

**STRATEGY
RESEARCH
PROJECT**

The views expressed in this paper are those of the author and do not necessarily reflect the views of the Department of Defense or any of its agencies. This document may not be released for open publication until it has been cleared by the appropriate military service or government agency.

**CONTRACTORS IN SUPPORT OF JOINT VISION 2020 FOCUSED
LOGISTICS: PERSPECTIVES AND POSSIBILITIES**

BY

**LIEUTENANT COLONEL RONALD G. ISOM
United States Army**

**DISTRIBUTION STATEMENT A:
Approved for Public Release.
Distribution is Unlimited.**

USAWC CLASS OF 2002



U.S. ARMY WAR COLLEGE, CARLISLE BARRACKS, PA 17013-5050

20020806 383

USAWC STRATEGY RESEARCH PROJECT

**CONTRACTORS IN SUPPORT OF JOINT VISION 2020 FOCUSED LOGISTICS:
PERSPECTIVES AND POSSIBILITIES**

by

LTC Ronald G. Isom
U.S. Army

COL Don Yates
Project Advisor

The views expressed in this academic research paper are those of the author and do not necessarily reflect the official policy or position of the U.S. Government, the Department of Defense, or any of its agencies.

U.S. Army War College
CARLISLE BARRACKS, PENNSYLVANIA 17013

DISTRIBUTION STATEMENT A:

Approved for public release.
Distribution is unlimited.

ABSTRACT

AUTHOR: LTC Ronald G. Isom

TITLE: Contractors in Support of Joint Vision 2020 Focused Logistics: Perspectives and Possibilities

FORMAT: Strategy Research Project

DATE: 09 April 2002

PAGES: 53

CLASSIFICATION: Unclassified

Over time, an increasingly diverse team has executed U.S. military operations. From the Revolution to recent operations in the Balkans, the efforts of uniformed military personnel, Department of Defense (DoD) civilians and contractors have been synchronized to execute the U.S. National Security Strategy. This trend will continue in operations conducted under the Joint Vision 2020 concept, the benchmark for how the U.S. military will fight future wars. Operational concepts under Joint Vision 2020 include dominant maneuver, precision engagement, focused logistics, full dimensional protection, with information dominance and innovation as enablers. This study examines the requirements of the six tenets of Joint Vision 2020 Focused Logistics and proposes changes that must be made to contracting policy, programs, doctrine, organization, and training to support the Focused Logistics concept. It does so by outlining the history of contractor support, the essentiality of contractor support, and the risks associated with contracting support to U.S. military operations. In providing a final analysis, it addresses four key challenges facing contractor support of focused logistics: 1) improving the responsiveness and flexibility of contracting; 2) balancing requirements for contracting support against risk; 3) balancing costs against operational requirements; and 4) incorporating JV2020 contracting into military doctrine, education and training. This study examines contractor support to operational military missions but does not cover base operations or installation contracting.

TABLE OF CONTENTS

ABSTRACT	III
PREFACE.....	VII
LIST OF ILLUSTRATIONS.....	IX
LIST OF TABLES	XI
THE CHALLENGE OF JOINT VISION 2020 FOCUSED LOGISTICS	3
PERSPECTIVES ON CONTRACTING SUPPORT TO THE U.S. MILITARY.....	5
HISTORICAL CONTRACTING SUPPORT TO THE U.S. MILITARY	5
CONTRACT SUPPORT TO CURRENT U.S. MILITARY LOGISTIC OPERATIONS	8
Contracting Policies	8
Joint Doctrine on Contracting Support of Military Operations.....	9
DoD and Service Programs for Contracted Support of Military Operations.....	10
WHY CONTRACTING SUPPORT TO JV2020 FOCUSED LOGISTICS IS ESSENTIAL....	12
Maximizing Military Resources through Contracting	12
Increasing Weapon System Complexity	13
THE RISKS OF CONTRACTING SUPPORT TO JV2020 FOCUSED LOGISTICS	14
Contractor Responsiveness to Military Operations	15
Contractor Failure to Support Military Operations	16
Risk Analysis	17
POSSIBILITIES FOR FUTURE CONTRACT SUPPORT TO U.S. MILITARY	
OPERATIONS	18
ANALYSIS	18
Improving Responsiveness and Flexibility of Contracting.....	19
Balancing Requirements for Contracting Against Risk	21
Balancing Cost Against Operational Requirements.....	23
Incorporating JV2020 Contracting into Doctrine, Education and Training.....	24

CONCLUSION.....	26
ENDNOTES	27
BIBLIOGRAPHY.....	37

PREFACE

I thank COL Don Yates, my project advisor at the U.S. Army War College, as well as LTC Jeff Willey and LTC Tony Bell, fellow students at the U.S. Army War College, Class of 2002, for their invaluable assistance in the preparation of this strategy research project - RGI.

LIST OF ILLUSTRATIONS

FIGURE 1. CONTRACTOR RISK ANALYSIS MODEL	17
FIGURE 2. MILITARY CONTRACTING RISK ANALYSIS	22

LIST OF TABLES

TABLE 1. DELINEATION OF DOD FUNCTIONS	2
TABLE 2. RATIO OF CIVILIANS TO CONTRACTORS DURING MAJOR U.S. WARS/CONFLICTS.....	5
TABLE 3. TYPES OF CONTRACTORS IN THE BATTLESPACE.....	9

CONTRACTORS IN SUPPORT OF JOINT VISION 2020 FOCUSED LOGISTICS: PERSPECTIVES AND POSSIBILITIES

In all countries engaged in war, experience has sooner or later pointed out that contracts with private men of substance and understanding are necessary for the subsistence, covering, clothing, and moving of any Army.¹

- Robert Morris, U.S. Superintendent of Finance, 1781

The 2001 Quadrennial Defense Review (QDR) Report sets the stage for the transformation of America's Armed Forces. It directs important changes in paradigms for force planning, defense strategy and the global posture of the U.S. military. Continuing business as usual within the Department of Defense (DoD) isn't viable given the future national security challenges facing the nation. Transformation must successfully address these future challenges. Increases in the variety of threats and the emergence of state/non-state adversaries with symmetric and asymmetric capabilities require the U.S. military to develop greater capabilities to operate in joint, multinational and interagency environments across the military spectrum of conflict.²

The QDR envisions a military with greater speed, flexibility and a more eclectic mix.³ Accordingly, it must effectively integrate emerging technologies to enhance weapon systems, intelligence systems, command and control nodes and other key operating systems.⁴ While meeting these requirements, the operational tempo (OPTEMPO) of the military will likely remain high, even as force levels remain constant or decrease.

Resources required for the future execution of both transformation and the national security strategy may be subsumed by increasing needs for domestic entitlement programs.⁵ In turn, this may undermine transformation efforts. The National Defense University QDR Working Group 2001 offers a potential solution for this:⁶

... the Administration must examine ways of both reducing the peacetime demands placed on the Armed Forces and increasing the availability of forces ... it should consider the following options ...: change the criteria for intervention or participation in small scale contingencies; increase use of civilian contractors (and) non DoD government agencies ...

To facilitate transformation, the 2001 QDR directs the revitalization of DoD by streamlining organizations, modernizing DoD-wide business approaches, consolidating/modernizing base infrastructure, and focusing DoD owned resources on direct warfighting functions.⁷

To define the parameters for focusing DoD resources on warfighting functions, the QDR categorizes these functions as indicated in Table 1:⁸

- Functions directly linked to warfighting and best performed by the federal government. In these areas, DoD will invest in process and technology to improve performance.
- Functions indirectly linked to warfighting capability that must be shared by the public and private sectors. In these areas, DoD will seek to define new models of public-private partnerships to improve performance.
- Functions not directly linked to warfighting and best performed by the private sector. In these areas, DoD will seek to privatize or outsource entire functions or define new mechanisms for partnerships with private firms or public agencies.

