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**POTENTIAL COMBAT RISKS FROM OUTSOURCING
OF SELECTED SUSTAINMENT FUNCTIONS**

BY

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Abstract

This paper concerns itself with the danger of taking a good strategy too far. It examines the emerging tension between combat risk avoidance and best business practices, and the degree to which theater Commanders-in-Chief are able to manage the combat risks introduced by Service outsourcing decisions in theater preparations for war. Fueled by the desire to generate modernization funding under a tight budget constraint, there is a strong impetus within DoD to further outsource logistic functions traditionally performed by uniformed service members. Within this growing outsourcing trend, defense acquisition policy holds clear potential for inducing significant combat risk through the introduction of advanced weapon, intelligence, and command and control systems which will be substantially dependent on embedded contractor maintenance at all echelons. These systems are being fielded without an associated generation of trained military maintenance technicians, and the sophisticated skills required for maintaining them will preclude the rapid generation of a substitute military capability if needed. Significantly, these outsourcing initiatives are being conceived and implemented under the conditions of peacetime engagement or operations other than war. Though recent experience in contingency operations has demonstrated that civilian contractor personnel are willing to confront austere and hostile conditions, none of these cases has embodied exposure to hazard levels expected under high-intensity conflict. Under such scenarios, there may be serious implications for the execution of outsourced functions because some of them may directly support critical warfighting tasks and it is unreasonable to assume that a civilian contract employee can or will endure the same scale of peril under which uniformed service members are expected to serve. This induced risk impacts theater combatant commanders because neither war planning nor theater exercises take adequate account of the foreseeable problems inherent in Service outsourcing decisions. As a result, these potential combat risks are being masked by highly visible costs savings.

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Executive Summary

There is an ongoing trend toward "outsourcing" functions traditionally performed by uniformed service members. As a source of sorely needed modernization funding, it is a strategy certain to be pursued with vigor by the services. This paper concerns itself with the danger of taking a good strategy too far.

Some of these outsourced functions directly support critical service warfighting tasks. Significantly, however, current outsourcing initiatives are being conceived and implemented under the conditions of peacetime engagement or operations other than war. There may be serious implications for the execution of outsourced functions if they must be performed forward in a theater of operations, under the higher threats associated with a major theater war.

Though recent experience in contingency operations has demonstrated that civilian contract personnel are willing to confront austere and hostile conditions, none of these cases has embodied the level of exposure to hazards posited under some existing high-intensity conflict scenarios. It may be unreasonable to assume that a civilian contract employee can or will endure the same scale of peril under which uniformed service members can be expected to continue to serve. Absent a declaration of war by Congress, neither the contracted individuals nor their employers legally can be compelled to perform contract provisions at the jeopardy of their lives, as can a member of the armed services. It is this possibility of non-performance, admittedly at the higher end of the conflict spectrum, that generates the potential combat risks to U.S. forces. Accordingly, **our paper attempts to determine whether or not the outsourcing of selected functions which directly support warfighting competencies introduces significant combat risk to U.S. forces.**

METHODOLOGY

Our analysis centers on two fundamental categories of logistics functions derived from joint logistic doctrine: basic sustainment (transportation, supply, general engineering, and miscellaneous services) and maintenance. We proceed by comparing civilian contract performance of these two functions with a corresponding uniformed capability with respect to a set of doctrinal logistics principles. We use this viability assessment to derive the level of potential combat risk to U.S. forces by evaluating the likelihood of three possible outcomes:

- Failure to accomplish the mission
- Excessive delay in mission accomplishment
- Inordinate casualties in the course of mission execution.

Upon completion of this analysis, we turn our attention to the theater combatant commander, whose forces will bear the brunt of any adverse impacts from outsourcing. In particular, we examine the degree to which theater Commanders-in-Chief are able to make use of available means to manage the risks introduced by Service outsourcing decisions. Specifically, we examine unified command involvement in the decision processes, and the inclusion of the resulting decisions in theater preparations for war. From this examination, we draw conclusions as to possible impacts on the CINC's ability to exercise his legal and doctrinal prerogatives as a combatant commander.

FINDINGS

Finding 1:

There appears to be little combat risk associated with the outsourcing of basic sustainment functions. The risk of non-performance under elevated threat conditions is mitigated by the availability of active and reserve component military units capable of providing similar support if necessary.

Finding 2:

Current defense acquisition policy and practice holds clear potential for inducing significant combat risk to U. S. forces through the introduction of advanced weapon, intelligence, and command and control systems which will be substantially dependent on contractor maintenance at all echelons. Emerging program methodology for providing maintenance support, driven by acquisition policy, is likely to lead to the fielding of these systems without an associated generation of trained military maintenance technicians. The sophisticated skills required for maintaining these advanced systems will preclude the rapid generation of a substitute military capability if needed.

Finding 3:

There is no effective policy or mechanism for ensuring congruence between theater logistic concepts and the means by which the Services support them.

Finding 4:

Neither war planning nor theater exercises take adequate account of the foreseeable problems inherent in Service outsourcing decisions; as a result, potential risks are masked.

RECOMMENDATIONS**Recommendation 1:**

The Services retain a capability for uniformed provision of basic sustainment functions in the active or reserve components.

Recommendation 2:

DoD institute a comprehensive program to resolve the host of legal, administrative, and logistical issues relevant to the presence of large numbers of civilian contractors on the battlefield.

Recommendation 3:

The Services consider actions to mitigate outsourcing risks and reduce the uncertainties surrounding a forward deployed, contract civilian maintenance capability under high-intensity threat scenarios. We suggest the following policy alternatives as a basis for further study:

- Specific contract delineation of the level of risk that civilian contract personnel will be expected to accept.
- Requesting legislative action to amend U.S. law to provide for the extension of selected provisions of the Uniform Code of Military Justice to essential civilians under certain conditions short of a declared state of war.
- Requiring that selected contract personnel be members of the mobilizable Individual Ready Reserve.

Recommendation 4:

The unified commands be required to specify acceptable parameters for contractor presence on the battlefield. Further, combat risk due to outsourcing should be considered for review in the

Joint Warfighting Capabilities Analysis process. If that process indicates unacceptable levels of risk associated with Service programs, corrective actions should be recommended in the Chairman's Program Review for inclusion in the Defense Planning Guidance. Compliance should be explicitly evaluated in the Chairman's Program Assessment.

Recommendation 5:

Modify the latest defense acquisition policies related to contractor-provided logistic support for advanced combat systems, with the aim of restoring the primacy of combat risk avoidance over best business practice.

Recommendation 6:

Modify JOPES to allow fully integrated deployment planning for outsourced functions.

Recommendation 7:

With regard to theater exercises:

- Outsourced logistics should be made a "CJCS Commended Training Issue."
- Regional CINCs should include outsourced logistics as a training objective in theater-level exercises, and ensure that realistic contingencies related to outsourcing are included in exercise scenarios.
- Joint theater warfighting models should be modified to provide automated play for outsourced functions. Current initiatives in this area should be vigorously supported.

Introduction

There is an ongoing trend towards "outsourcing" functions traditionally performed by uniformed service members. The trend is supported by cost considerations and driven by budgetary constraints. The Air Force, for example, has put some 63,000 positions – over 11 percent of its end-strength – on the table for study as outsourcing candidates. The goal is to achieve in the neighborhood of two billion dollars in savings to be applied to modernization accounts.¹

Some of these outsourced functions directly support critical service warfighting tasks. This expanded use of civilian contract organizations and personnel to perform supporting tasks critical to sustaining warfighting capabilities, versus the traditional employment of uniformed service members, places an unprecedented degree of reliance on civilian performance of their contract provisions. Significantly, however, current outsourcing initiatives are being conceived and implemented under the conditions of peacetime engagement or operations other than war. There are serious implications for the execution of outsourced functions if they must be performed forward in a theater of operations, under the higher threats associated with a major theater war.

The potential threats under which these functions will have to be performed vary greatly, depending upon the locations and scenarios envisioned. Though recent experience in contingency operations has demonstrated that civilian contract personnel are willing to confront austere and hostile conditions, none of these cases has embodied the level of exposure to hazards posited under some existing high-intensity conflict scenarios in Southwest Asia or the Korean peninsula. It may be unreasonable to assume that a civilian contract employee can or will endure the same scale of peril under which uniformed service members can be expected to continue to serve. Absent a declaration of war by Congress, neither the contracted individuals nor their employers legally can be compelled to perform contract provisions at the jeopardy of their lives,

as can a member of the armed services. It is this possibility of non-performance, admittedly at the higher end of the conflict spectrum, that generates the potential combat risks to U.S. forces.

Without the reliable performance of essential sustainment functions, the execution of critical combat tasks cannot be assured. This in turn generates the potential for failure or costly delay in the accomplishment of assigned missions, or increased casualties incurred in mission execution. **Our paper attempts to determine whether or not the outsourcing of selected functions which directly support warfighting competencies introduces significant combat risk to U.S. forces.**

SCOPE

This paper will confine itself exclusively to the question of combat risk to combatant commanders resulting from outsourcing. A number of related issues will not be addressed. Specifically:

- We will assume that real savings can be obtained through outsourcing. We will not challenge the economic claims made on its behalf.
- We will not address the “privatization” of CONUS-based depot and industrial-level activities, though it is often spoken of in the same breath with outsourcing. We will confine ourselves to functions supporting the in-theater requirements of a deployed force.
- We will ignore the numerous ancillary issues related to outsourcing, such as the effect on the deployment rotation base.
- We will stop short of prescribing detailed policy initiatives to mitigate combat risk attributable to outsourcing. We will recommend only policy avenues for further development and analysis.

“Outsourcing,” as discussed here, is defined as in common business practice: contracting for or otherwise procuring externally services or functions previously performed by organic assets. It is characterized by the competitive selection of the most cost-effective means of adequately providing the required service.

METHODOLOGY

We begin our analysis in Chapter 2 by assessing the potential vulnerability of civilian contract personnel performing logistics functions under the conditions of higher intensities of conflict, using the following objective risk factors:

- Vulnerability to conventional force attack, due to proximity to forward operational areas
- Vulnerability to chemical or biological attacks delivered by theater ballistic missiles
- Vulnerability to unconventional force attack, from elements infiltrated into rear areas
- Vulnerability to terrorist attack

We continue our analysis in Chapters 3 and 4, organized around the following logistics functions listed in Joint Publication 4-0, Logistics Support for Joint Operations:

- Supply Systems
- Transportation
- General Engineering
- Miscellaneous Services
- Maintenance

We group the first four into a set of basic sustainment functions, and deal with the maintenance function separately.² We are not including the remaining doctrinal logistics function of Health Services Support in this study, as to this point there has been no evident inclination on the part of any service to deploy civilian contract medical personnel into a forward theater.

We use a set of logistics principles defined in Joint Publication 4-0 to compare the viability of civilian contract performance of these functions with a corresponding uniformed capability. These principles are:

- Attainability – being able to provide the supplies and services essential for the conduct of combat operations
- Responsiveness – ensuring that any necessary support is available in the right place, at the right time.
- Flexibility – adapting logistics structures and procedures to changing situations, missions, and concepts

- Simplicity – reducing complexity in meeting sustainment requirements
- Economy – providing required support at the least cost
- Sustainability – being able to maintain theater-wide support for the duration of operations
- Survivability – the capacity to continue operations in the face of various threats³

These logistics principles serve as criteria for commanders in determining the best use of available logistics assets. Competing needs are evaluated, priorities are established, and tradeoffs made to optimize the logistic force's contribution to the overall generation of combat power for a specific situation. As maximizing combat capability depends upon using each resource to its highest potential, these criteria provide a useful structure for a comparative analysis of the provision of logistics support.

We use this viability assessment to derive the level of potential combat risk to U.S. forces posed by outsourcing. Joint doctrine defines combat risk as the probability of occurrence and severity of damage caused by contact with an enemy, or some other hazardous condition.⁴ It is characterized by both the likelihood of an event happening and the magnitude of the negative consequences, should it occur. We measure potential risk by evaluating expected outcomes against three basic criteria:

- Failure to accomplish the mission
- Excessive delay in mission accomplishment
- Inordinate casualties in the course of mission execution.

The doctrinal methodology we employ for assessing degrees of risk is depicted graphically in the following matrix:⁵

Risk Assessment Matrix					
	<u>Probability</u>				
	Frequent	Likely	Occasional	Seldom	Unlikely
<u>Severity:</u>					
Catastrophic	E	E	H	H	M
Critical	E	H	H	M	L
Marginal	H	M	M	L	L
Negligible	M	L	L	L	L

E: Extremely High: Loss of ability to accomplish the mission if hazards occur during the mission. A frequent or likely probability of catastrophic loss or frequent probability of critical loss exists.

H: High: Significant degradation of mission capabilities in terms of the required mission standard, inability to accomplish all parts of the mission, or inability to complete the mission to standard if hazards occur during the mission.

M: Moderate: Expected degradation mission capabilities in terms of the required mission standard will have a reduced mission capability if hazards occur during mission. An unlikely probability of catastrophic loss exists.

L: Low: Expected losses have little or not impact on accomplishing the mission.

In Chapter 5 we assess the degree to which theater Commanders-in-Chief are able to make use of available means to manage the risks introduced by Service outsourcing decisions. In particular, we examine unified command involvement in the decision processes, and the inclusion of the resulting decisions in theater preparations for war. We then discuss foreseeable impacts on the ability of the CINC to exercise his statutory and doctrinal prerogatives with respect to logistic support of his forces. We conclude in Chapter 6 by summarizing the problems with outsourcing that we found in pursuing our research question, and suggesting some remedial policy alternatives for further investigation and analysis.

FINDINGS

We find that outsourcing initiatives in the basic sustainment functional areas of supply systems, transportation, general engineering, and miscellaneous services pose little combat risk. In the event that a contracted capability is unavailable due to the threats inherent in high intensity conflict, adequate alternative, uniformed capability is available to the services.

In the maintenance functional area, however, increasing reliance on sophisticated contractor-provided maintenance capabilities does pose a potential risk for combat commanders. There is currently a reasonable likelihood of their withdrawal from forward operational areas under some worst-case conflict scenarios, and there is no adequate substitute currently available for the outsourced capabilities. The consequences of key weapon, intelligence, and command and control systems unavailability, under just the exceptionally violent circumstances when they are

most necessary, could be catastrophic. As our doctrine moves more towards the information dominance and decisive maneuver featured in Joint Vision 2010, the dependable performance of our arsenal of advanced systems becomes ever more critical. A robust, reliable maintenance capability underlies this system performance; yet under the evolving, significantly outsourced maintenance structure, it cannot be assured.

