attaches;
- USAF Exchange Officers serving with allied operational units;
- State and Defense Department estimates of allied
  - — defense budget allocations and procurement programs,
  - — mission priorities and capabilities, and
  - — domestic events that may affect national air power interests or NATO participation.

By using such measures and resources, the U.S. delegation can achieve a more effective leadership position within the TAWP. This is not to say that the U.S. delegation has the only vision of air power use

for the European theater or that the U.S. Air Force holds the doctrinal secret to success in potential European conflicts. NATO commanders will certainly have something to say about the course and conduct of allied operations. But if the U.S. delegation is to provide NATO with much needed doctrinal leadership, then the U.S. Air Force must assume greater responsibility in preparing American positions, exercise greater latitude in conducting negotiations, and display greater tolerance of allied differences that doctrine alone cannot change.

The broad principles espoused by Air Force Manual 1-1 are not and will not be accepted as operating doctrines by the major NATO air forces. The several Allied Tactical Publications that voice NATO air doctrine commit USAFE to concepts and doctrines that are foreign to AFM 1-1. In effect, the part of the USAF that operates as part of NATO is committed to a regional air doctrine. Accommodating to that reality is a major challege confronting the USAF.

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