TABLE 1. DELINEATION OF DOD FUNCTIONS

Contracting support of the military serves as both a key component and enabler of transformation. The type of support required for future military operations must be measured against Joint Vision 2020, the benchmark concept for how the military will fight. While the National Military Strategy requires the military to shape the international environment, respond to a full spectrum of crises to protect U.S. interests, as well as to prepare for an uncertain future, JV2020 focuses on the future.⁹ JV2020 prepares for an uncertain future by outlining the attributes the military must possess to dominate across the spectrum of conflict.¹⁰ It encompasses four operational concepts and two enablers: Dominant Maneuver, Precision Engagement, Full Dimensional Protection, and Focused Logistics, with Information Superiority and Innovation as overarching enablers. Since many logistics functions reside in the latter two categories in Table 1, this strategy research project concentrates on the Focused Logistics operational concept of JV2020.

This study examines the requirements of the six tenets of Joint Vision 2020 Focused Logistics and proposes changes that must be made to contracting policy, programs, doctrine, organization, and training for future contracting to support the Focused Logistics concept. It does so by outlining the history of contracting support, the essentiality of contracting support, and the risks associated with contracting support to U.S. military operations. In providing a final analysis, it addresses four key challenges facing contracting support of Focused Logistics.

1. Improving the responsiveness and flexibility of contracting.
2. Balancing requirements for contracting support against risk.
3. Balancing contracting costs against operational requirements.

4. Incorporating JV2020 contracting into military doctrine, education and training.

This study encompasses those operations for which U.S. military forces are deployed and does not address home station or base operations contracting. For purposes of this strategy research project, the word "contractors" refers to civilians contracted directly by or for support of U.S. military operations, while "civilians" includes contractors, DoD civilians and other civilians in support of military operations. The word "military" refers to the U.S. military unless otherwise stated and "Services" refers to the departments of the DoD, to include the U.S. Army, U.S. Air Force, U.S. Navy and U.S. Marine Corps.

THE CHALLENGE OF JOINT VISION 2020 FOCUSED LOGISTICS

Across the spectrum of conflict, logistics significantly impact the ability of the military to rapidly deploy and concentrate forces. Therefore, logistics directly impact the range of options available to the U.S. National Command Authority.¹¹ Assessments from Desert Shield/Storm¹² and other operations suggest that while U.S. military logistical organizations and processes are immensely capable, they also lack the attributes required for the support of future military operations.¹³

Joint Vision 2020 (JV2020) provides the template for future warfighting that prepares the military to operate in an uncertain future.¹⁴ The objective of JV2020 is a force dominant across the spectrum of conflict – persuasive in peace, decisive in war and preeminent in any conflict.¹⁵

The strategic context of JV2020 has three main aspects. First, the U.S. will have global interests and will be engaged with a variety of actors. In most military operations, the U.S. will operate jointly as part of a coalition and interagency team.¹⁶ Second, potential adversaries will have access to the same technologies as the U.S.¹⁷ Third, potential adversaries will respond to U.S. military capabilities with asymmetric warfare, the employment of high technology forces, and potentially use of weapons of mass effect (WME).¹⁸

The operational concepts to achieve JV2020 are Dominant Maneuver, Precision Engagement, Focused Logistics and Full Dimensional Protection.¹⁹ The primary enablers to achieve transformation under JV2020 include the continued development and proliferation of information technology and the ability of the military to integrate future innovation.²⁰

Dominant Maneuver envisions a military with unmatched speed and agility in positioning and repositioning tailored forces from widely dispersed locations to quickly and decisively achieve operational objectives. Under this concept, the U.S. commander rapidly masses forces and effects to gain positional advantage, influence potential adversaries and reassure friends.²¹

Precision Engagement envisions a system of systems that enables commanders to engage adversaries using a variety of kinetic and non-kinetic effects. It links sensors with delivery systems and effects to enable the commander to shape the battlespace and protect forces.²²

Full Dimensional Protection synthesizes a wide range of measures throughout the battlespace to protect personnel and other critical assets. It includes implementation of active and passive measures, security, intelligence, anti-terrorism, information assurance/protection, missile defense, and risk management. The concept of "reach-back" logistics is incorporated to designate those functions that can be effectively performed outside the theater of operations.²³

Focused Logistics provides the commander with the right personnel, equipment and supplies in the right place, at the right time and in the right quantity across the full range of military operations.²⁴ It will be accomplished through improved information systems, innovative organizational structures, reengineered processes and advances in transportation technologies.²⁵

JV2020 Focused Logistics links logistics functions and units through advanced information systems that integrate real-time total asset visibility with a common relevant operational picture using improved analysis, planning and decision support tools. These systems link U.S. and multinational forces and take advantage of advanced business practices and economies.²⁶

JV2020 Focused Logistics advocates dramatic improvement of the entire logistics pipeline and provides real-time control through speed, improved capacity, and enhanced deployment, distribution and sustainment processes.²⁷ The six enabling tenets include Joint Deployment/Rapid Distribution, Information Fusion, Joint Theater Logistics Command and Control (Joint Log C²), Multinational Logistics, Force Health Protection, and Agile Infrastructure. These enablers, applied in concert, envision more responsive support of warfighters across all levels of war.

Joint Deployment/Rapid Distribution is the process of moving multi-Service forces to an operational area, coupled with the accelerated delivery of logistics resources through improved transportation and information networks, providing the warfighter with vastly improved visibility and accessibility of assets from source of supply to point of need.²⁸ Information Fusion requires the timely and accurate access and integration of logistics data across units and combat support agencies throughout the world, providing reliable asset visibility and access to logistics resources in support of the warfighter.²⁹ Joint Theater Logistics Command and Control (C2) envisions a single entity that is responsible for logistics support in a joint warfighting

environment.³⁰ Multinational Logistics provides mutual logistics support relationships between the United States and allied/coalition partners.³¹

Force Health Protection (FHP) is a "total life-cycle" health support system, and is an integrated approach to protect and sustain DoD service members and their families.³² FHP's three interrelated pillars (promoting and sustaining a healthy and fit force, illness and injury casualty prevention, and sustaining a world-class casualty care and management system) and the infrastructure activities that underpin them will change the nature of medical operations on the battlefields of the future. Agile infrastructure will result in right-sizing of the logistics footprint through reductions in logistics forces, facilities, equipment and supplies.³³ These reductions will be enabled through significant enhancements to joint logistics policies, structures and processes in inventory management, engineering, maintenance, and infrastructure improvements.³⁴

Because history provides some perspective on future challenges, it is essential to review the history and evolution of contracted support to U.S. military operations before understanding current contract policies, doctrine and programs. This history certainly provides clues in regards to our current and future use of contracting in the battlespace.

PERSPECTIVES ON CONTRACTING SUPPORT TO THE U.S. MILITARY

HISTORICAL CONTRACTING SUPPORT TO THE U.S. MILITARY

GEN John Coburn, the former Commander of U.S. Army Materiel Command (USAMC) observed that readiness is a team sport, involving soldiers, civilians, and contractors.³⁵ The historical contributions of contractors to U.S. national defense are indicative of this statement.