This situation has arisen in large part because of the incorporation of contractor logistics support into the procurement of advanced weapon systems, reflecting disconnects between the service acquisition programs that procure these systems and the service logistics communities responsible for sustaining them. Despite policy guidance requiring protection of “core capabilities” and often-stated service insistence on not replacing existing forces with contractors, this is occurring *de facto* in the maintenance functional area as the services acquire systems incorporating advanced technologies with embedded contractor logistics support. With each passing year the presence of civilian maintenance contractors is more essential, and more enduring. As one individual associated with developing doctrine for managing civilian contractor presence on the battlefield put it, “they are not *replacing* force structure, they are *becoming* force structure”.⁶

We further find significant shortfalls in the application of available means for managing and reducing the risks to theater combat operations incurred through outsourcing. In particular, there is a disconnect between outsourcing decision processes, largely the province of the Services, and the theater commanders-in-chief who will be the beneficiaries or victims of the resultant decisions. Consequently, the risk reduction that might be expected from a tight coupling of outsourcing schemes with theater logistical concepts is not realized. Additionally, the primary methods for theater means testing, the war planning process and theater exercises, ignore the implications of outsourcing and thus similarly neglect opportunities for quantifying and addressing the associated combat risks. The impact of these shortfalls in risk management is the partial negation of the theater CINC’s legal and doctrinal prerogatives with regard to logistical support of his forces.

Chapter 1 Endnotes

¹ Lt Col Donna H. Parry, Deputy Chief, Outsourcing and Privatization Division, Headquarters, U. S. Air Force, telephone interview with author, March 3, 1998.

² Department of Defense, *Doctrine for Logistics Support of Joint Operations* (Joint Pub 4-0), (Washington: Government Printing Office, 1995) I-3

³ Department of Defense, *Doctrine for Logistics Support of Joint Operations* (Joint Pub 4-0), (Washington: Government Printing Office, 1995) II-1

⁴ Department of the Army, *Risk Management* (Draft),(FM 100-14), (Washington: Government Printing Office, 26 September 1997), 2-10

⁵ Department of the Army, *Risk Management* (Draft),(FM 100-14), (Washington: Government Printing Office, 26 September 1997), 2-10

⁶ Mr. Joe Fortner, Doctrine Division, USACASCOM, Army Doctrine Working Group Conference, Contractors on the Battlefield, 21 January 1998.

Background

THE EVOLUTION OF THE SUSTAINMENT INFRASTRUCTURE

US. law and Department of Defense guidance assign specific roles and missions to the various armed forces of the United States.¹ Within this broad framework, the services are tasked with organizing, training, and equipping the forces applicable to their respective roles. The various Joint and Unified Commands of the Department of Defense then apply these forces in the execution of various aspects of our national security strategy.

From these roles and missions the services have derived a set of warfighting competencies which they view as critical to their respective abilities to carry out their assigned roles. An array of supporting functions underlie service ability to execute the combat tasks inherent in these competencies. The reliable performance of these logistics functions is absolutely essential to the maintenance of service combat capabilities in wartime. Joint logistics doctrine groups these functions in the broad areas of supply systems, maintenance, transportation, general engineering, health services, and miscellaneous services, and they are generally applicable to each of the uniformed services.²

As military services have evolved, their logistical structures have evolved with them. Throughout the initial stages of European military professionalization in the Renaissance period, logistical functions almost universally were carried out by civilians contracted to the state or the armies they supported. In an age of mobilized societies and mass armies, supporting functions increasingly were provided by newly-available uniformed personnel in logistics organizations, under the direct authority of field commanders. These personnel and organizations proved to be considerably more reliable than their civilian counterparts, especially under the threatening conditions of the battlefield.³

In the American experience, the Civil War represented the first true mobilization of our society. Significant portions of the logistics structure of both the Union and Confederate armies relied upon an array of civilian contractors, serving as teamsters, blacksmiths, sutlers, and countless other functions.⁴ World War I represented the next occasion in which the United States mobilized a large armed force. Significantly different in this case was the requirement to project this force to fight overseas, well beyond the reach of many civilian organizations which traditionally performed supporting functions. The majority of logistics functions were consequently militarized, putting substantial numbers of supporting personnel in uniform.

During World War II the United States mobilized a truly massive force, this time deploying it to the four corners of the earth. Millions of uniformed personnel, organized into a vast, worldwide logistics infrastructure, were employed in support of the forces engaged in direct combat. Continuing a trend which began in the Civil War, the ratio of supporting to combat personnel increased to the point where an ever larger number of individuals in service units supported a single soldier in the line.⁵ Nearly every task was accomplished by conscripted service members, leaving a civilian presence, even in the rear areas, the rare exception. The huge logistical infrastructure characteristic of our World War II armed forces became the model for the subsequent Cold War organization of our globally deployed sustainment base. The maintenance of a peacetime draft provided the services with the relatively inexpensive manpower needed to fill out this infrastructure.

The advent of the all-volunteer force significantly changed the conditions under which the services manned their organizations. Forced to compete with commercial enterprises in the job market for quality individuals, personnel costs skyrocketed. Many active component logistics units were eliminated, with their functions being transferred to a restructured reserve component force. The efficacy of this force design was tested in the Persian Gulf conflict, wherein over 250,000 reserve component personnel were mobilized and deployed to the theater and surrounding areas, the great majority in sustainment roles.⁶

The conclusion of four decades of cold war tensions subsequently brought about overwhelming pressures to reduce significantly the size and budget of the armed forces. Paradoxically, increased deployment and operational requirements for an expanded range of post-cold war missions generated a continuing need for a robust active component combat and combat

support force structure. As the services shrank, particularly the Army and the Air Force, they placed an even greater reliance on their respective reserve organizations for sustainment requirements. This reliance has grown to the point that deployments which could be considered relatively small-scale on a global basis, such as participation in the NATO efforts in Bosnia-Herzegovina, require a Presidential Selective Reserve Call-up in order to be sustained.

At the same time that drawdown pressures and continued commitments exert their effects, the services perceive an increasingly urgent requirement to modernize their aging force structure. This serves both to ensure the dominant global military position we currently enjoy, and to preserve in at least a rudimentary form the complex military industrial base that would be required to meet the challenges posed by a future major adversary. Yet, in an age of multipurpose platforms integrating the most advanced technologies, modernization is an expensive proposition.

THE DEVELOPMENT OF A TREND TOWARDS OUTSOURCING

These force and budgetary reductions, coupled with a desire to find funding for modernization initiatives, have led to significant pressures to find the required fiscal resources from within existing programs. The Department of Defense has indicated to the services that savings accrued through economies in their sustainment infrastructure may be retained and applied to modernization programs.⁷ This guidance in turn has spurred service initiatives to find alternative means of providing the sustainment functions critical to service warfighting competencies; thus, the DoD and service focus on the methodology of "outsourcing" to meet these functional requirements.

Department of Defense outsourcing activities are governed by a number of policy statements and guidelines. Though a few are reinvigorated or reinterpreted versions of past policies, most have been newly generated within the past two to three years. These guidelines are covered in more detail in Appendix A.

Within these broad guidelines, specific outsourcing initiatives have been largely left to the services. Each pursues its own programs, with considerable latitude as to specifically how and where it will generate the fiscal savings. Service initiatives have taken them in many directions, which will be covered in some detail within the body of this paper. All bring about an expanded use of civilian contract organizations and personnel for the provision of sustainment functions. The Army, for example, employs its LOGCAP program to oversee the provision of a variety of

supporting functions to the forces deployed in Bosnia-Herzegovina. The Navy's CONCAP and the Air Force's TENCAP programs provide essentially similar capabilities to contract for the provision of selected mission-specific sustainment activities.⁸ All of the services are increasing the levels of embedded contractor logistics support in the procurement of new weapons and command and control systems.

POTENTIAL THREATS AND RESULTING VULNERABILITIES

Many of our recent experiences with civilian contractor presence in operational areas have occurred under a wide range of hostile circumstances. None, however, have been as intensely threatening as the conditions our armed forces endured during portions of World War II or the opening stages of the Korean conflict. To provide a realistic assessment of the prospective risks posed by the outsourcing of logistics functions, the implications must be analyzed with respect to the most demanding circumstances our armed forces potentially will face in the near-term future. The current geo-strategic situation and ongoing contingency planning postulate that major theater wars in Southwest Asia or the Korean peninsula are the worst case scenarios we might face.

In the early stages of high intensity conflict in either area, potential threats vary across a wide spectrum. Though it is impossible to define precisely the nature of the threat for any given scenario, years of work throughout the international intelligence community have given us a fairly detailed understanding of the likely threats to forces under some worst-case scenarios. The implications of these threats with regard to outsourcing are felt in the consequent vulnerabilities experienced by logistics elements, potentially incorporating contractors, operating under these conditions.

In some cases personnel operating in support of ground forces may be vulnerable to direct conventional force attack. In the Korean peninsula, the North Korean Peoples Army (NKPA) maintains a recognized capability to attack with minimal advanced warning. Any support personnel operating within 50 kilometers of forward positions in South Korea initially would be within range of heavy caliber tube and rocket artillery deployed by the NKPA. Even if not caught in the opening barrages foreseen in most intelligence estimates, there is broad speculation that the NKPA forces are likely to experience some early successes in their initial attacks, before the full weight of U.S. and South Korean military capability can be brought to bear to stabilize the situation. Conventional force penetration of front lines is entirely possible, and could easily result

in the exposure of civilian contract personnel operating in logistics facilities as far as 100 kilometers from the current Demilitarized Zone.⁹

Potential opponents in Southwest Asia also retain significant conventional forces in their arsenals. However, most scenarios posit significantly greater warning times before these forces could be prepared to launch an attack. It is thus much less likely that support personnel would be exposed to the danger of conventional forces breaking through front lines.

Vessels supporting amphibious or other shallow water operations in the proximity of the North Korean or Iranian coastlines are vulnerable to an array of sophisticated mines deployed in the arsenals of both nations. Both also maintain shore-based batteries of Chinese-manufactured CSSC-2 Silkworm anti-ship missiles, with ranges extending out to 85 kilometers. While the North Korean submarine force is largely obsolete, Iran has purchased three Russian-made Kilo-class submarines that present a significant threat in shallow coastal waters.¹⁰

In many cases logistics personnel are likely to be vulnerable to chemical or biological weapons delivered by theater ballistic missiles or other means. North Korean, Iraqi, and Iranian capabilities in these areas have been widely reported. Though a variety of Theater Ballistic Missile Defense (TBMD) alternatives are under development, none has been proven completely effective. Contractors operating at such high-value facilities as principal air bases, ports of debarkation, fixed major headquarters, and other major logistics facilities within the 650 km range of the Iraqi Al Hussein, or the 1000 km North Korean Nodong missiles are vulnerable to such attack, which could have significantly more devastating consequences than the conventionally-armed SCUD attacks experienced during the Persian Gulf conflict.¹¹

Even if the theater ballistic missile threat could be interdicted, lethal concentrations of chemical and biological agents are not exceptionally difficult to transport and deploy. Personnel operating in these same high-value targets could be vulnerable to agents delivered by terrorists or infiltrated unconventional forces. Terrorists have repeatedly demonstrated their presence and capabilities throughout Southwest Asia. The NKPA maintains an unconventional force of over 100,000 men intended to infiltrate to the rear areas in South Korea to conduct sabotage, demolition, and other assaults on key facilities.¹²

CONTRACTORS AS A SOURCE OF RISK

Given these potential threats, contractor presence on the battlefield can contribute to increased operational risk by undermining the effective application of the principles of logistic support. The primary constraining factor with regard to contractors is their requirement for physical security from an external source, which may in turn seriously limit their battlefield mobility. If there is an urgent need to send contractors forward into a higher threat area, their physical security must be provided by the supported force. If it is not provided, they may not go. This diversion of forces can jeopardize the unit mission. Beyond this constraint, which limits logistical responsiveness and flexibility, there are other inherent limitations which affect contract civilians. We have grouped these limitations into four categories:

- chain of command/compliance
- legal status
- readiness factors
- support factors.

These limitations are explored in greater depth in Appendix B, Contractors as a Source of Risk. The significant concern is that regardless of the functions they perform, or their location on the battlefield, they contribute to higher levels of risk by their presence alone. Minimizing these additional risks necessitates additional planning and organization. At low risk levels, opportunity costs are low. At higher levels, they increase.

We will now examine the implications of contractor involvement in these doctrinal logistics functions in more detail.

Chapter 2 Endnotes

¹These roles and missions are subject to the provisions of Chapter 6, Title 10, United States Code, and are further defined by DOD Directive 5100.1. Department of Defense, Joint Chiefs of Staff, *Unified Action Armed Forces (UNAAF)*, Joint Pub 0-2, (Washington: Government Printing Office, 1995) II-12

²Department of Defense, Joint Chiefs of Staff, *Doctrine for Logistics Support of Joint Operations* (Joint Pub 4-0), (Washington: Government Printing Office, 1995) I-3

³Martin Van Kreveld, *Supplying War* (Cambridge: Cambridge University Press, 1977) 72.

⁴Martin Van Kreveld, *Supplying War* (Cambridge: Cambridge University Press, 1977) 72.

⁵Martin Van Kreveld, *Supplying War* (Cambridge: Cambridge University Press, 1977) 235

⁶Deborah Lee, Assistant Secretary of Defense for Reserve Affairs, Department of Defense news briefing, 11 December 1995

⁷DEPSECDEF memo on retention of outsourcing savings by services for modernization.

⁸ Bill Brewer, U.S. Army Corps of Engineers, Trans Atlantic Programs Office, personal interview with author, 6 November 1997

⁹ Brian Cloughley, "Korean Flashpoint Awaits", *International Defense Review*, September 1996

¹⁰ Brian Cloughley, "Korean Flashpoint Awaits", *International Defense Review*, September 1996

¹¹ Duncan Lennox, ed. *Janes Strategic Weapons Systems* (Coulson, UK: Janes Information Group, LTD) 15

¹² Brian Cloughley, "Korean Flashpoint Awaits", *International Defense Review*, September 1996

Basic Sustainment Functions

We will begin our analysis by examining the basic sustainment functions of supply systems, transportation, general engineering, and miscellaneous services. Given that contractors' presence performing these functions on the battlefield can, at least in theory, constrain logistic capability and, thereby, increase risk, we will look at some recent examples of their use and see what available data shows. The first example we can look at is civilian contractor performance in Operation Desert Shield/Desert Storm (ODS/DS) where reviews of contractor performance are mixed at best, for while there were successes, numerous difficulties had to be worked through.

OPERATION DESERT SHIELD/DESERT STORM (ODS/DS)

The logistics structure of ODS/DS had a large number of government civilians (1,500) and contractor employees (over 3,000). They provided a variety of services including aspects of all the logistics functions. Although they performed these duties well, misinformation about how to deploy and utilize them abounded. One unpublished study found that there was "no central policy for deploying contractor employees in effect at the start of ODS. Each Army organization which entered a contract negotiated its provisions with the contractor." ¹

Compounding this problem of multiple sources of information on how to deploy contractors, was the finding that there wasn't an organized approach to developing consistent answers to questions about the use of civilians and contractors. An interdisciplinary team from the logistics community found that ". . . there was no single source of information available to help manage the civilian deployment process. The team also identified voids in policies, procedures, and regulations that left the implementation process unclear." ²

The dual nature of authority structures was also noted: "The misunderstandings and unclear lines of authority identified during the Gulf War demonstrate the importance of command and

control of civilians deployed to support military operations." ³

Furthermore, there was confusion about the combatant status of civilians. During ODS/DS, ". . . the combatant status of civilians was not clearly articulated." ⁴ This was multiplied by the number of instances where civilians ventured forward from the safer rear areas.