War/Conflict	Civilians	Military	Ratio
Revolution	1,500	9,000	1:6 (Est)
Mexican/American	6,000	33,000	1:6 (Est)
Civil War	200,000	1,000,000	1:5 (Est)
World War I	85,000	200,000	1:2
World War II	734,000	5,400,000	1:7
Korean Conflict	156,000	393,000	1:2.5
Vietnam Conflict	70,000	359,000	1:6
Desert Storm	15,500	510,000	1:50
Bosnia	2,000	20,000	1:10

TABLE 2. RATIO OF CIVILIANS TO CONTRACTORS DURING MAJOR U.S. WARS/CONFLICTS

Table 2 shows that historically, civilian support to U.S. military operations is significant.³⁶ Although the ratio of civilians to military has varied through the years, it is clear that civilians, especially contractors, will likely provide support to future U.S. military operations.³⁷

Through the years, contracted support to the U.S. military has generally been successful. The beginning of modern contracting emerged with the Grand Army of Napoleon and was used extensively during the American Revolution. During the Revolution, the Continental Army was habitually under-resourced and reserved the majority of its funds and soldiers for direct combat.³⁸ To focus soldiers on combat functions, the Army contracted civilians to provide transport, engineering, medical support and supply services.³⁹ Despite its functionality, contracting during the Revolution had its share of problems. The fledgling American Government lacked adequate funds to devote to widespread contracting.⁴⁰ When contracting was utilized, contractors were typically better paid than their military counterparts as incentive to continue support of the Army under harsh conditions. As a result, Continental soldiers widely resented the contractors.⁴¹

As the 19th Century evolved and as the military developed its internal logistics organizations and processes, the application of military contracting became more sophisticated. During the Mexican-American and Civil Wars, contractors not only provided clothing, subsistence and transportation but also provided medical and ordnance production and repair capabilities.⁴² The Civil War introduced the first operational maneuver of large ground and naval forces and wider utilization of contracting.⁴³ Independent contractors called "suttlers" supported both armies and served as precursors to military surplus vendors. These goods were more readily available through the suttlers than through the respective Army Quartermasters, but at higher prices. Early in the war, contract transportation was used extensively. As the war progressed, contractors proved more unreliable as they perceived a higher risk of death or injury from highly mobile and more lethal opposing forces. Over time, uniformed military teamsters replaced many of these contractors.⁴⁴

During the Twentieth Century, the military role in national security expanded. This created a greater need for contracting and increased interdependency between the military and contractors. During World War I, the American Expeditionary Force used foreign contractors for basic functions, such as labor, transport and housekeeping.⁴⁵ But contractors also formed the organization that would later constitute the U.S. Armed Forces battlefield medical service.⁴⁶

Contractors were significant force multipliers during World War II. As weapon systems increased in sophistication and the requirement for fighting manpower increased, contractors served in the U.S., European and Pacific Theaters of War, and in forward areas to provide technical support of ground, air and naval systems. In North Africa and the Middle East, contractors built and operated numerous ordnance depots.⁴⁷ Extensive use of construction

contractors, especially in the Pacific Theater, foreshadowed their use in base development later in the 20th Century. Although contractors were used extensively, the emergence of U.S. military logistical organizations before and during World War II signaled a decrease in their use in comparison with uniformed military personnel.⁴⁸

Limited mobilization during the Korean Conflict resulted in greater reliance on contractors in both Japan and Korea. Japanese contractors supported multinational forces with force projection and sustainment from Japan, while Korean contractors provided stevedore, road and rail repair and transportation on the peninsula.⁴⁹ Use of these contractors reduced the required commitment of U.S. military personnel by an estimated 250,000.⁵⁰

Vietnam is known as the first war fought by contract.⁵¹ During the conflict, over 80,000 contractors served in country, while many more served from CONUS and other overseas locations. Weapons systems and construction support represented major contractor efforts in Vietnam. Military construction capabilities in Vietnam were critically short because of President Johnson's decision not to call up construction units from the Reserve Components.⁵² This, combined with a lack of skills among the Vietnamese population in engineering, created a need for wide participation by U.S. construction contractors. At the height of the Vietnam Conflict, construction contractors employed over 51,000 personnel, of whom ten percent were American contractors.⁵³

Vietnam detailed two emerging aspects of contract support. Contractors now served on the front lines and were as vulnerable to enemy fire as their military counterparts. Additionally, contractors were no longer relegated to basic logistical tasks. They were instead becoming specialists in the implements of war.⁵⁴

Military dependence on contractors during Desert Shield/Storm was great, but not in raw numbers. One U.S. contractor was utilized for every 50 U.S. uniformed members, a downward trend from previous conflicts.⁵⁵ However, this is deceptive since this doesn't account for the extensive host nation support provided by Saudi Arabia and other nations. During Operation Desert Shield, contractors provided food, water, transportation, port operations and other services essential to the reception and onward movement of coalition forces.⁵⁶ For example, the 22d Support Command initially fielded only 112 military Heavy Equipment Transporter (HET) trucks in their fleet, well below total HET requirements of the coalition. Through contracting, the 22d assembled a fleet of nearly 1300 HETs that provided the coalition with unparalleled mobility, reduced the consumption of spares and fuel, and reduced the overall cost

of the operation.⁵⁷ Contractor contact teams also provided critical weapon system support to coalition forces in forward combat areas.⁵⁸

In Bosnia, contracting was at the forefront of logistical operations and branched into other support areas. The USAMC Logistics Civil Augmentation Program (LOGCAP) was implemented and contractors subsequently built and operated base camps (Brown and Root Corporation), provided commercial telephone service (AT&T), and provided interpreters, among other services.⁵⁹ One in ten personnel who supported operations in Bosnia and elsewhere in the Theater of Operations were contractors.⁶⁰ Significant numbers of these contracted personnel were hired from countries throughout Eastern Europe and the Balkans.

In the future, the U.S. military dependence on contractors will increase as initiatives in competitive sourcing and privatization (CS&P) continue to expand into traditionally core military functions.

CONTRACT SUPPORT TO CURRENT U.S. MILITARY LOGISTIC OPERATIONS

Contracting Policies

Contracting is necessary to carry out the functions of government without impinging on commercial activities. Bureau of Budget Bulletin 55-4, published during the Eisenhower Administration, prohibits the Government from performing functions which are not inherently governmental:

It is the policy of the Government to ... rely on private sources for supplies and services if certain criteria are met while recognizing that some functions are inherently governmental...⁶¹

The Office of Management and Budget (OMB) Circular A-76 directs that contracting be considered using three guidelines. First, retain those functions that are governmental in nature. Second, achieve economy and enhance productivity by comparing "contracting out" against the performance of the function by "in-house" sources. Lastly, rely exclusively on the commercial sector for available sources of products and services.⁶²

Title 10, U.S. Code authorizes the Secretary of Defense (SECDEF) to use contracting if it is financially beneficial and consistent with military requirements.⁶³ DoD further directs that civilian personnel will be used in positions that do not require military personnel and that the Total Force mix include Active, Reserve, civilian, host-nation, and contract resources necessary to fulfill assigned peacetime and wartime missions.⁶⁴ However, contractors are prohibited from representing the U.S. government in three areas: first, governance, or making decisions on behalf of the government; second, controlling monetary transactions or entitlement accounts;

and lastly⁶⁵, contractors cannot perform functions that are inherently military (i.e., combat missions).⁶⁶

DoD contracting is guided by the Defense Federal Acquisition Regulation (DFAR) and each Service has its own supplement to the DFAR. In addition, there are numerous DoD and Service regulations and instructions regarding contracting.⁶⁷ These regulations outline contracting policies and procedures, as well as regulatory limits on contracting agencies and officers.

Joint Doctrine on Contracting Support of Military Operations

Joint Publication 4-0 (JP 4-0), Doctrine for Logistics Support of Joint Operations, regards contracting as a significant component of support to military operations.⁶⁸ Contracting augments existing military capabilities, expands sources of supplies and services, bridges gaps in deployed force structure, and reduces dependence on U.S. based logistics assets. Contractors are force multipliers that enhance the warfighting capabilities of the U.S. regional Commanders in Chief (CINCs).⁶⁹

JP 4-0 delineates three types of contractors in the battlespace as outlined in Table 3.⁷⁰

- | |
|---|
| <ul style="list-style-type: none">• <u>System support contractors</u> provide system life-cycle support to include maintenance, supply management and other technical support.• <u>External Theater support contractors</u> are administered by commands and agencies outside the Theater, typically by the Services, functional CINCs or other joint agencies.• <u>Theater support contractors</u> are prearranged through host nation support or contracted in the Theater by the Service Component Principal Assistant Responsible for Contracting (PARC). |
|---|

TABLE 3. TYPES OF CONTRACTORS IN THE BATTLESPACE

System support contractors typically support individual commands and units and are contracted through the system acquisition and fielding processes of the individual Services. External Theater support contractors include the Army's Logistics Civil Augmentation Program (LOGCAP), the U.S. Air Force's Air Force Civil Augmentation Program (AFCAP), the Navy's Contingency Civil Augmentation Program (CONCAP), and the Civil Reserve Air Fleet (CRAF) and Voluntary Intermodal Sealift (VISA) programs. Theater support contractors typically provide basic goods, support services, minor construction and other services. These contracts are executed and managed through in-Theater contracting officers.⁷¹

JP 4-0 delineates the requirements for successful contract -supported operations. Contracted services must be pre-planned and documented in the deliberate planning process. Contract requirements must be planned prior to deployment to include contractor-required equipment, pre-deployment training, and transportation of contractors and their equipment.⁷² CINCs and Service components must maintain visibility over the flow of contractors into their respective Theaters and their status during all operational phases.⁷³ Lastly, the status of contractors under international law, the law of war and host nation law must be clearly delineated, as well as military responsibilities for discipline and force protection.⁷⁴

DoD and Service Programs for Contracted Support of Military Operations

Contractors provide logistical support to U.S. military operations through key DoD and Service programs. Key DoD contracted programs include the Civil Reserve Air Fleet (CRAF) program, which can provide up to one-third of total cargo lift, half of patient lift, and 90 percent of wartime passenger lift.⁷⁵ The Sealift Readiness Program (SRP) and Voluntary Intermodal Sealift Agreement (VISA) provide the military with enhanced sealift responsiveness by providing U.S. carriers for immediate sealift of U.S. forces during contingencies.⁷⁶

The U.S. Army employs contractors using the doctrine outlined in JP 4-0. Weapon system or system contract requirements are generated from program managers/program executive officers and contracted by their supporting contracting offices for support of forces at home station and when deployed. When deployed, the Theater or Service Component Command PARC and his subordinate contracting officers, if staffed appropriately, may exercise oversight over these contractors (however, unless delegated, contract authority resides with the originating contracting officer). These contractors typically provide maintenance, supply support and technical assistance and training for combat systems, aircraft, command and control vehicles/equipment, ground vehicles and communications equipment.⁷⁷ Full life cycle weapons system support is being implemented for the AH-64 Apache and the Paladin Field Artillery System using the Army's Prime Vendor contract method. This provides complete contractor support above the unit maintenance and direct support levels (above Aviation Unit or Intermediate Maintenance levels for aircraft).⁷⁸

The Army's major external Theater support contracts are LOGCAP and Army Corps of Engineer real property and real estate programs. These programs are incorporated into CINC and Army Service Component deliberate planning, supporting operations plans (OPLANS) and Time Phased Forced Deployment Lists (TPFDLs). Since its inception in 1985, LOGCAP has been utilized in major contingency operations that include Haiti, Rwanda, Somalia, Bosnia and

Albania.⁷⁹ Although LOGCAP support was not pre-planned for some of these operations, it has successfully supported each of them. Despite this, the cost of the contract to support operations in Bosnia exceeded what the Army anticipated and has led some to question its utility for these types of operations.⁸⁰

Air Force contracting is divided into three areas: weapon platform support; civil engineering support; and the Air Force Civil Augmentation Program (AFCAP). AFCAP supports operations where AF units may not be available or appropriate, such as small-scale contingencies. AFCAP support includes logistics, services, engineering, and operations and maintenance.⁸¹ The key difference between LOGCAP and AFCAP is that AFCAP is executed for only non-hostile or permissive contingencies.⁸² Since the \$ 462M dollar AFCAP contract was awarded for one year and four optional years in 1997, it has been utilized for two humanitarian operations: the relief efforts for a typhoon that hit Andersen AFB on Guam and for relief at Keesler AFB, Mississippi in response to damage by Hurricane George.⁸³ AFCAP includes significant civil engineering capabilities, but, to date, only the sustainment element has been utilized.⁸⁴

Contracting is integrated into U.S. Navy support of its deployed forces in both peacetime and wartime. Naval Regional Contracting Centers located around the world coordinate support to fleets in each geographical region.⁸⁵ Local contractors support ships in port, while the Military Sealift Command and its fleet of logistics vessels are responsible for providing underway replenishment. Support provided in foreign ports is similar to that provided in U.S. home ports, though more limited in scope. Services include ship repair, ordnance handling, materiel handling, potable water, showers, salvage, towing, and sewage disposal.⁸⁶

The Navy is pursuing integrated contract weapon system support and in some situations, privatizing entire functions. Maintenance and supply for the V-22 Osprey engines is contracted to Allison Engines for support beyond the flightline, to include all intermediate and depot maintenance. Under the agreement, Allison retains all data rights for the engines via licensing agreements, but is required to meet Navy readiness standards. The initiative is anticipated to save the Navy up to \$ 500M over the first five years and is hailed as an example of how DoD is partnering effectively with contractors.⁸⁷

The Navy has implemented a standing Construction Capabilities (CONCAP) contract to provide Naval and Marine Corps forces with civilian construction capability to rapidly respond to contingencies or natural disasters.⁸⁸ CONCAP includes the full range of engineering services to

include personnel, equipment, and materials. CONCAP was used successfully in 1996 to provide relief to Camp Lejeune, N.C. in the aftermath of Hurricanes Bertha and Fran.⁸⁹

U.S. Marine Corps contracting revolves around contingency support. Marine Corps contracting teams are typically among the first to deploy to contingency operations, normally attached to the Marine combat service support headquarters.⁹⁰ They execute agreements required to provide supplies and services to deployed Marines. The contracting team is also responsible for the management and integration of host nation support and DoD or Service contracted support in accordance with the deploying force support plans.⁹¹ Marine Corps aviation assets are supported above the direct support level by the Navy, so most contractor programs and support for these are consolidated.

Integration of contractors into Navy and Marine Corps operations is more problematic than in the other Services because of the nature of their operations. In addition to their regular jobs, sailors and Marines serve on emergency response teams for damage control, medical support and other shipboard functions such as watch. In most situations, contractors are prohibited from performing these functions. Therefore, if contractors in naval and amphibious forces replace Marines or sailors, this has potential second and third order impacts.

WHY CONTRACTING SUPPORT TO JV2020 FOCUSED LOGISTICS IS ESSENTIAL

Contractors are now essential to the military force mix, rather than fillers for capability shortfalls or mismatches. This trend will continue for several reasons. These include reduced military and DoD civilian manpower, the continuing need for DoD cost savings and recapitalization, the utility of contracting in the battlespace, and the increasing complexity of weapon systems.

Maximizing Military Resources through Contracting

As transformation evolves, U.S. political and military leaders will continually be pressured to decrease defense expenditures through downsizing, and at the same time maintain high states of readiness. Force structure, especially logistics structure, will be closely scrutinized to generate further personnel and cost savings. For future military operations, many core military logistics functions may be privatized or outsourced.⁹² As JV2020 is realized, the utilization of resources must be maximized. Contracting will play a key role in this effort.

Since the Cold War, DoD has cut over 700,000 military (33% of the force) and over 300,000 civilian (40% of the workforce) personnel. Despite these reductions, military OPTEMPO increased significantly in the 1990s. The Air Force increased from a daily average

of 2000 airmen deployed in the early 1990s to 12,000 deployed in year 2000.⁹³ From 1989 to 1997 the Army experienced a 300% increase in deployments.⁹⁴ Contracting has certainly made up a portion of the resources used to fulfill military commitments during downsizing, as it will in the future.