Readiness factors entered into the situation also. An Army Materiel Command (AMC) study group found that, ". . . many of the civilians who deployed, particularly to support operations in the Gulf, were not trained in military arts" ⁵ Reinforcing this point, another study noted that "Reserve soldiers were not allowed to deploy to ODS without fulfilling the law's requirement to attend 12 week basic training, but civilians were expected to perform as soldiers without such training." ⁶

Notwithstanding these difficulties and the other problems, one of the prime benefits accruing from ODS/DS was that it provided a rich source of lessons learned for future study and resolution. Ultimately, these experiences provided the services with a wealth of ideas for improving the integration of civilians and contractors with uniformed service personnel.

This larger problem--the lack of full integration of contractors in a military effort -- was identified in a U.S. Army Audit Agency report that found: "The process of integrating contractor support into the basic command structure on a contingency operation is complex; it requires extensive coordination and planning because of the different commands involved with management responsibility for the logistical support contract." ⁷ This report, and others, became a clarion call for action.

Since ODS/DS, the Army Material Command and other agencies have diligently worked to solve contractor battlefield issues and have developed changes to policy, doctrine, and organizations. Additionally, they have published reference guides such as:

- The AMC Contractor Deployment Guide for Contracting Officers,
- The AMC Civilian Deployment Guide
- The Civilian Personnel Office Reference Guide
- Commander Desk Side Guide.

These documents along with the publication of Field Manual 63-11, Logistics Support Element and other documents have begun to fill the policy, procedure, and regulation vacuum.

LOGISTICS CIVIL AUGMENTATION PROGRAM (LOGCAP)

A more recent example is currently taking place in Bosnia where contractors under the Army's Logistics Civil Augmentation Program (LOGCAP) are playing a major role in the support of Operation Joint Endeavor (OJE). Approximately 6,000 LOGCAP contractor personnel are supporting U.S. forces in 33 base camps and 8 field operating sites in Hungary, Croatia, and Bosnia.⁸ Twenty four of these base camps plus eight of the field operating sites are in Bosnia--the operational area.⁹

The AMC Support Contract of LOGCAP is a worldwide planning and services contract for civilian contractors to provide selected logistics functions to Commanders in Chief (CINCs) during wartime or in military operations other than war (MOOTW). Contractor projects include base/logistics camp construction, base/logistics camp operations, and field services.¹⁰ Functions they provide include: engineering and construction (facilities management), supplies, services, maintenance, and transportation. The range of services includes:

- | | | |
|---------------------------|---------------------------|----------------------|
| o billeting | o food preparation | o construction |
| o sanitation | o drinking water | o showers |
| o laundry | o transportation | o utilities |
| o refuse collection | o facilities maintenance | o ice |
| o maintenance | o aerial port operation | o sea port operation |
| o retrograde of equipment | o other support functions | |
| and supplies | | |

In Bosnia, LOGCAP is providing primarily these types of indirect support to the force; however, with the performance of engineering and maintenance functions, their involvement moves closer to a direct supporting role.

Advantages and Disadvantages

The primary advantage of LOGCAP in any contingency is its capability to provide a rapid, highly flexible surge capacity.¹¹ Their basic performance standard is to have an advance team on the ground within 72 hours of the formal Notice to Proceed. Within 15 days of this notification, they must have the capacity to receive and support 1,500 personnel per day. Within 30 days, they must be able to house and sustain 25,000 personnel in eight base camps (one rear and seven forward) and be able to receive up to 3,000 personnel per day.¹²

Their ability to provide highly responsive support is enhanced by the fact that they are unconstrained by the time lags present in military procurement processes. They can use the most modern available equipment and commercial business practices to leverage every advantage in providing timely, high quality service.

Their fundamental weakness is that they have no inherent capability to assume operational risk. This was clearly evidenced by the fact that Navy SEABEES and the Air Force RED HORSE units were the first CSS elements in Bosnia because of the uncertainties surrounding the initial deployment. LOGCAP personnel were not introduced into the Bosnia theater until after the operation was begun and it was judged safe. Although this was not a problem, the overall Bosnian support requirement was relatively small compared to what we might expect in a major conflict.

By design, the LOGCAP program is not structured to assume operational risk. It is based on a logistic concept called Force Provider which was developed to provide quality of life enhancements--feeding, hygiene, laundry, and sleeping—for deployed soldiers. The Force Provider concept did not envision any inherent capability to defeat an enemy threat. Conceptually, it's personnel would ". . . maintain the same defensive readiness posture and capability as other units in the area of operations." ¹³ Because it was intended to be located in rear areas, primary threats to it would result from its proximity to other high value targets co-located in the rear. It would be susceptible to collateral damage from attacks against nearby targets and units including artillery, hostile air strikes, chemical and biological weapons, and terrorist actions.

As an aside, the use of LOGCAP may increase vulnerability to this last type of security problem--terrorist act or sabotage. This can occur because host nation support is usually a vital part of the LOGCAP program. Host country nationals provide ready access to logistic camps and centers. Recent examples indicate a ratio of approximately 1:4 U.S.-based contractor personnel to foreign workers, and in OJE, over 80% of the US contractor's work force are local foreign nationals.

The Decision to Use LOGCAP

Although CINCs may request LOGCAP support, the use of the LOGCAP program to satisfy requirements is a Headquarters, Department of the Army (HQDA) decision. During the operational planning phase, the CINC staff evaluates the available logistic force structure and

other competing priorities against the availability of host nation support and other factors. LOGCAP is one of several options available to meet perceived shortfalls in support. It is supposed to be the choice of last resort, however, it can be necessary because of troop ceilings (the need to keep a relatively low U.S. presence), the unavailability of host nation support agreements, the political sensitivity surrounding the activation of reserve forces, and the need to keep military units available to respond to other potential needs.¹⁴ A recent evaluation of LOGCAPs use for OJE found that:

The Army uses a reasonable approach in deciding whether to use LOGCAP. This approach follows a systematic decision logic that considers the military (including risks), political and economic impacts of using its available options. By design, LOGCAP is the third option choice, after the use of military forces and host nation support.¹⁵

The fact is that LOGCAP use is growing because it provides a viable, responsive alternative where risks are judged acceptable, and in a number of recent cases, these risks have been judged acceptable. Since 1992, LOGCAP personnel have been used in most deployments, including: Somalia, Rwanda, Haiti, Saudi Arabia/Kuwait, Italy and Bosnia. As an indicator of its growth over 6,800 LOGCAP personnel were involved supporting operations in the Former Yugoslav Republic.

Services provided during these real- world operational uses of LOGCAP have covered a wide range, including: base camp construction; food service and supply; water production, storage and distribution; mail delivery; fuel receipt, storage and issue; linguist support, transportation for passengers and cargo, airport and seaport operations, and railhead operations.

¹⁶ These services have been concentrated in the combat service support arena.

Similar to ODS/DS, Operation Joint Endeavor has provided a rich source of lessons for better integrating the use of contractors within a theater. All the available studies generally agree that the time to start building working relationships between the military and contractors is through individual and unit training, and exercise play prior to a real event. The studies also recommend that the contractor should be brought into the contingency planning process at an early stage. One study stressed the importance of rapport building steps in their study, as follows: "Thorough training before and during a LOGCAP deployment will serve to clarify the distinction between command and contractual lines of authority, as well as cultivate the general

understanding of the contract, thus preventing confusion among both military and contracting personnel." ¹⁷

Among their other recommendations, this same study makes two interesting ones that explicitly recognize LOGCAP limitations. First, they make the point that: "Throughout the LOGCAP decision process, a threat threshold should be established at which point regular Army personnel would be brought in to fulfill CS/CSS needs."¹⁸ Second, is the slightly unsettling but prudent recommendation that the Army should: "Prepare alternatives to satisfy mission needs should the LOGCAP contractor default and be unable to perform required tasks." ¹⁹

These recommendations point out the importance of considering force protection against a hostile action as an important factor in choosing when and where to use the LOGCAP program. Given a low, or even medium, threat environment, the contract non-compliance issue usually doesn't surface; or if it does, it can be isolated and resolved quickly. Force protection economies, which are made available by a higher density of support units being co-located in rear area, allow security for all to be provided by a minimum number of personnel. Yet, LOGCAP is touted as a program which can be used in wartime as well as during contingencies. Given that this paper's analysis is based upon a two major theater war scenario and non-linear battlefield, the question of whether we are setting ourselves up for possible failure under higher levels of risk remains untested in these examples of contractor provision of basic sustainment functions. The potential risks are worthy of more detailed analysis.

NET ASSESSMENT

Using our analytical paradigm, based on the logistic principles, we compare the likely risk of LOGCAP-provided combat support services versus the organic, uniformed capability and derive the results summarized in the chart below.

Basic Sustainment Functions Comparative Risk Analysis

	Outsourced	Organic
Sustainability	Mod	Low
Simplicity	Low	Low
Responsiveness	Low	Low
Flexibility	Mod	Low
Economy	Low	Mod
Survivability	Low	Low
Attainability	Mod	Low

Currently, there appears to be little significant combat risk associated with the outsourcing of basic sustainment functions, as exemplified by LOGCAP and other similar contracting efforts which concentrate on providing combat service support.

During most contingencies, risk will probably be low in all categories due to this low expected threat and the CSS types of functions that LOGCAP is expected to provide. During a larger scale conflict, risk may increase as the probability of loss increases due to higher threats. If the situation changes after LOGCAP is employed within a theater and the LOGCAP contractors are forced to leave due to a higher threat, it is likely that more vital combat support services will be reconstituted from existing reserve component forces. In the interim, troops can adjust temporarily to spartan conditions.

Therefore, based on this analysis, the only real tradeoff is a potential sacrifice of economy due to the use of a more costly asset (organic forces) if LOGCAP resources are not available versus the potential risk to flexibility and sustainability if threat conditions change and LOGCAP contractors cannot perform as they are supposed to.

In the event that the threat situation does change, offsets available to minimize the risk include, in addition to temporarily reconstituting may CSS functions from within, the use of reserve components. In Appendix C, the feasibility and likelihood of using reserves is further developed. Our conclusion is that, given current force structure trends, the use of reservists is the only viable military option available. Of note, however, there are some current Reserve

Component force structure trends which could impact on the future availability of uniformed forces to replace unavailable contract capability.

SUMMARY

LOGCAP performance in OJE has been reviewed by numerous government offices--including the Government Accounting Office, U.S. Army Audit Agency, and other independently commissioned studies. The tenor of their overall evaluation is that ". . . it [LOGCAP] is a viable, cost-effective, and successful alternative to augment CS/CSS forces during contingency operations." ²⁰ They caveat this finding with the caution that, if the mission changes to a more hostile environment, a re-evaluation of the applicability of LOGCAP personnel will be required. ²¹

Problems which have been identified with respect to contractors on the battlefield during ODS/DS, and each contingency operation up to the present effort in Bosnia, are being addressed by DoD and the services through policy and doctrine revisions, service member education programs, and training on how to effectively integrate contractors in a theater-wide effort. The potential problems in these logistics functional areas confronting the other services are similar in scope, though on a significantly smaller scale. The Department of Defense has designated the Army to be the lead agency for addressing issues surrounding a contractor presence on the battlefield. This includes structural changes, such as an improved management organization with responsibility for providing logistical contract oversight, as is being developed by the Army Material Command. ²²

Even with these improvements and solving contractor personnel readiness and support issues, residual risk factors due to a fuzzy contractor legal status and dual chains of authority will remain. The complexity that these two residual factors add to logistic planning and execution will increase as more and more civilians are found on the battlefield and the nature of theater-wide threats changes due to asymmetrical threats and modern weapons. Pointing out that the future is now, one study noted:

The Army is now relying more on civilians at the tactical/operational levels, rather than in some rear, fixed-facility location. . . . Their changed role has exposed civilians to hostile situations, as was the case in ODS/DS, where a number of contractors went forward with combat units into Kuwait and Iraq. ²³

Although the services have made much progress in integrating the use of contractors, there is much remaining to be done; and, from a Department of the Army perspective, it is getting harder to do. The Deputy Assistant Secretary of the Army (Logistics), OASA (I,L&E) noted in a recent memorandum "These issues appear to cut across logistics, operations and personnel, as well as, the legal and international arena."²⁴

Even these tougher issues can be assessed and minimized; however, the fundamental question still remains. On a linear battlefield, the closer to the fight the contractor is asked to perform, the more acute the risk problem becomes, and on a non-linear battlefield, with a high threat, this problem will be a constant.

Our conclusion is that under low and moderate threat conditions, contractor support such as that provided by LOGCAP is a viable option because operational risk is manageable. Under high threat conditions, a uniformed capability can be substituted in the event contractors cannot continue to perform. The discrete decision to provide service-wide basic logistics functional support with contractors is a good one.

Chapter 3 Endnotes

¹ John R. Bondanella, RAND, telephone interview, 19 February 1998.

² Larry L. Toler, "Civilians on the Battlefield," *Army Logistician* Nov.-Dec. 1994: 3

³ Toler 5

⁴ Bondanella

⁵ Toler 4

⁶ Bondanella

⁷ U.S. Army Audit Agency, *Contractor Support for the Logistics Civil Augmentation Program: Operation Joint Endeavor* (Alexandria: U.S. Army Audit Agency, 1996) 5

⁸ David R. Gally and Charles L. Horne III, *LOGCAP Support in Operation Joint Endeavor: A Review and Analysis* (McLean: Logistics Management Institute, 1996) 13

⁹ Gally and Horne 16

¹⁰ Army Material Command, *Logistics Civil Augmentation Program* (Alexandria: 1997) 11

¹¹ BDM Federal, Inc., *Operational and Organizational Implications of the Logistic Civil Augmentation Program and Army Total Asset Visibility on Operation Joint Endeavor and Future Operations Other Than War, Final Report* (McLean: 1996) ES-3

¹² Army Material Command 6

¹³ Operational Concept for FORCE PROVIDER, 1993 (...) 2

¹⁴ Government Accounting Office, *Contingency Operations, Opportunities to Improve the Logistics Civil Augmentation Program* (Washington: 1997) 4, 6

¹⁵ Gally and Horne 27

¹⁶ Government Accounting Office 7

¹⁷ BDM Federal 4-2

¹⁸ BDM Federal 2-3

¹⁹ BDM Federal 2-18

²⁰ BDM Federal 2-18

²¹ BDM Federal 2-18

²² U.S. Army Audit Agency 17

²³ Bondanella

²⁴ Eric A. Orsini, Memorandum for Deputy Chief of Staff for Logistics, Washington D.C. 15 April 1997

The Maintenance Function

The remaining sustainment function is maintenance of weapons and C2 systems critical to executing warfighting tasks. Joint doctrine defines this function as actions taken to keep materiel in serviceable condition, to return it to service, or to update and upgrade its capability.¹ Throughout the services, maintenance is done in echeloned levels, depending on complexity of the maintenance requirements.