Although DoD has reduced its forces by 33% and closed many bases, the percentage of its budget spent on support infrastructure has remained relatively constant.⁹⁵ Competitive outsourcing and privatization (CS&P) has the potential to reduce DoD expenditures by as much as 30%.⁹⁶ GEN (Ret.) William J. Tuttle, former Commander of the U.S. Army Materiel Command and current board member of the Logistics Management Institute in Washington, D.C., argues that CS&P could result in a 20% reduction in logistics costs alone.⁹⁷ In the Air Force, CS&P is projected to save over \$ 500M annually.⁹⁸ Annually, CS&P is projected to save between \$ 7-12B dollars, or about 3% of the current DoD budget.⁹⁹

CS&P is also a trend in industry. In 1996, U.S. companies spent an estimated \$ 100B dollars on CS&P with an estimated savings of between 10-15% of their operating costs.¹⁰⁰ Accordingly, programs like the Army's Apache and Paladin Prime Vendor programs offer the DoD potential reductions in operating and support (O&S) costs, more modernized and capable systems, and increases in readiness.¹⁰¹ With further initiatives in CS&P, DoD can also re-capitalize these dollars into infrastructure improvement.¹⁰²

The utility of contracting in the battlespace is the primary reason for the continued evolution of contract support to military operations. Among many other organizations, Army Special Forces (SF) utilizes contracting because of its limited organic support structure and the flexibility offered by contracting. By deploying Contingency Contracting Officers with Groups, Battalions, or smaller, SF units rapidly acquire supplies and services that might otherwise consume the efforts of non-support personnel or require a large logistics footprint.¹⁰³ During planning for operations in Bosnia, the execution of LOGCAP provided exceptional utility to U.S. commanders. By providing 2000 contractor personnel to perform a wide variety of support functions, LOGCAP facilitated the deployment of 2000 additional combat personnel, within the limits mandated by the Dayton Peace Accords (which limited U.S. forces to 20,000 in Bosnia).¹⁰⁴ Furthermore, an agreement by the U.S. to hire Hungarian locals facilitated U.S. access to forward staging bases in Hungary.¹⁰⁵ These bases continue to serve as key nodes in the deployment of multinational forces into the Balkans.

Increasing Weapon System Complexity

As the U.S. military seeks to dominate the spectrum of conflict through technological innovation and as further cost efficiencies are sought, contracted support is anticipated to increase.¹⁰⁶ Historian Martin van Creveld noted that:

The shorter the war, the greater the importance of weapons and weapon systems. The longer it is, the greater the role of military activities other than fighting, pure and simple, and the greater the role of technologies that impinge on these activities or govern them.¹⁰⁷

Technology is driving almost every aspect of the U.S. military transformation. As the military moves toward a digitized and connected force, technology will be introduced with ever increasing speed and turnover. The introduction of technology will require heavy dependence on contractors.¹⁰⁸ For example, at a Force XXI exercise held at the U.S. Army's National Training Center (NTC) at Fort Irwin in 1997, over 200 contractors from 12 different companies maintained over 6000 networked devices for a single Army Brigade Combat Team.¹⁰⁹ During a recent Digitized Corps Exercise at the Army National Training Center, a senior military observer noted that over 500 contractors were located in the Division Rear area.¹¹⁰ In a similar trend, the Air Force is considering transitioning the maintenance of the F-117 Stealth Fighter and software maintenance on the B-2 Bomber to contractors.¹¹¹

As systems become more complex, the requirements to maintain these systems will increase. Since the end of the Cold War, the U.S. military reduction in civilian workforce has led to an imbalance in skills and experience that is jeopardizing certain logistics capabilities in DoD.¹¹² This same type of exodus of skills and experienced personnel occurred immediately after all U.S. major wars and conflicts. Can the U.S. military afford the costs and time required to train uniformed personnel on these systems as they lose these same personnel to industry during periods of high prosperity and employment? A potential solution is to use contractors in those areas that require extensive training and maintenance of skills. However, this must be done only after a full assessment of the risks of utilizing contracting.

THE RISKS OF CONTRACTING SUPPORT TO JV2020 FOCUSED LOGISTICS

There are numerous risks connected with the integration of contractors into military operations. Risks must be viewed from several vantage points: 1) the risk to contractors serving in the battlespace; and 2) the risk to the unit mission in using contractors to support in certain high intensity operations such as Major Theaters of War. Potential risks that are most relevant to military operations include the lack of contractor responsiveness to military requirements and contractor inability to carry out missions in certain types of military operations. To reduce these risks, the supported Commander must effectively apply risk analysis.

Contractor Responsiveness to Military Operations

The ability of contractors to rapidly deploy and provide support to military operations is a seminal issue in the JV2020 environment. In the past, contractors have proven responsive, but this has been for linear types of operations that involved extensive periods of buildup. To improve contractor responsiveness, the military must pre-plan, implement flexible types of contracts and ensure an adequate level of specificity in contracts and statements of work (SOWs).

Peacetime planning is vital to using contractors successfully under JV2020, but it may not be enough. Under JV2020 Focused Logistics, contractor planning is best performed during the deliberate planning process, but this may not be possible in all instances. Programs like LOGCAP provide a flexible alternative. LOGCAP support is pre-planned for each Theater, and is integrated into OPLANs and Time Phased Force Deployment Lists (TPFDLs). Responsiveness is specified in the LOGCAP contract (under LOGCAP, initial teams deploy to a Theater of Operation within 72 hours).¹¹³ In the JV2020 operational environment, forces will be required to rapidly deploy, operate and shift to other areas or conflicts in or outside the battlespace.¹¹⁴ To support Focused Logistics in this environment, contracts like LOGCAP must ensure maximum responsiveness by providing both flexibility and an adequate amount of specificity.

The type of contract used impacts the responsiveness of contractors. The three basic types of contracts used within DoD are fixed price, cost and incentive.¹¹⁵ Fixed price contracts are the least flexible because they require the government to specify in detail the services to be provided at a fixed cost. These contracts place the greater risk on the contractor because the contractor may incur costs in excess of the fixed price.¹¹⁶ Cost contracts are the most flexible and are utilized when uncertainties in contract performance preclude accurate cost estimates. Under cost contracts, the government accepts greater risk because costs may exceed the amount budgeted for execution.¹¹⁷ Cost contracts are utilized for weapon system support and operational service and sustainment contracts because of the uncertainty surrounding the required services and scope.¹¹⁸ Incentive contracts provide contractors and the government with a balance of flexibility and risk. For example, the LOGCAP contract utilizes a cost plus award fee contract, which allows a commander to request services not previously listed in the specific SOW for that operation, but still within the scope of the overall LOGCAP contract.

SOWs must adequately define military requirements of the contractor without binding the military to an inflexible arrangement. Responsiveness, location, type of work to be performed, time for work to be performed and performance metrics must be addressed. Additionally,

SOWs must address pre-deployment training requirements (may include items such as first aid, NBC and country indoctrination), force protection and government provided equipment and support. Military commanders have no direct authority to modify the statement of work within which contractors operate, even under wartime conditions.¹¹⁹ Contractors cannot be compelled to carry arms, wear uniforms or unwillingly subject themselves to enemy action. Commanders manage contractors through their supporting contracting officers, and within the specifications of the respective contract. Only contractors are authorized to direct contract personnel. Using appropriate contract language, military commanders can effectively manage (via the supporting contracting officer) the tactical control and force protection of contractors, in addition to the mission support provided by contractors.¹²⁰

Because the Services, Theater CINCs and DoD have separate contracting authority for different systems/programs, the operational employment of contracting to support these has sometimes been fragmented. In these instances, there was limited or no cross-service coordination at the Theater, Service Component or JTF levels. For example, during Desert Shield/Storm, the 3d U.S. Army arranged for 40 contractors to deploy to support UH-60 aircraft for 11 Army Aviation Lift Companies. Meanwhile, the Navy had contracted an Israeli company to support their SEAHAWK aircraft (similar to the UH-60 with some modifications) and other coalition nations had executed separate maintenance contracts for their UH-60s. A post conflict DoD Inspector General (IG) Report examined this issue, concluding that there was inadequate coordination at the Theater level and a lack of policy at the DOD.¹²¹ Subsequently, DoD Directive 4151.18, Maintenance of Military Materiel, directed that:

Contractor maintenance support to equipment and weapon systems for deployed forces shall be coordinated with other DoD Components operating the same or similar equipment and weapon systems in the same operational area, when practical.¹²²

However, both the I.G. report and directive fail to address how this might be accomplished. Additionally, both fail to address the synergistic impact of habitual support provided by contractors to units.

Contractor Failure to Support Military Operations

There is potential risk that contractors will fail to fulfill their contractual obligations when supporting military operations. Although there is plenty of historical evidence that they will continue to support military forces, even under the most extreme conditions, commanders are prudent to consider the risks.

Although the Geneva Convention categorizes contractors as non-combatants, for practical purposes they are combatants when accompanying military forces. Even though contractors typically do not wear uniforms or carry weapons, they are subject to attack by hostile forces due to their proximity to supported military forces.¹²³ Contractors are protected as prisoners of war (POWs) under the Geneva Convention when they carry a uniformed services identification card identifying them as non-combatants.¹²⁴ However, contractors will likely receive the same treatment as the force they support, good or bad.

Contractors have historically come under fire and stayed the course. During Operation Just Cause in Panama, civilian contractors remained on duty to maintain critical computer systems used for strategic intelligence operations for the U.S. Southern Command (USSOUTHCOM). A senior officer in USSOUTHCOM headquarters noted that their participation ensured success in Operation Just Cause.¹²⁵ During Desert Storm, contracted weapon system maintenance teams operated in Kuwait and Iraq, many times without military security. During the push into Iraq, third country drivers effectively delivered fuel, munitions, food and other supplies to forward U.S. elements.¹²⁶

However, there are examples where civilians failed to support forces during a crisis situation. One example is the tree-cutting incident at the DMZ between North and South Korea in 1976, where hundreds of emergency-essential civilian personnel purportedly fled their posts at the prospect of imminent hostilities.¹²⁷ During Operations Desert Storm/Desert Shield, approximately 20% of contracted drivers failed to return from missions on time. Additionally, there were numerous instances where drivers were not accounted for during long periods of time.¹²⁸ During Iraqi Scud attacks, third country nationals that provided food service on several coalition air bases walked off the job after they received chemical attack warnings.¹²⁹ However, these seem to be isolated instances in a history that has seen overall successful support.¹³⁰

Although history provides added assurance that contract support will be available for mission essential functions in the battlespace, commanders must conduct a thorough risk

analysis to ensure that the use of contractors is properly assessed.

Risk Analysis

Commanders must determine if contracting is appropriate for their particular military operation by using risk analysis. The analysis must determine

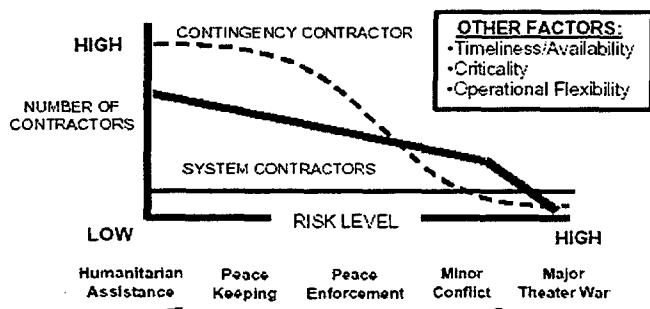


FIGURE 1. CONTRACTOR RISK ANALYSIS MODEL

essentiality, alternatives to contractors and dangers to individuals by examining the need against the permissiveness of the environment or intensity of combat.¹³¹ The graph in Figure 1 provides a theoretical framework for assessing when contractors should be utilized.¹³²

In some instances, military commanders will have a choice between contract, DoD civilian and military providers. However, with the increasing complexity of weapon systems, commanders may have little choice but to integrate contractors into their task organizations. For this purpose, a line has been added across the bottom of the graph to indicate that there will likely be a number of contractors that are essential to sustain the force. To reduce risk in operations where contracting must be included, the contracting military agency must commit the contractor(s) to provide their plan to continue emergency essential operations in the case of high intensity operations.¹³³

Commanders are responsible for the protection of both U.S. and non-U.S. contractor personnel (for the latter, only if the host nation lacks protection capabilities). Therefore, some military assets will be tied up in providing force protection to contractors. Consequently, commanders must examine both the risk to contractors and the potential cost to the organization in terms of security manpower.

As the threat increases, fewer contractor-operated functions are employed. For those that are employed, force protection measures are implemented according to the level of threat. Commanders must ensure that measures such as reach-back support and basing of contractors in protected areas adjacent to the battlespace (e.g., intermediate staging bases) are considered within the realm of other reasonable measures.

POSSIBILITIES FOR FUTURE CONTRACT SUPPORT TO U.S. MILITARY OPERATIONS

ANALYSIS

An analysis of historical and current perspectives and a look into both the essentiality and risks of contracting now requires a final analysis applicable to future contracting support under the JV2020 Focused Logistics concept. As such, this project addresses four overarching challenges that must be resolved to ensure successful contracting support of Focused Logistics. These challenges are:

1. Improving the responsiveness and flexibility of contracting.
2. Balancing requirements for contracting against risk.
3. Balancing costs against operational requirements.
4. Incorporating JV2020 contracting into doctrine, education and training.

Improving Responsiveness and Flexibility of Contracting

There are numerous ways to improve the responsiveness of contractors to support future U.S. military operations under the operational concepts of JV2020.

JV2020 Focused Logistics requires that both speed and agility are the end products of support to U.S. forces. To support the Rapid Deployment/Distribution tenet of Focused Logistics, contracting must be preplanned where possible, but must be flexible enough to support the U.S. military in the dynamic JV2020 operational environment. Contracts must be written to allow for the broadest scope possible while allowing adequate specificity with regards to the types of services that are needed. Instead of tying support and sustainment contracts to specific operations plans, these contracts should be written to provide a broad range of services across the regional CINC areas of responsibility for operations across the spectrum of conflict. The new LOGCAP program incorporates this concept and contains not only OPLAN specific supporting plans, but also generic plans for developed and undeveloped countries.¹³⁴ However, DoD must go further. Available contract services must include packaged contractor modules for enroute support of deploying forces such as establishment of intermediate staging bases and forward operating bases, and the establishment of associated deployment and logistical bridges. Under these contracts, government furnished equipment may include prepositioned base development packages such as the Army's Force Provider.

To further support the Focused Logistics Rapid Deployment/Distribution tenet, programs such as CRAF, SRP and VISA must be refocused and closely integrated. The current design of these programs is a staged or linear approach to incorporating these assets into execution of contingency operations. This approach may have been effective over the past few decades, but it will not work under JV2020. If continued, it will have real costs in terms of dollars, readiness and strategic mobility. The continuing challenge must be to identify innovative ways to fully utilize relatively inexpensive commercial lift resources and access the efficiencies of commercial carriers, while retaining sufficient military lift capabilities to support peacetime operations and small scale contingencies.¹³⁵ An alternative may be to focus DoD lift assets at the operational and tactical levels, with strategic lift provided by contractors.

Contracting doctrine must be modified to dovetail with the Focused Logistics tenet of Theater Joint Logistics C2. JP 4-0 must adequately address three areas: integration, visibility and control of contractors. In doing so, it must address processes and responsibilities of the CINCs, Theater Service Component Commands, subordinate Service Component Commands

(e.g., ARFOR under a Joint Task Force), military contracting organizations, controlling boards and centers, contractor elements and individual contract personnel. Under JP 4-0, operational control of contractors is maintained by the CINC's Joint Theater Logistics Manager (JTLM) under direction provided by the Theater Joint Contracting Support Plan.¹³⁶ However, because most contracting is conducted in support of the individual Service components in subordinate JTFs, adequate visibility and control over contractors under this concept would probably never be achieved. A more realistic doctrinal approach would be to make the Theater Service Component Command responsible for reception and the JTF Service Component Command (e.g., ARFOR) for integration and control, while requiring continuing visibility and contract oversight at the Theater Service Component Command level (using the Joint Acquisition Board or CINC Logistics Procurement Support Board). At the supported unit level, entities such as the U.S. Army Logistics Support Element (LSE), LOGCAP Support Units (a USAR drilling Reserve unit), and contracting support teams provide management and direct interface between the supported commander and the contractors.