Forward area maintenance traditionally has been accomplished by uniformed service personnel, trained in the maintenance of specific systems or components. Extended acquisition times and integrated operational fielding concepts provided for maintenance training as part of system acquisition. By the time a piece of equipment selected for procurement was fully developed, produced, tested, and fielded, the services had trained lower-echelon maintenance personnel in the specific tasks required for forward maintenance of the system, fielded system-unique special tools and equipment, and purchased and distributed stocks of required spare parts. Depot-level facilities and personnel were similarly prepared to perform higher echelon maintenance tasks. Any maintenance participation by the manufacturer usually was integrated at this latter level.

EVOLVING MAINTENANCE CONCEPTS

Recent acquisition policies are changing this traditional approach. Service procurement is oriented on full life-cycle costs, and recent Department of Defense policy guidance requires acquisition managers to incorporate embedded contractor logistics support to the maximum degree feasible. Department of Defense Regulation 5000.2-R, Mandatory Procedures for Major Defense Acquisition Programs, states:

Support concepts for new and modified systems shall *maximize the use of contractor provided, long-term, total life-cycle logistics support* that combines depot-level maintenance for non-core-related workload along with wholesale and selected retail materiel management functions. *Best value over the life cycle of the weapon system and the use of existing contractor capabilities*, particularly while the system is in production, shall be key determinants in the overall selection process. The PM shall provide for long-term access to data required for competitive sourcing of systems support.² (Italics added)

The latest revision to this regulation does address the retention of "core" tasks under the purview of organic service capabilities. In practice, this has proved to be a difficult line to draw, and clearly indicated in this policy guidance is the emphasis placed on cost concerns when considering "total life-cycle logistics support". In designing systems acquisition strategy, program managers are required to use cost as the defining criteria, and they in fact must demonstrate how uniformed maintenance personnel at any echelon of system maintenance would be more cost effective than maintenance performed under an acquisition contract.

The services, expecting to retain any savings generated through contractor logistics support for use in force modernization, have embraced these policies, and are applying them in current acquisition programs. Defense contractors have proven more than willing to participate in the life-cycle sustainment of purchased systems, in some cases generating unsolicited proposals for extended maintenance services, basing them on the language of this policy.³ The Army's AH-64 Apache attack helicopter, Paladin self-propelled howitzer, and Patriot PAC-3 missile, the Air Force's C17 transport, the Navy's LPD-17 amphibious assault ship, and the Marine Corps' V22 Osprey programs all reflect the impact of this guidance.

In addition to embedding contractor maintenance support in the acquisition of new weapons systems, all of the services are engaged in an aggressive effort to integrate into their forces the most advanced information management systems available. This effort is having a significant effect on the modification of existing systems, as well as the procurement of new ones. It is especially pronounced in the continued development of digitized command and control architectures.

The acquisition and fielding of this information technology often is being accomplished through a streamlined procurement process, in order to take advantage of the latest technological developments. While this process does result in the fielding of off-the-shelf or derivative systems

in significantly shorter periods than the traditional procurement methodology, it does not provide the services with the ability to establish the maintenance and sustainment structure that traditionally has accompanied the procurement of a new system. The services thus routinely have incorporated some level of contractor maintenance support within the purchase contracts.⁴

These acquisition-driven trends result in a prospective requirement for the presence of contractor maintenance personnel further forward, and in significantly greater numbers, than previously experienced. The potential risks to U.S. forces accrue if threat conditions preclude these personnel from being able to perform in accordance with their contract provisions. The repercussions of this presence vary significantly by service.

The Navy Case

On most U.S. Navy combat vessels, civilian maintenance contractor presence is normally limited to trials or shakedown periods linked with the initial acceptance of the vessel, or subsequent refits, overhauls, or modifications. Aircraft carriers, however, routinely operate with civilian contract Technical Representatives on board. Beyond this presence, the Navy's aggressive outsourcing initiatives "are not really going after the operational guys," and have minimal impact on deployed operational capability.⁵ While the growing use of digitized command and control systems on naval vessels places increasing dependence on their reliable function, the shipboard operating environment is generally such that favorable operating conditions can be maintained and replacement components kept close at hand. In the event of a major casualty or system failure, the ship can be evacuated to a relatively safe area for repair, one in which civilian maintenance specialists can perform their contracted functions in relative security.

Beyond combatant vessels, the Navy is beginning to turn to civilian-manned vessels managed by the Military Sealift Command (MSC) for the underway replenishment of its forward deployed forces.⁶ Though this practice potentially exposes these civilian personnel to more hazardous conditions than those operating the Military Sealift Command's transport fleet, the Navy regards its service forces as valuable assets, and is unlikely to risk them in exceptionally hostile waters, whether Navy- or civilian-manned. Additionally, the civilians manning these ships are members of the Merchant Marine, for which a distinct body of law relating to their performance already exists. In any event, if conditions are too threatening for safe underway replenishment close to the

operational area, Navy doctrine calls for surface elements to withdraw to a more secure environment for the conduct of replenishment operations.⁷ **For the Navy, then, any combat risks associated with embedded contractor logistics support seem manageable, and do not require further analysis.**

The Air Force Case

The Air Force establishes its forward maintenance echelons at the air bases used by its combat elements. Civilian contractor presence at forward operational installations has grown in recent years, and hundreds were present in maintenance facilities during Operation Desert Storm.⁸ And while the immediate proximity to front line conventional threats of many bases critical to the execution of current plans in both the Korean and Southwest Asian theaters is not an initial concern, they are considerably more vulnerable to theater ballistic missile-delivered weapons and unconventional or terrorist threats.

In establishing candidate activities for outsourcing, the Air Force's emerging outsourcing and privatization program focuses primarily on continental United States (CONUS)-based functions. It is careful to distinguish between those supporting tasks deemed critical for warfighting requirements or inherently governmental and those which fall outside of in this category. It does, however, allow for the outsourcing of some activities conducted at the overseas bases of the Air Force's warfighting commands.⁹ Further, it does little to regulate the degree of contractor maintenance support incorporated through the acquisition process, tacitly allowing for the integration of civilian maintenance specialists within the leading echelons of aircraft maintenance structures.

The C17 program is an example of this organizational alignment. Boeing Field Service Technical Representatives work out of facilities collocated with organic maintenance organizations. They function closely with assigned Air Force personnel in executing almost every facet of C17 operational maintenance. As expected, these individuals bring extensive experience to forward maintenance echelons, generating significant operational cost savings through their ability to perform diagnostic and specialized repair work that their uniformed counterparts have neither the skills nor the resources to accomplish.

As stated in their service contract with the Air Force, these technical representatives are deployable to operational theaters, where their responsibilities could take them well forward of

the large fixed bases usually associated with Aerial Ports of Debarkation.¹⁰ The C17 has a forward airfield operational capability, a feature for which the Air Force paid a significant cost in the design of the system. In the event of a system breakdown rendering the aircraft nonflyable, a maintenance team, in all likelihood incorporating these contract specialists, must deploy forward to the aircraft's location to effect repairs.

There is nevertheless a reasonable expectation that most bases can be kept sufficiently secure to permit the conduct of maintenance activities. It is precisely for this reason that the Air Force maintains Air Base Ground Defense units and the capability to operate in a chemically contaminated environment. The Air Force trains its forward-based organizations to conduct operations under such conditions, and contingency plans could allow for the provision of chemical defense equipment and training to civilian contract maintenance personnel. In many cases contractors have indicated a willingness to continue to perform in a chemical environment, provided that they are suitably equipped and prepared by the supported elements.¹¹

Should forward bases nevertheless become untenable, alternate bases are available hundreds of miles further to the rear in both the Korean and Southwest Asian theaters. The range and in-flight-refueling capability of their tactical aircraft, coupled with the availability of substantial numbers of refueling platforms, gives the Air Force a wide degree of flexibility with regard to the location of its bases, and consequently its logistics infrastructure. Though relocating its maintenance facilities would certainly degrade operational capability, at least on a temporary basis, this would have to occur whether or not civilian contractors were present. Even the C17, which may have to fly into locations deemed too exposed for fixed basing, is considered a critical asset by airlift planners; it will not likely be risked in an area too hazardous to permit emergency repair if required.¹² **For the Air Force, then, as for the Navy, the combat risks associated with a significant civilian contractor presence seem manageable.**

The Army and Marine Corps Cases

The ground and forward-based air elements of the Army and the Marine Corps are confronted with a significantly different situation. Many contractor logistics support initiatives currently pursued by service acquisition authorities are generating a prospective requirement for a continuous civilian maintenance contractor presence as far down as the direct support maintenance battalion. They envision a transitory presence at the company/battery levels, and

possibly even further forward in exceptional circumstances.¹³ The Army's AH-64 Apache attack helicopter Prime Vendor Support (Apache PVS) proposal provides an illustrative example.

The Apache PVS proposal was generated by Team Apache Systems (TAS), a limited liability company, comprised of the Lockheed Martin Corporation and Boeing Helicopter Systems. Team Apache coordinates its efforts through the Apache Program Manager's office and the Army Aviation Center. Though still under refinement, it currently envisions the positioning of civilian maintenance technicians in Field Support Teams at the Aviation Intermediate Maintenance (AVIM) levels. These teams would enhance the maintenance capabilities of the supported organization by providing specialized equipment and skills necessary to perform troubleshooting and diagnostic functions on sophisticated armament and avionics systems, capabilities which the uniformed maintenance personnel lack. Contact teams would go further forward, to Aviation Unit Maintenance (AVUM) organizations, on an as-needed basis.¹⁴ Apache PVS also provides for support operations specialists to assist in streamlining replacement parts acquisition and delivery, using commercial transportation means.

As presently envisioned, the civilian contractors in the Field Support Teams are intended to "supplement", not replace, the uniformed maintenance personnel assigned to the unit. They will make maintenance operations more efficient by using advanced technologies to better isolate equipment faults, thus significantly reducing the amount of effort currently spent replacing components which are not in fact unserviceable.¹⁵ As the contractor support becomes fully integrated into the maintenance system, however, reliance on their presence will inevitably increase. The role of these civilian maintenance specialists will become even more pronounced as the more sophisticated Apache Longbow version of the attack helicopter enters the force.

Similar, though not identical provisions for a forward maintenance contractor presence are being incorporated into the upgraded M1A2 tank, Paladin self-propelled howitzer, and Patriot PAC-3 air defense missile systems.¹⁶ An array of evolving intelligence, command and control, and other digitized systems further involve highly skilled contract specialists in activities well forward in the operational area, functions for which there are no uniformed personnel with the requisite technological expertise. During field exercises incorporating many of these systems in the Army's Advanced Warfighting Experiment, conducted at their National Training Center in 1996, over 1,200 contractors and other manufacturers representatives were present at various

echelons.¹⁷ While this is certainly an extreme case, and reflects the developmental nature of many of the systems involved, it highlights the trend towards incorporation into combat and command and control systems of advanced technologies for which there is no current, or conceived, uniformed maintenance capability.

The Marine Corps is confronting similar challenges in their acquisition programs. Notable examples include the V22 Osprey and AV-8B Harrier.¹⁸ Contractor involvement in their Hunter Warrior exercise, conducted at Twenty-nine Palms in the summer of 1997, mirrored in many respects that experienced during by the Army during their Advanced Warfighting Experiment.¹⁹

NET ASSESSMENT

These potential concerns confronting ground commanders require a more detailed examination of the risks involved with providing required maintenance with civilian contractors. We will use our analytical paradigm, employing the doctrinal logistics principles as the basis for comparing outsourced, contract maintenance with organic, uniformed capability.

The results of this analysis are summarized in the table below.

Maintenance Comparative Risk Analysis

	Outsourced	Organic
Sustainability	Low	Low
Simplicity	Low	Low
Responsiveness	Low	Mod
Flexibility	Mod	Low
Economy	Low	Mod
Survivability	Low	Low
Attainability	High	Low

Sustainability

The concerns with sustaining contractors on the battlefield discussed in the preceding chapter apply equally to maintenance contractors. As indicated, these concerns, though complex, are being addressed in several manners, and are capable of being resolved. There is thus only a low risk that contract maintenance capability will be unsustainable in future conflicts.

Simplicity

Again, as discussed in the preceding chapter, the incorporation of civilian contract maintenance organizations and personnel within or alongside organic military units will inevitably generate a higher level of complexity for commanders responsible for the performance of maintenance functions. These organizational and managerial concerns can nevertheless be mitigated by prior planning and preparation, and complexity likely will decrease as operational integration smoothes out in practice. The risk to commanders resulting from the reduced simplicity of an integrated maintenance structure is low.

Responsiveness

Modern defense manufacturing corporations increasingly are large, diverse organizations possessing a significant depth of resources in almost any aspect of their operations. If contracted to provide maintenance support for a system purchased by the armed forces, there is every reason to expect that they will draw on this depth of capability, at a global level, in response to whatever requirements that contract performance generates. In comparison, a purely uniformed maintenance organization, embodying generally less experienced technicians and probably not having the direct links to product information and material bases available to the manufacturer, may not be able to respond as effectively to unexpected or expanded maintenance requirements. This is particularly relevant where the most sophisticated weapons, intelligence, and command and control systems are concerned. Contingency experience, especially in Operation Desert Storm, shows numerous examples of contractors providing information, technical skills, and replacement components in a remarkably expeditious fashion.

For this reason, incorporation of an outsourced maintenance capability makes the sustainment system more responsive to the commander. He confronts a moderately greater risk in this respect if he lacks the uniquely responsive capabilities that maintenance contractors can provide.

Flexibility

The vast majority of systems maintenance contractors work on a single system or interrelated set of components. Contract provisions negotiated with service acquisition agencies or contracting representatives specify the scope and level at which maintenance will be performed.

Though some degree of latitude can be incorporated within the contracts, any significant deviation requires renegotiation, often a complex process under the best of circumstances.

This contract-based methodology inevitably results in a "stovepiped" capability, wherein a highly specialized, well resourced, and broadly responsive structure exists for the maintenance of a system – and only that system. Even if the personnel are capable of adapting their skills and equipment to other maintenance tasks, they are not supposed to do so.

This is in contrast to a more generic, uniformed maintenance capability, where specialists in one specific area, system, or component may have wide utility in other areas. If the situation required, they might make critically important contributions working outside of their initially designated capacity. Thus, while an outsourced maintenance capability may indeed be more responsive than a uniformed one, it is inherently less flexible. The absence or degradation of capability in one area is more difficult to accommodate, and risks to the commander rise accordingly.