Integration of contractors into a Theater of operation has been problematic in past operations. In the past, contractor visibility was lost during movement from CONUS to the Theater. The Service Component Command must integrate contractors through the same Joint Reception Staging and Onward Integration (JRSOI) process that supports military forces. This should include issue of a standard color-coded contractor identification card, other than the non-combatant ID card, which would identify those facilities which contractors are authorized to access (i.e., dining facilities, MWR facilities, medical facilities). An alternative to this would be to include required data elements on the new military identification smart cards. Once in Theater, the Service Component Headquarters under a Joint Task Force (JTF) must maintain visibility over them.¹³⁷ Contractor strength must be reported in Service and Joint Personnel Status Reports (JPERSTATs). Joint Publication 1-0, Joint Doctrine for Personnel Support of Joint Operations requires that civilians, to include contractors, are included in both strength and casualty reporting.¹³⁸ However, it must also require the delineation of U.S. and non-U.S. contract personnel in the JPERSTAT, which is relevant in instances where the commander may want to move these personnel out of the direct combat zone.

The Focused Logistics tenet of Information Fusion requires that contractor information systems and military information systems be fused to some extent. To date, the Services have failed to effectively integrate contractor information systems.¹³⁹ For major contracts, contractor information systems must dovetail into the U.S. military standard logistics information systems, such as the Global Command and Control System (GCCS) or at minimum, address the

integration of essential contractor data elements. Contractor information networks must also be information assurance compliant.¹⁴⁰ Contractor data cannot be vulnerable to network warfare and potentially used as a "back-door" method to monitor and disrupt U.S. operations. Taking into account information assurance requirements, essential elements of information must be identified to allow access of contractor developed information (IAW proprietary rights) within the specifications of the contract. Integration of contractor information systems is critical. Otherwise, commanders and staffs will be forced to work through parallel or non-contiguous information systems that prohibit staffs from rapidly accessing and disseminating critical information.

Under the Agile Infrastructure tenet, teaming programs involving military, DoD civilians and contractors must be explored to improve responsiveness. Teaming enhances the responsiveness of logistics by providing a buffer against the uncertainty of total or partial outsourcing or privatization of functions.¹⁴¹ This will be particularly critical to weapon system contracts, where a mix of uniformed and civilian personnel are needed to provide an ever wider range of technical support functions. The Army has effectively combined the talents of uniformed support personnel, Department of the Army (DA) civilians, and contractors to support many of its major weapon systems.¹⁴² Under the Logistics Assistance Program, administered by the U.S. Army Materiel Command, the Army has a dedicated group of Logistics Assistance Representatives (LARs) that provide maintenance and supply support and training to supported units.¹⁴³ For critical systems, such as the M1 Tank and Apache, the Army has also contracted on-site technical and maintenance support.¹⁴⁴ This team of military, DA civilians and contractors provides multi-dimensional support and is rapidly able to resolve both specific and systemic logistics issues.¹⁴⁵

Balancing Requirements for Contracting Against Risk

Because of the anticipated dynamics of Focused Logistics support in the JV2020 environment, commanders must carefully assess the risks of contracting. DoD is privatizing and outsourcing large pieces of logistics support, but this should be done only after fully assessing the risks presented by the future environment. Currently, JP 4-0 does not adequately address risk. Risk assessment must be conducted from two viewpoints: the risk to the mission if contractors are unavailable to perform missions and the risk to the contractors in the battlespace. The JV2020 environment is inherently risky for all non-military personnel, to include DoD civilians, contractors and other civilians. Adversaries will focus both symmetric and asymmetric capabilities on denying access to areas where contractors will likely support. As a

result, DoD and the Services must carefully assess the role of contracting under JV2020 Focused Logistics. The desired end state must be to employ a balanced team of military, DoD civilians and contractors who can support and survive in the JV2020 environment.

Risk analysis must be effectively incorporated into both Joint and Service doctrine. Army Materiel Command Publication 715-18 does an excellent job of addressing risk but does it from a tactical perspective. Risk to contractors must be analyzed against several realities. First, contractors will likely be involved. Second, for those who are involved, what measures can be taken to reduce the risk? JP 4-0 indicates that equipping contractors with uniforms and weapons provides a level of security. However, by providing contractors "self-protection," this

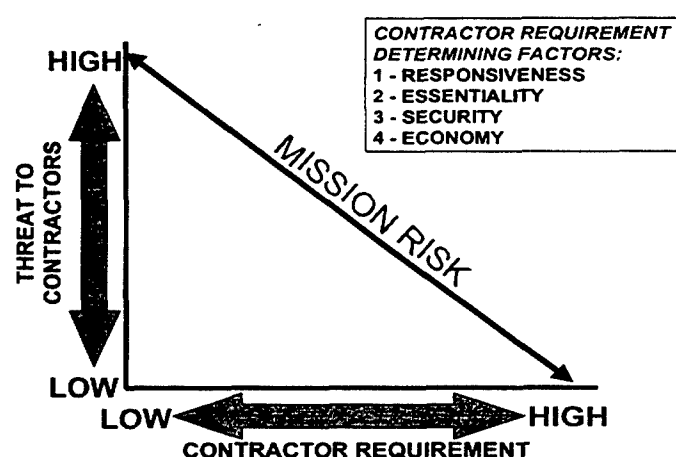


FIGURE 2. MILITARY CONTRACTING RISK ANALYSIS

negates their status as non-combatants and should be considered only under extreme circumstances. Contractors cannot be compelled to fight even if they are provided weapons and uniforms. Doctrine should, therefore, address passive measures that commanders must consider before arming contractors. These may include: 1) locating contractors out of the Joint Operational Area (JOA) at either intermediate staging bases or

permissive areas, but within the Theater of Operation; 2) identifying areas where contractors are prohibited from transiting without security; 3) restricting contractors to bases or certain routes; or 4) a combination of the above. Figure 2 is a proposed model for assessing the risk of utilizing contracting:

This analysis examines the overall mission risk and the risk to the contractors. It accounts for contractor responsiveness to mission requirements (deployability and agility), contractor essentiality (determined by availability of military force structure and skills to perform the missions), security (the ability to protect contractors as determined by location and forces available), and economy (cost of military vs. contract participation). It assesses these against the threat to contractors.

Because of the proliferation of contracting and the risks inherent in the JV2020 battlespace, contractors must be trained to survive under the same conditions as the uniformed military. They must be certified in pre-deployment and in-Theater training. This must be

facilitated by the respective contracts and required in clear language. For example, contract pilots performing aerial surveillance missions in Bosnia should be certified as trained for Geneva Convention, escape and evasion and all other requirements designated by CINC, U.S. European Command. Documentation of training must be provided to the supported commander by the contractor (as specified by the contract) and certified by the designated mobilization training center. Contractors should be required to deploy with these records (again by contract) and provide the certification when processing into Theater. Supported units must be responsible for training and equipping non-U.S. contract personnel who are hired in-Theater using the same criteria as the mobilization centers. This reduces the risk to the contractors, the supported commander and the U.S. Government.

The DFAR must also require that a standard operational support clause be included in all operational support contracts. This clause must include standard directives on pre-deployment preparation and training, deployment, reporting and integration of contract personnel and protection measures. It should also include a requirement for contractors to document their actions under emergency essential conditions and the designation of emergency essential contract personnel. This ensures there is a "Plan B" in case contractors are prohibited from performing their duties and, therefore, reduces the risk to the supported commander. This clause should be written broadly enough to allow flexible support of U.S. forces in a variety of scenarios.

Balancing Cost Against Operational Requirements

Military commanders must weigh cost against operational requirements. As an enabler for both transformation and JV2020, contracting provides advantages and disadvantages that must be considered.