Economy

The driving rationale for embedding contractor logistics support into system maintenance structures is an economic one. The cost efficiencies gained over the life-cycle of the system theoretically enable the procurement of more systems within a given funding ceiling. Alternatively, as pointed out previously, outsourcing can deliver a more comprehensive, responsive maintenance capability than could be acquired if money had to be put into recruiting, training, and retaining corresponding uniformed maintenance technicians. Without contractor support, then, commanders may have to face combat with fewer key weapon systems, or systems less well maintained (and therefore increasingly non-operational) than under conditions of outsourcing. Risks in mission accomplishment or increased casualties rise accordingly.

Survivability

As indicated in the previous chapter, contractors depend heavily on the supported military forces to provide security for their employees. With some modicum of safety assured, contractors have demonstrated in the recent past that they will remain and function in very hostile environments. Experiences in Somalia, Bosnia, and the Persian Gulf conflict provide many examples of this inclination. In cases where the services have provided suitable training and

equipment support, even the prospect of limited chemical weapons attack generally has not forced civilian contract personnel out of the operational area.²⁰

Experienced defense contractors are anxious to point out that their employees can perform under exceptionally austere and demanding conditions. These organizations work hard to recruit personnel with both the technological background to handle the sophisticated tasks involved, and the willingness to confront the demands of a hostile environment. Many of their employees are former uniformed service personnel, who readily adapt to the working environment.²¹ And while most contractors may not be as physically fit as their generally younger uniformed counterparts, this factor contributes less to aspects of survivability in the service support arena than it does in the combat or combat support arms. Contracted maintenance capability, then, is generally as survivable as a uniformed counterpart; the presence of contractors generates no inordinate risks in this area.

Attainability

Though outsourced maintenance elements initially may be as survivable as their uniformed counterparts, a different set of considerations emerges if civilian contractors do, in fact, begin to face the imminent prospect of substantial casualties in an overseas conflict. The threat conditions arising during the contingency operations we have engaged in since the Vietnam war have not been as compelling as those envisioned in some existing and potential major theater war scenarios. Though most current defense contracts include standardized clauses requiring continued contract performance "in time of war",²² the question of just how much danger to civilian contract personnel is too much is not definitively established. Both intuition and historical experience indicate that there is a threshold beyond which a defense contractor will not risk the safety of its personnel. The Boeing Aircraft Corporation, for example, initially withdrew its contract maintenance personnel from bases in Saudi Arabia when Iraq began launching SCUD missiles. Boeing's apparent rationale, understandable at the time, was that they did not feel they could put their employee's lives at risk.²³

In this case the Air Force was able to work around the situation, and Desert Storm provides countless other examples of forward contractor performance despite the potential hazards. The point, however, is that the degree of jeopardy which contractors must endure is not specifically defined in current policy or regulation. The final determination is essentially in the hands of the

contracted organization (albeit at a financial cost), or in extreme cases, to the judgment of the contracted personnel themselves.

Civilians are not subject to the Uniform Code of Military Justice unless congress has declared a state of war; contractors thus cannot be legally compelled to perform a function at the risk of their lives, as can a uniformed member of the armed forces.²⁴ Even the most committed and dedicated contract personnel can be expected to endure only so much peril, and even the most lucrative wage scales can be expected to provide only so much motivation. As reviewed in the first chapter, the worst case scenarios in existing warplans, as well as in envisioned future conflicts, portend threats unlike any we have seen since the early stages of the Korean conflict in 1950. Civilian contractor presence under such conditions is problematic at best.

The potential concerns inherent in this situation are compounded by the fact that, unlike the cases of the other sustainment functions, there is no reliable Active Component substitute for contractor performance of many maintenance functions on advanced weapons, intelligence, and command and control systems. Though the Army and Marine Corps both recruit and train electronics and avionics repair specialists, the extensive, system-specific technological skills brought by contract civilian personnel cannot be duplicated. Though military personnel could certainly be trained to perform the required tasks, the time required to generate such capabilities would impose a potentially disastrous window of vulnerability on front line commanders whose systems were damaged or otherwise inoperative.

Nor is there a mobilizable Reserve Component capability to perform the required maintenance functions. Again, though many skilled individuals populate the ranks of the Reserve and National Guard, the system-specific nature of most of the maintenance tasks involved precludes rapid assumption of these functions by mobilized reservists. And while a majority of civilian contract maintenance employees are former service members, there is no existing requirement that they be associated with the reserve components. Many are not.²⁵

Maintenance doctrines espousing a modularized concept of "replace forward, repair rear" are not an adequate substitute for a reliable forward maintenance capability. Given the technological sophistication of many systems, re-calibration requirements once repaired, extensive integration of digital technologies, and high cost (with corresponding low inventories) of many component parts, in many cases the entire system must be present, in the hands of a skilled

technician, to effect even basic repairs. Given the high anticipated operational tempo of foreseen scenarios, the time required to transport a potentially immobile system out of a high-threat area to a secure facility, repair it, and return it to service would impose a significant risk of system non-availability on forward commanders. The high cost of acquiring sufficient additional systems to provide "maintenance floats", in order to sustain reasonable combat readiness rates, renders this option equally prohibitive from a service standpoint.

For all of these reasons, the attainability of required forward maintenance services in circumstances where outsourced capabilities have been heavily integrated into the maintenance structure cannot be assured under the conditions of higher intensities of conflict. This potential situation generates a high degree of combat risk to the deployed force.

Chapter 4 Endnotes

¹ Joint Publication 4-0, *Doctrine for Logistic Support of Joint Operations*, 27 January 1995, p. I-3

² Department of Defense Regulation 5000.2-R, *Mandatory Procedures for Major Defense Acquisition Programs*, 28 March 1998, para 3.3.7

³ CW3 Mike Dotson, Doctrine Division, Directorate of Training, Doctrine, and Simulation, U.S. Army Aviation Center and School, at Army Doctrine Working Group Conference, Contractors on the Battlefield, 21 January 1998. The Apache Prime Vendor Support (PVS) proposal put forth by the Lockheed Martin Corporation is an example of this concept, and will be discussed in greater detail in following portions of this chapter.

⁴ Mr Wimberly Griffin, Chief, Doctrine Literature Branch, U.S. Army Intelligence Center, at Army Doctrine Working Group Conference, Contractors on the Battlefield, 21 January 1998. Many current and planned C2 and intelligence systems are being acquired with embedded Contractor Logistics Support, often generating frequent requirements for a contractor presence at forward operating locations.

⁵ CAPT Hugh McCullom, Deputy Director, Naval Outsourcing and Privatization Programs Division, personal interview, 7 November 1997.

⁶ CDR Mark Ferguson, National Security Fellow, Harvard University, personal interview, 19 October 1997.

⁷ CDR Mark Ferguson, National Security Fellow, Harvard University, personal interview, 19 October 1997

⁸ Jay Berry, Office of the Secretary of Defense -- Maintenance Policy, personal interview, 6 November 1997.

⁹ LtCol Donna Parry, USAF Outsourcing and Privatization Office, personal interview, 6 November 1997. Basic guidance for outsourcing within the Air Force is contained in the USAF White Paper, *Air Force Outsourcing and Privatization Program*, March 1996.

¹⁰ John Caywood, Boeing Field Service Technical Representative, 58th Airlift Squadron, Altus AFB, telephonic interview, 5 March 1998.

¹¹ Randy King, Project Officer, Deputy Chief of Staff for Logistics, U.S. Army, at Army Doctrine Working Group Conference, Contractors on the Battlefield, 21 January 1998

¹² LtCol Peter O'Neill, USAF, Action Officer, Defense Logistics Agency, personal interview, 21 January 1998.

¹³ Randy King, Project Officer, Deputy Chief of Staff for Logistics, U.S. Army, at Army Doctrine Working Group Conference, Contractors on the Battlefield, 21 January 1998.

¹⁴ CW3 Mike Dotson, Doctrine Division, Directorate of Training, Doctrine, and Simulation, U.S. Army Aviation Center and School, and LTC Carl Wiley, USA, Director, Aviation Logistics Planning Group, at Army Doctrine Working Group Conference, Contractors on the Battlefield, 21 January 1998

¹⁵ Charlie Steele and Bob Karney, Lockheed Martin Electronics and Missiles Division, personal interview, 21 January 1998.

¹⁶ MAJ Terry Baker, USA, Training With Industry Program, General Dynamics Corp., personal interview, 21 January 1998. A specific example is a trial program being implemented by the General Dynamics Corporation in support of the upgraded M1A2 Tank at Fort Hood, Texas. This program places one Field Service Representative in each Tank Battalion and one in the brigade's supporting Forward Support Battalion.

¹⁷ Jeremy Shapiro, *The Political Economy of Military Privatization*, Draft Research Paper, 3 November 1997, 10.

¹⁸ Don Shirk, Action Officer, USMC Programs Analysis and Evaluation Office, telephonic interview, 9 March 1998.

¹⁹ LTC William DeCamp, USMC, National Security Fellow, Harvard University, personal interview, 6 March 1998.

²⁰ Randy King, Project Officer, Deputy Chief of Staff for Logistics, U.S. Army, at Army Doctrine Working Group Conference, Contractors on the Battlefield, 21 January 1998.

²¹ Charlie Steele and Bob Karney, Lockheed Martin Electronics and Missiles Division, personal interview, 21 January 1998.

²² The Department of Defense routinely requires that contracts be performed under the conditions of broadly defined "events". The standard definition is "wartime conditions from heightened international tensions or states of military readiness through periods of armed conflict up to and including a Congressionally declared state of war." This example is from the Department of the Army's contract for services under their LOGCAP program, contract number DACA 78-92-C-0066, 27 July 1992.

²³ RAND Corporation Research Specialist (requested anonymity), personal interview, 4 November 1998.

²⁴ MAJ James Larusch, USA, Judge Advocate General Liaison Officer, US Army CASCOM, at Army Doctrine Working Group Conference, Contractors on the Battlefield, 21 January 1998.

²⁵ Bob Karney, Lockheed Martin Electronics and Missiles Division, personal interview, 21 January 1998.

The Theater Connection

As we have seen in the preceding chapters, outsourcing initiatives to date present varying degrees of combat risk in a theater of war. This risk accrues from uncertainty as to the impact on combat operations of outsourcing particular functions. Presumably, then, effective management of this risk would involve a twofold approach aimed at reducing uncertainty. First, construction of a rational policy framework linking outsourcing decisions to the regional CINC's theater wartime concepts would ensure congruence between the risk introduced by a particular decision and that acceptable to the CINC. Second, doctrine and process changes would be necessary to ensure the results of those decisions were incorporated into theater preparations for war.

Unfortunately, however, current policies and processes are inadequate on both counts. First, as we shall see, the CINCs have no meaningful input of any kind in outsourcing decisions, increasing the risk that service-provided logistic support will fall short of theater requirements in wartime. Second, the two primary elements of theater preparation for war, planning and theater exercises, downplay or ignore altogether the implications of outsourcing decisions. As a result, the inherent risk associated with the original decision to outsource a particular function is exacerbated by the subsequent failure to adequately plan for it, or to train for and test its impacts on theater combat operations. This chapter will examine these shortfalls in turn, then reason to some conclusions as to their likely impacts on the wartime commander's ability to exercise his statutory and doctrinal prerogatives.

OUTSOURCING DECISIONS

Despite DoD claims to defer to the CINCs on the issues of "how many?" and "how far forward?" with regard to civilian presence in theater¹, the fact is that all relevant decisions are

made by the services. This is the result of two primary factors: statutory assignment of responsibilities for logistics, on the one hand, and the practical matters of staffing and workload levels of the unified commands on the other.

The primary source of statutory responsibility in this regard is Title 10 of the United States Code, which charters the services with full responsibility for all aspects of providing forces for assignment to combatant commands -- a charter jealously guarded by the services.² Specifically, the Services are chartered with, among other things, organizing, supplying, equipping, training, and mobilizing forces "primarily for prompt and sustained combat."³ By contrast, the regional commanders in chief are assigned no logistic responsibilities at all under Title 10.⁴

Aside from the issue of statutory authority, the lack of CINC involvement in outsourcing decisions probably stems most directly from the heavy workload and limited staffing of the unified commands. The CINC staffs are, of necessity and by charter, focused on the short-term planning and management of operations in their respective areas of responsibility (AOR). This appears to be particularly true, as might be expected, of the regional commands most likely to face a major theater war in the current strategic environment. Under the attendant workload, there are quite simply no resources, human or otherwise, available for "voluntary" activities. As one logistics staff officer at U. S. Central Command stated, "the staff is overloaded just trying to keep up with activities in the AOR -- there's no time to get involved in the Services' business even if we wanted to." Regardless of the reason, this fact is not difficult to verify by observation: outsourcing initiatives are publicly proposed, defended, and announced unilaterally by the Services. Whether by inclination or of necessity, the unified commands appear willing to respect Service prerogatives with regard to logistic support and to leave logistics decisions, including outsourcing, entirely to the services.

Joint Review Processes

In counterpoint, it should be noted that national and joint processes provide for various levels of review to serve as checks on unilateral Service decision making. None, however, is likely to flag the outsourcing risks detailed in this paper, at least under current conditions. At the national strategy level, for example, the Joint Strategic Planning System (JSPS) requires that the Chairman of the Joint Chiefs of Staff, "assesses the overall balance and adequacy of the composite . . . force and support levels in view of approved strategy and the requirements of the combatant

commander and documents his assessment in the Chairman's Program Assessment (CPA)."⁵ This document is one product of a continuous process that makes impacts on warfighting capability its primary interest.⁶ As such, theater combat risks due to outsourcing would seem to present a valid issue for inclusion.

Indeed, such concerns have not been wholly ignored in the Chairman's assessment process (termed the Joint Warfighting Capabilities Analysis). They are, however, peripheral to the main thrust of this broad-based review. Direct warfighting issues, such as force levels and major weapons programs, understandably tend to predominate. Under the circumstances, outsourcing would have to present a very clear and significant level of aggregate combat risk to be addressed in depth. Such a conclusion presupposes a great deal of underlying analysis across a broad spectrum of Service programs.⁷ Absent a very high level of CINC participation in the process, this level of analysis is unlikely⁸. In sum, while the Joint Warfighting Capabilities Analysis process is a potentially valuable forum for moderating Service outsourcing trends (recent developments, including the addition of a new panel focused on the warfighting impacts of the various reform initiatives across the Department of Defense, indicate that its value in this regard is increasing), it has not, to date, exercised much influence in that area.

Additionally, the operations planning process itself includes, at various stages, detailed reviews of logistical support plans. The flaws in that process are the subject of the next section.

WAR PLANNING

Given, then, service decisions to outsource various theater support functions without meaningful regard for their relation to the regional CINC's wartime logistical concepts, a degree of risk management is still possible if the implications of those decisions are thoroughly accounted for in the war planning process. Logically, this would require an integrated planning process that accounts for all support requirements and all sources of support, organic or contracted. Indeed, joint doctrine describes just such a "unified planning system."⁹ In practice, however, no such process exists today; while fully integrated in most respects, the planning process is completely disjointed with regard to contracted capabilities.

The Planning Process

Planning for combat operations in a theater war is primarily the domain of the unified commands.¹⁰ The process is complex and iterative, and varies greatly with the situation. Joint Publication 5-0, "Planning for Joint Operations," lists five separate aspects of the planning process:

- Mobilization Planning
- Deployment Planning
- Employment Planning
- Sustainment Planning
- Redeployment Planning¹¹

Of these, two are of primary interest here: deployment planning and sustainment planning. These aspects are logistical in nature and hold significant potential to impact combat operations. For our purposes, the two will be treated as one, since the implications discussed here apply generally to both.

In the most complete and detailed form of planning, all military forces apportioned to a particular operation plan (and their associated materiel) are prioritized for deployment and assigned required movement assets (e.g., sealift, airlift, port capacity, etc.) through the deliberate planning process using the Joint Operations Planning and Execution System (JOPES). Through this planning process, discrepancies between the planned operation and the arrival of the necessary forces with their critical sustainment ("force closure," in planning parlance) are discovered and resolved. The result is a Time-Phased Force Deployment List (TPFDL) which details the means and timing of the deployment to and within the theater of all people and materiel needed for the prosecution of the war.¹²

Planning For Outsourcing

Not so with outsourced functions. Current practice calls for a "parallel planning process," which means the contracted firm plans for its own deployment, with the assumption that no interference between the plans will occur¹³. If outsourced functions are few and small, this seems a reasonable assumption, as any actual conflicts are likely to be insignificant and relatively easy to resolve in the event. But with the apparent trend toward large-scale outsourcing of theater

sustainment, it is difficult to imagine a successful deployment on the scale of Desert Shield/Desert Storm that would not entail significant competition for strategic lift, port capacity, and onward movement assets. The problems encountered in the Gulf War in this regard, as described by the Army's top logistician at the time¹⁴, have not been fully resolved. Indeed, the 1997 report of the Quadrennial Defense Review refers to increased challenges for mobility forces not yet accounted for in strategic mobility programs.¹⁵ Under the circumstances, the non-interference assumption seems optimistic at best.

In fairness, it should be noted that the operations planning process includes the conduct of a Logistics Sustainability Analysis (LSA), to be completed during the development and maintenance of operational plans. According to Joint Publication 5-0, Doctrine for Planning Joint Operations, "the LSA provides a broad assessment of key logistic capabilities by: documenting the results of a process that ensures an integrated evaluation of key logistic capabilities, identifying logistic support shortfalls and assessing the risks . . ."¹⁶ The risk analysis conducted during this process is detailed, and includes statistically-supported and subjective ratings of risk in some 64 categories of logistic support. The subjective portion of this assessment could include, for any particular function, a risk factor associated with contracted support. In practice, however, a basic assumption of operations plans is that Service-provided contract support (as opposed to contracting of host country nationals during a contingency) will be roughly equivalent to military support. Therefore, no elevated risk is normally associated with these functions during the Logistics Sustainability Analysis.¹⁷

Thus whatever the implications of service outsourcing decisions for theater combat operations, it appears that the theater planning process does not account for them. Instead, they are "tacked on," with unreasonable assumptions of adequacy and feasibility. It seems clear that outsourcing risk is not being managed through prudent planning; rather it is masked by the planning process itself.

THEATER EXERCISES

Aside from thorough planning, the CINC's primary tool for preparing his forces for war is the theater exercise program. Theater exercises provide both an opportunity to train multi-service and multinational forces in joint operations and, just as important, to test concepts and uncover shortfalls in planning¹⁸. As such, exercises represent another avenue for managing the risk

associated with outsourcing theater support functions. At present, however, this possibility is unexplored, as outsourcing considerations are rarely integrated in any meaningful way into theater exercises.

The Exercise Process

Theater-level exercises are highly visible events. They carry a high priority, not only for their training and readiness value, but for their diplomatic and political value as well. (The perennially vigorous objection on the part of North Korea to Exercise Ulchi Focus Lens¹⁹ illustrates their influence). During a full-scale exercise, the CINC and his staff may be very involved, almost to the same degree as in an actual operation.²⁰ As such, the resources available for planning and conducting these exercises are extensive (exercise control staffs, for example, can be quite large; for one major exercise in Central Command's region, it will number in excess of 800 people²¹).

Accordingly, the state of the art in theater exercises is fairly advanced today. Careful, detailed exercise planning produces elaborately scripted scenarios that simultaneously satisfy many training objectives for numerous different "target audiences" among the exercise participants. Constantly updated computer models simulate consumption of materiel, and pre-planned "injection" of unexpected events (such as loss of port access due to attack) provides the "fog and friction" that characterize combat operations. Additionally, a degree of latitude for "free play" by exercise controllers allows them to take advantage of breaking developments in play to satisfy additional training objectives or test failure thresholds.²²

Incorporating Outsourcing

None of this capability has so far been applied to outsourced functions.²³ "Best-case" assumptions are applied to theater functions supplied by contractors: the function is assumed to be in place on time and to remain fully operational at designed capacity throughout the scenario.²⁴

This is partly a by-product of the planning disconnect. The TPFDL is the means by which the logistics portion of the exercise is brought into play; since outsourced functions are not in the TPFDL, they are not automatically included in exercise play. As a result, any simulation of, for example, the absence or non-performance of a contractor would have to be manually injected, either as part of the pre-planned script or as part of free-play.²⁵

Manual injection would be possible, but since outsourcing scenarios are not included in the training objectives, they do not occur either. A case in point is Central Command's exercise Internal Look 98. This large, multinational exercise involves some 164 training objectives, including 20 or more associated with logistic support. None of these relate to the outsourced functions already planned for.²⁶

Like the planning process, then, theater exercises neglect the implications of outsourcing support functions. In doing so, an opportunity is missed to manage the associated risk by training for it and testing the concept for problems. Instead, grossly optimistic assumptions once again lead to inadequate preparation for war and masking of the potential risks of outsourcing theater sustainment.

IMPACTS

In deference to the principle of unity of command and the critical importance of logistics in war, the regional CINC is granted a number of statutory and doctrinal prerogatives with regard to the logistic support of his forces. Impacts on his ability to exercise those prerogatives can be reasonably inferred from the findings described above. In general, we find that they impose serious limitations on the combatant commander, rendering his prerogatives impotent with regard to outsourced support.

Directive Authority for Logistics

The CINC's logistical prerogatives primarily fall under the title, "Directive Authority for Logistics." Joint Publication 3-0, Doctrine for Joint Operations, describes this authority as follows:

The exercise of directive authority for logistics by a combatant commander includes the authority to *issue directives* to subordinate commanders, *including peacetime measures*, necessary to ensure the following: *effective execution of approved operational plans*; effectiveness and economy of operation; and prevention or elimination of unnecessary duplication of facilities and overlapping of functions among the Service component commands. [italics added]²⁷

It will be useful to break this definition down and examine the two constituent parts of most interest for our subject in light of our findings.

Peacetime Measures

The authority to direct peacetime measures to ensure effectiveness in combat presupposes a means of determining what measures to direct. Yet as we have seen, the failure to incorporate outsourced capabilities into theater exercises in any meaningful way eliminates the prime theoretical means of analyzing their implications prior to combat. Certainly, if shortfalls due to outsourcing serendipitously come to notice, the CINC's authority in this regard would be sufficient to direct corrective action. But we would not expect most such problems to come to light in this manner. It seems that, without effective means for testing the effectiveness of outsourced functions, the CINC's authority to direct peacetime corrective measures is largely without force.

Ensuring Effective Operations

In addition to these limitations on his ability to direct action prior to conflict, the lack of CINC involvement in outsourcing decisions fatally weakens his authority to direct logistical measures during the build-up to and conduct of combat operations to ensure their effectiveness. Generally, it is simply too late once the war starts to take effective corrective measures with regard to many aspects of logistical support. This is best illustrated by examining two common types of directives the CINC might wish to issue for this purpose: specifying the composition and disposition of his forces.

Should his estimate of the situation in theater indicate a threat level inconsistent with the presence of a large number of civilian contractors, his options will be limited. The CINC's ability to specify the composition of his forces with respect to the number of civilians in theater will be severely diminished, particularly if force structure offsets have eliminated any alternative source for provision of basic support functions, or where procurement decisions to embed contractor logistics support have provided no such alternative in the first place.

Similarly, the CINC's ability to specify the disposition of his forces will be complicated, if not seriously limited, by service procurement decisions. Required operational capabilities may place essential contract support personnel in much closer proximity to combat than the CINC would otherwise find prudent. His only alternative may be to choose a reduction in capability in order to

minimize the threat to civilians supporting his forces. Clearly, such a choice represents a limitation on the CINC's freedom of action in conducting combat operations.

Thus it appears that, though he has been granted significant prerogatives with regard to logistic support, the CINC is seriously limited in his ability to exercise them for their stated purposes by the problems described in this paper. In many cases, the failure to make use of available analytical tools leaves him with no way of knowing what to direct; in others, the nature of outsourcing makes it simply too late to give effective direction once a crisis has begun.

SUMMARY

To summarize, this chapter has looked at the theater end of the outsourcing issue. It has demonstrated the existence of a basic disconnect between the theater CINC and the Service decision processes that are configuring the forces he will be assigned in the event of a major war in his theater. This disconnect exists in the lack of any mechanism for ensuring congruence between outsourcing decisions and theater logistic concepts, and in the lack of any apparent inclination to design such a mechanism. Further, this chapter has detailed the failure to take available measures to manage the risk inherent in these outsourcing decisions. Specifically, these failures are embodied in a disjoint planning process that treats contracted and organic capabilities separately, and in theater exercises that make grossly optimistic assumptions about contracted support and neglect its inclusion in training objectives. The impact of these findings is severe limitation of the ability of the combatant commander to exercise his logistical prerogatives, at potentially significant risk to his combat operations. Prescriptions for mitigating that risk are presented in the next chapter.

Chapter 5 Endnotes

¹ Mr. James B. Emahiser, personal interview, 6 Nov. 1997. At the time, Mr. Emaheiser was the Principal Deputy Undersecretary of Defense (Logistics) (Acting).

² Lt Col Donna H. Parry, personal interview, 6 Nov. 1997. Lt Col Parry is Deputy Chief, Outsourcing and Privatization Division, Headquarters, U. S. Air Force. The appeal to this statutory charter is a common one in the halls of the Pentagon where, at least from a Service point of view, encroachment in the name of jointness is embodied in the various and sundry joint panels and boards (e.g., the Joint Requirements Oversight Council) that have arisen in this decade with the apparent aim of extending the influence of the joint staffs from requirements definition into the realm of Service programming.

³ 10 US Code; Sections 3013, 3062, 5013, 5062, 5063, 8013, and 8062; 1996. The first two sections listed apply to the Army, the next three to the naval services, and the last two to the Air Force. The specific wording quoted

appears only in sections 3062 (Army) and 5062 (Navy), though similar wording is included in the sections applicable to the Marine Corps and the Air Force. Sections 3013, 5013, and 8013 also charge the Service Secretaries with fulfilling the "current and future operational requirements of the unified and specified combatant commands." Further, under Section 165, "the Secretary of a military department is responsible for the administration and support of forces assigned by him to a combatant command."

⁴ 10 US Code, Sections 162 and 164, 1996. Section 164 empowers the combatant commander with "giving authoritative direction to subordinate commands and forces necessary to carry out missions assigned to the command, including authoritative direction over all aspects of . . . logistics." This restrictive wording does not, however, levy responsibilities for logistics on the CINC, and Section 162 specifically excludes from assignment to the combatant commander "forces assigned to carry out functions of the Secretary of a military department listed in sections 3013(b), 5013(b), and 8013(b)," as detailed above.

⁵ United States, Dept. of Defense, Joint Chiefs of Staff, *Doctrine for Planning Joint Operations* (Joint Pub. 5-0) (Washington: Dept. Of Defense, 1995) II-2.

⁶ Col David R. Edmonds, telephone interview, 6 Mar. 1998. Col Edmonds is assigned to the Joint Staff in the Force Structure, Resources, and Assessment Directorate (J-8).

⁷ Edmonds, 6 Mar. 1998.

⁸ It should be noted that CINC participation in the JWCA process is significant; CINC representatives are present in every panel and provide expertise on theater requirements essential to meaningful analysis. The focus has been, however, as the name suggests, core warfighting capabilities. "Second order" effects like outsourcing impacts have not factored heavily in these analyses.

⁹ *Doctrine for Planning Joint Operations*, viii.

¹⁰ *Doctrine for Planning Joint Operations*, I-6. Specifically, the combatant commander has responsibility for "development and production" of joint operations plans. Overall, he shares "primary responsibility for planning" with the Chairman of the Joint Chiefs of Staff (p. vii), but the Chairman's duties fall generally in the strategic guidance and oversight areas.

¹¹ *Doctrine for Planning Joint Operations*, I-3.

¹² *Doctrine for Planning Joint Operations*, III-3 - III-9. Naturally, this is a vastly simplified description of the planning process. There are actually a number of different types of plans, each with different levels of detail and scope; not all include a TPFDL. However, for the purposes of our subject, this description captures the features of interest.

¹³ LTC Howard J. Killian, personal interview, 21 Jan. 1998. LTC Killian is a logistics planner in the Directorate of Logistics and Security Assistance (J-4/7), Headquarters, US Central Command.

¹⁴ William G. Pagonis and Jeffrey L. Cruikshank, *Moving Mountains: Lessons in Leadership and Logistics from the Gulf War*, (Boston: Harvard Business School Press, 1992) 203.

¹⁵ United States, Dept. of Defense, *Report of the Quadrennial Defense Review* (Washington: Dept. Of Defense, 1997) 34.

¹⁶ *Doctrine for Planning Joint Operations*, II-7.

¹⁷ LTC Anne H. Smith, telephone interview, 4 Mar. 1998. LTC Smith is Chief, Logistics Plans Branch, Directorate of Logistics and Security Assistance (J-4/7), Headquarters, US Central Command.

¹⁸ United States, Dept. of Defense, Joint Chiefs of Staff, *Joint Training Master Plan 1998* (CJCSI 3500.02) (Washington: Dept. Of Defense, 1995) 13, 26.

¹⁹ "1997 Ulchi-Focus Lens Drill Begins," *The Korea Herald* 19 Aug. 1997, *Universe*, Online, Lexis-Nexis, 4 Mar 1998.

²⁰ COL Donald G. Goff, telephone interview, 31 Mar. 1998. COL Goff is Chief, Exercise Plans Division, Directorate for Operations (J-3), Headquarters, US Central Command.

²¹ Goff, 21 Jan. 1998.

²² Goff, 31 Mar. 1998.

²³ Goff, 21 Jan. 1998. It should be noted that as this paper was in preparation, the inclusion of outsourced functions in exercise play began to be addressed at Central Command. As of the publication date, such inclusion is anticipated in the near future.

²⁴ Killian, 21 Jan. 1998.

²⁵ Goff, 31 Mar. 1998.

²⁶ Goff, 31 Mar. 1998. At publication, Internal Look 98 had been canceled. Plans are underway for Internal Look 2000, which may include full exercise play for outsourced functions.

²⁷ United States, Dept. of Defense, Joint Chiefs of Staff, *Doctrine for Joint Operations* (Joint Pub. 3-0) (Washington: Dept. Of Defense, 1995) II-7.

CONCLUSIONS AND RECOMMENDATIONS

Outsourcing as a means of reducing support manpower and costs in the armed forces is here to stay. Moreover, as a source of sorely needed modernization funding, it is a strategy certain to be pursued with vigor by the services. This paper has concerned itself with the danger of taking a good strategy too far. Specifically, it has looked in some detail at current outsourcing trends as they might be expected to play out under the high intensity conditions of a major theater war. In the process, it arrived at findings in four areas:

- outsourcing of basic theater sustainment functions
- maintenance of weapon systems and other high-technology combat systems.
- disconnects between theater CINC prerogatives and the service decision processes related to outsourcing
- use of available risk management tools in theater preparations for war.

From these findings, we derive a number of policy recommendations for further development.

FINDINGS

Finding 1:

There appears to be little combat risk associated with the outsourcing of basic sustainment functions, exemplified by LOGCAP and other similar contracting vehicles currently in force in global contingency operations under low to moderate threat conditions. The risk of non-performance under elevated threat conditions is mitigated by the availability of active and reserve component military units capable of providing similar support if necessary. Provided these alternative forces remain in the force structure, no significant risk will accrue to combat forces. If

some or all of these forces are removed from the force structure, the generally less sophisticated personnel skill levels involved in basic service provision allow for the reasonably rapid assemblage of a uniformed force to reconstitute the capability lost because of a non-performing contractor. Clearly, this option is not without some cost to the commander, but the associated combat risk seems very low. Moreover, historical evidence suggests that non-performance risk for this type of basic support occurs only at higher intensities of conflict. However, one significant risk factor remains: a host of known issues relevant to the presence of contractors on the battlefield, from legal status under international law to contract compliance issues, remain unresolved with evident gaps in policy and regulatory guidance to assist in resolution of these concerns.

Finding 2:

Current defense acquisition policy and practice, on the other hand, holds clear potential for inducing significant combat risk to U. S. forces through the introduction of advanced weapon, intelligence, and command and control systems which will be substantially dependent on contractor maintenance at all echelons. Despite policy caveats addressing the protection of "core capabilities", emerging individual program methodology for providing "cradle-to-grave" maintenance support as a cost-saving measure, as in the Apache attack helicopter and other advanced programs, is likely to lead to the fielding of these systems without an associated generation of trained military maintenance technicians capable of maintaining the leading-edge technologies they incorporate. The sophisticated skills required for maintaining these advanced systems will preclude the rapid generation of a substitute military capability if needed, thus eliminating the contract non-performance hedge we have in the cases of the other basic sustainment functions. Of perhaps broader concern, recently revised defense acquisition policy includes a provision mandating the implementation of such contract maintenance features in all major programs unless the program manager can make a business case for a uniformed maintenance capability. In other words, the burden of proof is on the program manager who wishes to provide a military maintenance capability, and the proof must be provided in business terms(i.e., cost), rather than military terms(i.e., combat risk).

Finding 3:

There is a significant disconnect between the theater CINC and Service decision processes related to outsourcing. Specifically, there is no effective policy or mechanism for ensuring congruence between theater logistic concepts and the means by which the Services support them. In fact, the unified commands do not participate in any significant way in relevant Service decisions. As a result, the CINC is unable to fully exercise his prerogative of directive logistic authority.

Finding 4:

This absence of policy and process extends as well to prevailing practice in theater preparation for war. Neither war planning nor theater exercises take adequate account of the foreseeable problems inherent in Service outsourcing decisions. Consequently, potential impacts on effective execution of operations plans are masked, and the CINC's prerogatives over logistics further eroded.

RECOMMENDATIONS

This paper calls for further development of seven general policy and process initiatives to resolve the problems detailed in these findings and reduce the potential for high combat risk to the theater combatant commander in a major theater war. Each of these recommendations has associated with it varying degrees of potential effectiveness, potential cost, and certain controversy. It has not been the purpose of this paper to analyze solutions to the problems posed by the outsourcing of sustainment functions; rather, it has been to determine whether significant risks existed, and if so, why. Mitigating these risks, and allaying the legitimate concerns of forward commanders who will depend absolutely on the performance of these outsourced functions, remains a fertile field for further study. Regardless, the issues must be faced squarely now. In that light, we offer the following recommendations:

Recommendation 1:

The services retain a capability for uniformed provision of basic sustainment functions in the active or reserve components to provide a hedge against contractor non-performance in a major

theater war. This should be made a condition for approval of major service outsourcing decisions impacting functions deployable to a theater of war.

Recommendation 2:

DoD should expand existing efforts to formulate a comprehensive, defense-wide program to resolve the host of legal, administrative, and logistical issues relevant to the presence of large numbers of civilian contractors on the battlefield. We believe that only a comprehensive program to resolve these issues will bring about real progress toward ensuring that contracted capabilities arrive in theater in a timely fashion and with some assurance that they will be able to remain as long as needed and perform their critical functions in the place and manner required.

Recommendation 3:

We recommend that the services, in particular the Army and the Marine Corps, consider actions to mitigate the risks and reduce the uncertainties surrounding the attainability of a forward deployed, contract civilian maintenance capability under high-intensity threat scenarios. We suggest the following policy alternatives as a basis for further study:

- Consider specific delineation of the level of risk that civilian contract personnel will be expected to accept, within the provisions of the particular contract itself. Where appropriate, broaden the existing generic "war clause" to include language specifying that individual contractors will be required to perform contracted tasks despite risks of substantial materiel loss, injury, or death due to hostile action. Provide this feature as a basis for the contracted organization in hiring individual personnel, determining wage scales, and contract bidding.
- Consider requesting legislative action to amend U.S. law to provide for the extension of certain provisions of the Uniform Code of Military Justice to essential civilians in overseas operational areas, under emergency conditions short of a declared state of war. This could provide a legal basis for ensuring that critical personnel will be available to perform essential functions under worst-case scenarios.
- Consider requiring that individuals contracted to perform key forward maintenance functions be members of the mobilizable Individual Ready Reserve, to be activated and left in place in the event conditions deteriorate to the point that they could not remain

in the area as civilians. In the absence of a change to US law, this action could provide a legal basis for bringing crucial personnel under military authority. Again, this could be incorporated into contract hiring and contingency provisions.

Recommendation 4:

We recommend the unified commands be required to specify acceptable parameters for contractor presence on the battlefield (numbers, proximity to front, etc) under the various conditions detailed in the war plans under his purview. These parameters should be summarized and communicated to the Services via the component commands. Further, combat risk due to outsourcing should be considered for review in the Joint Warfighting Capabilities Analysis process. If that process indicates unacceptable levels of risk associated with Service programs, corrective actions should be recommended in the Chairman's Program Review for inclusion in the Defense Planning Guidance. Compliance should be explicitly evaluated in the Chairman's Program Assessment.

Recommendation 5:

DoD should modify the latest defense acquisition policies related to contractor-provided logistic support for advanced combat systems. Acquisition policy should require consideration of CINC-derived parameters regarding contractors on the battlefield in acquisition program strategies, with the aim of ensuring the full consideration of combat risk versus best business practice as a criterion in program life cycle support decisions.

Recommendation 6: With regard to the war planning process:

- JOPES should be modified to allow fully integrated deployment planning for outsourced functions, to include TPFDL generation and all other features normally applied to military unit deployments.
- Outsourcing contracts should require full contractor participation in the deliberate planning process for all plans they may support.

Recommendation 7:

With regard to theater exercises:

- Outsourced functions should be made a “CJCS Commended Training Issue” in the next edition of the Joint Training Master Plan of the Armed Force of the United States (CJCSI 3500.02).
- Regional CINCs should include outsourced logistics as a training objective in theater-level exercises, and ensure that realistic contingencies related to large-scale outsourcing of theater logistic functions, including contractor non-performance, are included in exercise scenarios.
- Joint theater warfighting models should be modified to provide automated play for outsourced functions. Full support should be provided to current efforts to develop requirements specifications for revised models that include detailed, realistic simulations of contracted support and its attendant vulnerabilities.

CONCLUSION

As always in times of relative peace, maintenance of the armed forces of the United States becomes almost exclusively a resource issue. The combat risk associated with alternative solutions, which should always be a heavily weighted factor in the resource equation, is often dismissed at such times. The imprudence of such an approach to national security often becomes evident only when the next war comes to pass, and then at very high cost. The outsourcing strategies of the armed services promise to yield some relief from the resource constraints of today and tomorrow. But in our headlong pursuit of that relief, we must not lose sight of the end for which these means are sought. Fortunately, the problem is not insoluble. Despite the fact that certain aspects of the current outsourcing trend raise the specter of high combat risk for our forces in a major theater war, a handful of modest initiatives diligently pursued, as detailed in this paper, offer a path to solid outsourcing decisions with real savings and, of greatest importance, no significant increase in the combat risk associated with a real war in a distant place.

Appendix A

Outsourcing Policies and Guidelines

A range of published policy and regulatory guidelines govern the privatization and outsourcing of government and military functions. We refer in this appendix only to those guidelines applicable to the logistical functions covered in this paper. They are organized below by policy source.

CONGRESSIONAL GUIDANCE/US LAW

A significant amount of legislation in recent years has addressed the subjects of outsourcing and privatization of military activities. The vast majority has concerned the privatization of depot-level functions, imposing an array of restrictions and constraints on the degree to which the services can divest themselves of depot activities.

The principal provisions which address outsourcing and privatization are Sections 2464, 2466, and 2469 of Title 10, United States Code. Section 2464 addresses core logistics functions and limitations on contracting, stating in part:

Section 2464. Core logistics functions

- (a) Necessity for Core Logistics Capability. - (1) It is essential for the national defense that Department of Defense activities maintain a logistics capability (including personnel, equipment, and facilities) to ensure a ready and controlled source of technical competence and resources necessary to ensure effective and timely response to a mobilization, national defense contingency situations, and other emergency requirements.
- (2) The Secretary of Defense shall identify those logistics activities that are necessary to maintain the logistics capability described in paragraph (1).

The language in paragraph (a)(1), specifying that DoD “maintain a logistics capability...to ensure a ready and controlled source of technical competence and resources necessary to ensure effective and timely response to...national defense contingency situations” clearly provides to DoD, and by extension the services, the legal basis for determining the degree to which they incorporate outsourcing into the logistics infrastructure. Additional language in this section

specifically prohibits the services from contracting functions determined to be “core capabilities”, unless waived by the Secretary of Defense and reported to Congress.

In practice, Congress has given the Department of Defense reasonably wide latitude in both the determination of core capabilities and the degree to which forward deployed logistics activities are outsourced.¹ Most Congressional focus has been on the privatization of CONUS depot-level functions, and up to this point there has been little to no Congressional dissatisfaction expressed with the pace or extent of overseas or deployable outsourcing initiatives.

Sections 2466 and 2469 exclusively address depot-level maintenance and workloads, and have only a marginal impact on the outsourcing of deployable logistics capabilities.

THE EXECUTIVE BRANCH

The principal source of executive guidance for outsourcing and privatization is Office of Management and Budget Circular A-76, “Performance of Commercial Activities”.² Originally published in 1966, this document since has been revised periodically, last in March, 1996. Based originally on the premise that the government should not be competing directly with private industry, A-76 guidelines focus on reliance on the private sector for the performance of commercial activities. The exceptions are in the cases of cost (i.e., for some reason a government entity can perform the task more cheaply) or a compelling rationale derived from such public concerns as the interests of national defense.

Current A76 guidelines require that outsourcing decisions balance three basic goals:

- Maintain public control over “inherently governmental” activities
- Avoid interference with the civilian market
- Use government and national resources efficiently

The guidelines specify a number of procedures designed to bring about these objectives, applicable to any contract requiring 11 or more civilian workers. They are based on comparing a government “most efficient organization” cost with bids or offers from the private sector.

The OMB guidelines leave considerable latitude to the various executive departments in the determination of which activities are “inherently governmental”. Though OMB has generated significant pressure on all departments to maximize the use of the A-76 process to privatize various functions, it has not gone beyond this basic guidance in trying to expand or limit the specific activities which the Department of Defense considers viable candidates for outsourcing.³

Moreover, a number of legislative actions over the years, including an outright moratorium contained in the National Defense Authorization Acts for 1993 and 1994, have limited Department of Defense use of the A-76 process to outsource support activities.⁴

THE DEPARTMENT OF DEFENSE

The Department of Defense (DoD) has incorporated the impetus towards privatization and outsourcing in a number of policy statements and guidelines. These have served broadly to encourage the services to expand the degree to which they commercialize support activities. Three of these sources of guidance relevant to our thesis are covered here.

DoD Directive 4151.18, Maintenance of Military Materiel, "establishes policy and assigns responsibilities for the performance of DoD materiel maintenance. Though primarily focused on the commercialization of CONUS-based, depot level activities, it acknowledges the performance of maintenance support for deployed forces by contract organizations. The only constraint it imposes on the services is that this support "must be coordinated with other DoD components operating the same or similar equipment, when practical."⁵ Beyond this understandable quest for efficiency, aspects of logistics support contracting are left to the services.

A second source of published DoD outsourcing policy guidance is DoD Directive 5000.2-R, Mandatory Procedures for Major Defense Acquisition Programs. This directive outlines the wide array of procedures that have grown to be part of the defense procurement environment over the years. Updated periodically, the latest revision directs acquisition Program Managers to develop an "Acquisition Strategy" for the particular system they are procuring, which takes the acquisition process "from program initiation through post-production support."⁶ It focuses this strategy on "methodologies to acquire *and operate* affordable DoD systems by setting aggressive, achievable cost objectives and managing achievement of those objectives" (italics added). This guidance is expanded in the provisions of the directive which cover the support for procured systems; specifically:

It is DoD policy to retain limited organic core depot maintenance capability to meet essential wartime surge demands, promote competition, and sustain institutional expertise. Support concepts for new and modified systems shall maximize the use of contractor provided, long-term, total life-cycle logistics support that combines depot-level maintenance for non-core-related workload along with wholesale and selected retail materiel management functions. Best value over the life cycle of the weapon system and the use of existing contractor capabilities, particularly while the system is in

production, shall be key determinants in the overall selection process. The PM shall provide for long-term access to data required for competitive sourcing of systems support.⁷

While the guidance contained in these directives opens the door to the outsourcing of sustainment functions, the real *incentive* for outsourcing is provided to the services in guidance which allows them to retain the savings accrued through outsourcing for use in modernizing their force structure. This guidance is contained in a 1996 memorandum to the service secretaries from then-Deputy Secretary of Defense John White, which states: "I expect each of you to make outsourcing and privatization a priority within your Department...Resources saved through these initiatives during the POM process will not be decremented from your outyear budgets and should instead be applied to your modernization priorities." The memorandum is attached at Annex 1.

The service perceptions of the urgency of their force modernization requirements, confronted simultaneously with an increased post-Cold War operational tempo and decreased budgets, do not require elaboration here. It is sufficient to state that the prospect of retaining savings achieved through increased efficiencies in sustainment functions for use in modernizing their forces provides an exceptionally powerful incentive to service leadership. This inducement has led to a relatively aggressive approach to outsourcing initiatives, to a degree overcoming inherent reservations among senior leaders, and thus producing a willingness to consider a deeper penetration of outsourcing into the logistics arena than they might otherwise have been inclined to contemplate. It has provided the springboard for the service initiatives discussed within the body of the paper.

Appendix A Endnotes

¹ Lara Roholt, House National Security Committee staff, personal interview, 5 November 1997.

² U.S. Government, Office of Management and Budget, Circular A-76, *Performance of Commercial Activities*, March 1996

³ Joe Alexander, staff of the Under Secretary of Defense for Acquisition and Technology, personal interview, 5 November 1997.

⁴ U. S. Government, General Accounting Office, *Base Operations: Challenges Confronting DOD as it Renews Emphasis on Outsourcing* (GAO/NSIAD-97-86), March, 1997, pp. 2-3.

⁵ Department of Defense, Directive 4151.18, *Maintenance of Military Materiel*, August 1997

⁶ Department of Defense, Directive 5000.2-R, *Mandatory Procedures for Major Defense Acquisition Programs*

⁷ Department of Defense, Directive 5000.2-R, *Mandatory Procedures for Major Defense Acquisition Programs*, 28 March 1998, para 3.3.8

Appendix B

Contractors as a Source of Risk

As substitutes for uniformed service members, contractors bring advantages and disadvantages to the battlefield; however, on balance, their presence increases operational risk by constraining the application of the logistic principles. An example from Operation Desert Shield/Desert Storm (ODS/DS) will show the types of problem that can arise when civilian contractors are on the battlefield.

Confusion arose over an issue of whether it was legal to issue a civilian a 9mm sidearm for self-defense. The situation developed during the counterattack when an AH-64 Apache helicopter was downed in a forward support area. The forward movement of a key civilian would have assisted both the unit and intermediate maintenance in restoring the aircraft to a mission ready status. The civilian agreed to deploy forward if he could be issued a sidearm for self defense and wouldn't go without it. The unit commander was willing to issue it to him, but the civilian questioned whether it was legal for the Army to do so. A request was made through personnel and legal channels for guidance not only on the sidearm issue, but also, on what disciplinary steps could be taken if the individual refused to go forward. In the end, conflicting guidance was given to the commander that was only resolved later.¹ The immediate impact was that the uncertainty that surrounded this case led to a delay in providing the needed maintenance--less responsive support.

The example touches many of the inherent characteristics that contribute to potential contractor risk: the lack of physical security, dual chains of command/ authority, uncertain legal status, unknown personnel readiness, and a supply/ equipment responsibility question mark.

1. Physical Security

Contractors are vulnerable to attack by any of the ways listed in the threats section of this work. Lacking any means of self-defense, they depend upon military units and individuals to provide for their protection. They can contribute to passive defensive measures through dispersion, camouflage, and other means; however, in certain situations, i.e. depending upon the

host country's status of forces agreement (SOFA), they may be prohibited from other means such as owning and carrying arms. They are particularly vulnerable to collateral damage from attacks against nearby targets and units either through terrorist act or long-range indirect fires.

The responsibility for providing contractors with physical protection is usually stated in the contract. For example, the Logistics Civil Augmentation Program (LOGCAP) contract addresses potential contractor risk with the blanket statement:

The Government will provide necessary **physical security** for Contractor personnel acting within the scope of their employment, throughout the Theater of Operations (TO). This includes but is not limited to the security at Contractor's work sites, during movement throughout the TO (i.e., between work sites and living and messing areas) and, if deemed appropriate by the in-theater ACO, ingress and egress to the TO.²

With this general, broad statement, the contractor's physical security can be subject to interpretation on a case-by-case basis. Potentially, it can become a contract compliance issue that is left to enforcement or resolution through a separate contract administrative chain of compliance.

2. Chain of Command/Compliance

Commanders have no direct authority or command and control over contractors. During a conflict, organizational authority flows from two separate basis through two separate organizational structures.

Soldier duty performance is based upon an oath of allegiance, assignment to a position with prescribed duties, and a well-defined command structure which ensures their performance through organizational discipline. Good order and discipline are defined in the military's Uniform Code of Military Justice. In contrast, a contractor's performance is based upon an employment contract relationship. Organizational discipline for the contractor is a part of the company's personnel policies. Along with a set of formal and informal company work rules, each contract has an ad hoc organizational structure with supervision embedded within it. The fundamental dichotomy between these systems was noted in one unpublished study which stated: "... The military normally follows these well-defined set of rules for its personnel and organizational relationships. ... there is a less defined set of rules for integrating civilians into military operations."³

Problems, when they occur, are usually found at points of interaction between the two

different systems and are usually grounded over contract interpretation . Because contractors are governed by a separate chain of command which flows from the Contracting Officer Representative (COR), local military commanders do not have the authority to order contractors to perform any action which is not covered by the scope of the contract. This issue surfaced during OJE where contractors were directed "to perform work that the administrative contracting officer (ACO) didn't authorize and that weren't covered by the contract."⁴

Demonstrating the degree of misunderstanding that may exist between the two lines of authority was the finding that during ODS/DS: "We observed that some military commanders/staffs want legal authority to compel civilians to fulfill their commitment to deploy and to stay in their assigned location until relieved, which would be akin to the military's authority over soldiers."⁵

Overall, this problem can be characterized as a lack of clear understanding of roles and responsibilities by each partner-- military and contractor, which results in a lack of clear command and control. As stated previously, incomplete and inaccurate information can lead to increased risk, and this is even more so when there is a higher level of threat present. In the worst case, we don't want to have to stop and make contract administration determinations during the confusion of battle, or to have to try and determine whether we even have the authority to do so. The bottom line is that this unclear line of command and control (or administration) creates additional risk by adding a layer of increased complexity. Ultimately, it reduces flexibility and responsiveness.

This complexity idea is further validated by a finding from U.S. operations in both Somalia and Haiti that " . . . the Army . . . was supporting its sister services as well as multi-national forces, resulting in confusion as to appropriate chains of command."⁶

3. Legal Status

Even though it is U.S. policy that contractors are not combatants, their legal status in theater can be very confusing since there is a fundamental question of whether they are members of the force or not.⁷ Both combatants and noncombatants are entitled to protection as prisoners of war under both the Hague and Geneva Conventions if they are captured while accompanying the armed forces but are not actually members; however, their status may depend upon the type and level of support they are providing to the armed forces.

In their study about the increasing use of contractors in theater support roles, the Army Material Command found that where ". . . civilians augment the Army in areas where technical expertise is not available or is in short supply, they in effect become substitutes for military personnel who would be combatants."⁸ and further, "The law of war does not clearly define those taking part in hostilities, but generally they can be defined as civilians accompanying an armed force in a support role."⁹

The sensitivity of this issue can be demonstrated by taking our example of the civilian aircraft maintenance technician a bit further. If the individual had been issued a sidearm and if the team came under attack while performing the required maintenance, it is likely that he would have defended himself. By doing so, he may have jeopardized his status as a noncombatant for the rule is that civilians ". . . who take part in hostilities may be regarded as combatants and thus may be subject to attack or injury incidental to an attack on military objectives."¹⁰

The other consideration for a contractor's legal status concerns standards for their civil behavior within a theater. If there is a status of forces agreement (SOFA) in effect between the host country and the U.S., host nation laws must be adhered per the SOFA or the contractors may be subject to local law enforcement. Avoiding trouble by ensuring widespread knowledge of appropriate behavior according to their legal status and responsibilities was the idea behind two recommendations from a study on contractor involvement in OJE which identified the importance of "Pre-establish[ing] contractor employee conduct standards and means of enforcement,"¹¹ and ensuring that the contractor "knows and complies with host nation standards, especially if they are more strict than Department of Defense (DoD) standards."¹²

4. Readiness Factors

All facets of contractor readiness are based on the expectation of a "good faith" execution of the contract. This includes categories of personnel readiness for medical, legal, financial, and other concerns. In contrast, military readiness is measured by a monthly reporting system which focuses on near-term operational issues. It assesses a unit's capability to perform the missions and tasks for which it was organized. Incorporated within the system are assessments of individuals' basic qualifications to perform their primary jobs and other general readiness factors such as weapons qualification, physical conditioning, medical condition, etc. Unit equipment levels, its serviceability and other readiness factors are intensively monitored. Through these well-

established management tools, military readiness is actively managed and maintained at the highest possible levels.

If contractor logistical support is to be fully responsive to service needs, there are a host of readiness factors that could be addressed in contractor employee community the same as they are in the military. These may include: "weapons training, chemical and biological training, legal issues, laws of war, rules of engagement, and the customs and courtesies of the host country." ¹³ Under current rules, their readiness to perform their duties and endure the conditions found within a theater are a matter of faith. In the section of this paper that discusses contractor performance in Operation Desert Shield/Storm, we find that this faith was not totally sufficient.

5. Support Factors

Like readiness factors, contractors must plan for support requirements prior to their deployment and sustainment while they are in theater. Prior to the deployment, uniform or special equipment requirements including: defensive chemical clothing, uniforms, weapons, and other field-type gear need to be identified, procured and trained with. Family support services need to be established for civilians similar to the military's approach. Other considerations include travel procedures, pay and compensation, life and medical insurance policies impacts, life sustainment functions, and medical support.

In certain cases, provision of these services should be integrated within the theater structure providing them to military members. This will serve to limit redundant systems which compete for resources. Unless provided for, these support factors provide another a source of uncertainty.

SUMMARY

The example given at the beginning of this chapter touched on most of the factors that lead to increased risk from contractor personnel. The primary issue was consideration for the physical security of the civilian and his inability to move freely around the battlefield without adequate protection. The military chain of command was uncertain about whether they could order the individual forward, and if he refused, what steps were available to them to discipline him. The legal status of the individual had to be clarified. The supply system would have had to provide the sidearm and the individual would have to be trained on the proper use of the weapon before it

could be issued to him. This is a known readiness factor for the military. This example demonstrates the overall complexity that can accompany contractors on the battlefield; and how this complexity can lead to less flexible, less responsive support.

Potential risks based on these characteristics constrain the freedom with which log planners are able to mix and match the logistic principles to optimize the theater support package. These risks may be low, moderate, high, or extremely high depending upon the situation. What can be stated is that proximity to the enemy or other hazard amplifies the level of risk and further constrains the commander in his use of contractor logistic assets. For instance, contractors who are in a rear area may be considered low risk; however, under the conditions a non-linear threat such as a terrorist attack or deep strike, this may quickly change to a higher risk category. The contractor may be unable to perform vital mission tasks, and ultimately, may choose to default on the contract. Without necessary mission support, the combat force may face significantly increased operational risk.

It leads us back to our original question: on the non-linear battlefield, where risk is much higher than in a contingency operations, are we are building an unhealthy dependence upon contractor personnel in peacetime that may haunt us if we ever fight a major theater war?

Appendix B Endnotes

¹ Center for Law and Military Operations, Judge Advocate Generals School, *A Judge Advocate's Guide to the Battle Command Training Program* (Charlottesville: 1996) 221-223

² LOGCAP Contract with Brown and Root, (1992) C-13

³ John R. Bondanella, RAND, telephonic interview, 12 February 1998

⁴ U.S. Army Audit Agency, *Contractor Support for the Logistics Civil Augmentation Program: Operation Joint Endeavor* (Alexandria: U.S. Army Audit Agency, 1996) 19

⁵ Bondanella

⁶ BDM, Federal, Inc., *Operational and Organizational Implications of the Logistic Civil Augmentation Program and Army Total Asset Visibility on Operation Joint Endeavor and Future Operations Other Than War, Final Report* (McLean: 1996) 4-3

⁷ Major Paul Kantwill, personal interview, 12 November 1997

⁸ Larry L. Toler, "Civilians on the Battlefield," *Army Logistician* Nov.-Dec. 1994: 5

⁹ Toler 5

¹⁰ Toler 4-5

¹¹ BDM Federal 4-3

¹² BDM, Federal 4-3

¹³ Toler 6

Appendix C

Offsetting Contractor Risk with the Reserve Components

The risk of contractor non-performance under elevated threat conditions is mitigated by the availability of active and reserve component military units capable of providing basic logistics functional support if necessary. Reserve Component (RC) forces give us similar capabilities to the active duty forces with a simple tradeoff in readiness for cost. In peacetime, they serve as a cost-effective, strategic hedge against an unknown future. However, there are political sensitivities and economic considerations involved with their activation. The answer to the question whether reserve forces are a viable alternative depends upon their availability and whether there is the political willingness to use them.

Provided these alternate forces remain in the force structure, less significant logistic risk will accrue to combat forces especially during the early stages of a conflict. However, with the end of the Cold War, the services have come under increasing pressure to reduce force structure.

An examination of the changes in both active duty and reserve component force structure shows a decreasing trend overall and a greater reliance on the RC. Today, the RC would provide about 70 percent of the planned combat support and combat service support for two full-scale major theater wars.

In the near term, there is a mismatch in how reserve forces are aligned to missions. The Army's future force planning system has identified a serious shortfall in combat support (CS) and combat service support (CSS) forces for the two major theater war scenario. This shortfall is in the range of 58,000 soldiers.¹ There has been an RC redesign plan to eliminate three-quarters of this shortfall; however, its implementation is contingent upon funding.

This information indicates that even though our strategy is based upon the capability to fight two major theater wars simultaneously, we are becoming more and more dependent upon the use of reservists and contractors to provide logistic sustainment functions. As was noted in a recent study for the Army Deputy Chief of Staff for Operations, LOGCAP was used in OJE to augment shortfalls in CS/CSS due to "force capacity constraints, force structure shortfalls, and the decision not to activate all required CS/CSS forces from the reserve component (RC)."² The study further states:

Force draw downs have led the Army to cut force structure deeply in the CS/CSS areas. Because contingency operations have recently become more the norm than the exception, the Army may have actually cut the CS/CSS force structure too deeply. Due to the decline in the strength of CS/CSS forces, recent contingency operations have seen a definite reliance on the LOGCAP alternative.³ This void is being filled by contractors.

Appendix C Endnotes

¹ Association of the United States Army, *An AUSA National Security Notebook: The Quadrennial Defense Review* (Arlington:1997)

² BDM Federal, Inc., *Operational and Organizational Implications of the Logistic Civil Augmentation Program and Army Total Asset Visibility on Operation Joint Endeavor and Future Operations Other Than War, Final Report* (McLean: 1996) 2-2

³ BDM Federal 2-1

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