For future operations, especially those at the lower end of the spectrum of conflict, cost will be a consideration. If contracting is a part of the JV2020 force mix, assessing the cost of contracting against uniformed military and/or DoD civilian support is essential. Currently, there is no standard DoD model for quickly comparing military, DoD civilian and contracting costs. However, there is currently no standard model for comparing the cost of military, DoD civilian and contract support.¹⁴⁶ A recent Rand Study that compared the costs of military with DoD civilian personnel concluded that cost savings were dependent on grade.¹⁴⁷ However, since costs for contracted services don't typically include those overhead (i.e., training, benefits programs) costs associated with the military, contracting should consistently be cost beneficial.¹⁴⁸ For example, during the period 1978-1994, A-76 cost comparisons showed 31%

savings using contract providers.¹⁴⁹ Either way, a standard DoD model is needed to assess monetary costs and best value.

Because the JV2020 warfighting environment is joint, sustainment and service contracts must support military forces across the full spectrum of potential military operations. LOGCAP, AFCAP and NAVCAP should be combined under a single contract to reduce overhead costs and improve their utility. Programs such as AFCAP that are implemented only under peacetime conditions have overall limited utility to JV2020 Focused Logistics. There are two options for management of service and sustainment contracts. First is to assign the Services executive agent responsibility for contracting in their respective operating environments. Under this option, the Army as DoD's landpower proponent, would execute all landpower based contracting; the Navy would execute sea-based (including port services) and littoral contracting, and the Air Force would execute aerospace based contracting programs. Second, service and sustainment contracts could be administered in an umbrella fashion by the Defense Contract Management Agency (DCMA). Since DCMA continues to administer the majority of contracts within DoD, this option offers both cost savings and overall utility.

To effectively implement the Multinational Logistics tenet of JV2020 Focused Logistics, DoD policy and doctrine must adequately address the responsibility for cross-service/cross-coalition contract support of forces in a Theater in accordance with DoDD 4151.18. This must always support the concept of operation, while ensuring "best value" is obtained whenever possible. In some instances, the CINC, using his directive logistics authority, will direct common system support. While this can be directed through the orders process, it can only be implemented for contracted support through an actual contract. Typically, it will be directed at the intermediate or depot level of maintenance. Where practical and cost efficient, weapon system contracts should be cross-leveled. However, CINCs and subordinate joint force commanders must be cautious in directing cross-service and multinational maintenance support for several reasons, to include: differences in tactics, techniques and procedures; and the potential for geographic dispersion of forces. Therefore, the fragmentation of habitual military-contract teams might be cost efficient, yet neither effective nor practical.

Incorporating JV2020 Contracting into Doctrine, Education and Training

The vast majority of operational contracting doctrine has been produced in the past 10 years. JP 4-0 provides very comprehensive doctrine on contractors in support of military operations, as does U.S. Army doctrine. However, there are several elements that must be modified.

Joint and Service doctrine should readdress the process and responsibility for integration of contracting in all types of operations. JP 4-0 identifies a requirement for integration as it pertains to planning, but the process for integration is not clearly defined. JP 4-0, Chapter V should be revised so that the process is outlined, as it would be executed. It should indicate the major tasks for pre-deployment, deployment, reception and integration. Additionally, it should include responsibilities for control and visibility.

A major obstacle to integration of contracting into the Total Force mix is a military culture that is reticent to accept contractors. "Contractor" seems to be a dirty word in most DoD circles and a source of distrust. Distrust exists primarily because military leaders don't understand the relationship between the military and contractors in the battlespace.¹⁵⁰ This is because contracting has been treated as a specialty area within the military, instead of as a tool in the commander's warfighting "kit-bag." Officers, noncommissioned officers and senior DoD civilians must be educated on the role of contractors and issues surrounding their use in the battlespace. Officer and noncommissioned officer basic and advanced courses must be an initial focus of this effort since these officers and noncommissioned officers will likely serve with contractors early in their careers and at all levels of command thereafter. Intermediate and senior service schools should implement courses focused on educating senior leaders on the effective integration of contracting into military operations. Focused sessions such as the recent U.S. Army War College "Industry Day" is a good start toward educating officers and senior civilians, but education must start at the earliest opportunity.¹⁵¹

Service and Joint training programs must incorporate contracting to some extent. Specifically, commanders and units should be exposed to the impact of contractors in the battlespace. To an extent, this is done currently at both the Army NTC and Army Joint Readiness Training Center. Since the training centers are focused on operations at the tactical level, the amount of contract participation should reflect the scenario and the level of support that would be required for tactical operations. For example, the Mission Readiness Exercises (Fort Polk) that prepare units for operations in Bosnia include the portrayal of contractors by Army units and the employment of actual contractors that provide both scenario and logistics support. To date, LOGCAP has been integrated into 25 major exercises.¹⁵²

In balancing resources against operational missions, readiness and transformation, force mix will be a critical component. The Joint Vision 2020 Focused Logistics concept fails to incorporate force mix and does not address contracting or outsourcing and privatization as key enablers. Contractors will continue to play an increasing role, especially in weapon system

sustainment. With the possibility of further downsizing of the U.S. military, contractors may play an even greater role.

CONCLUSION

The future U.S. national security strategy will continue to be ubiquitous in nature. As requirements for military forces to carry out the strategy change in size and complexity, so will the requirement for contracted support of U.S. military operations. Contracting support of U.S. military forces will continue to serve as both a component and a key enabler of DoD transformation.

Joint Vision 2020 Focused Logistics requires that support to U.S. forces is both agile and responsive. The success of how well contracting supports the force under this concept depends on the effective integration of contracting into U.S. military operations. Integration depends on changes to contracting policy, programs, doctrine, training and organizations that are designed to support U.S. military forces under the JV2020 focused logistics concept.

As contracting support under the JV2020 concept evolves, it must be implemented with a clear picture of the future environment. Future contracting support must account for risks to contractors in the JV2020 battlespace, and at the same time weigh the risk to the supported force if contractors are not available to provide support. Under JV2020, wholesale outsourcing and privatization is risky, whereas a balanced force mix of uniformed military, DoD civilian and contract support is prudent.

Contracting must be defined in policy and doctrine to support warfighting in joint, multinational and interagency environments. Where possible, complexity must be minimized, while education and training are enhanced. In the future, contractors must be an element of the Total Force team. Doctrine, education and training must effectively address issues, such as integration, visibility and control of contractors in the battlespace.

The Joint Vision 2020 concept should include the use of contracting in the Agile Organization concept for future warfighting. Without this, the concept is incomplete and fails to account for needed resource options, as well as the constraints that will dynamically challenge support to U.S. military operations in the future.

WORD COUNT = 9943

ENDNOTES

¹ James A Huston, The Sinews of War: Army Logistics 1775-1953, United States Army, (Washington, D.C.: Office of the Chief of Military History, 1966), 71.

² Department of Defense, Quadrennial Defense Review Report, 2001 (Washington, D.C.: Office of the Secretary of Defense, U.S. Department of Defense, 30 Sep 2001), 15.

³ Ibid, 26-27.

⁴ Ibid, 30-39.

⁵ Ibid, 16.

⁶ Michele A. Flournoy, QDR 2001: Strategy-Driven Choices for America's Security, (Washington, D.C.: National Defense University Press, April 2001), 379.

⁷ 2001 QDR, 52.

⁸ Ibid, 53-54.

⁹ Joint Chiefs of Staff, National Military Strategy, (Washington, D.C.: Office of the Chairman, Joint Chiefs of Staff, September 1997), 1.

¹⁰ Joint Chiefs of Staff, Joint Vision 2020, (Washington, D.C: Office of the Chairman, Joint Chiefs of Staff, June 2000), 1.

¹¹ Susan C. Foster, Contractors on the Battlefield: Force Multipliers or Detractors, Strategy Research Project, (Carlisle Barracks, PA: U.S. Army War College, 7 April 1999), 3.

¹² Kenneth Allard, Somalia Operations: Lessons Learned, (Washington, D.C: National Defense University, 1995), 82.

¹³ Joint Chiefs of Staff, Joint Vision 2010, Focused Logistics, A Joint Logistics Roadmap, (Washington, D.C: Office of the Chairman, Joint Chiefs of Staff, 1997), Executive Summary, i.

¹⁴ Joint Vision 2020, 1.

¹⁵ Ibid.

¹⁶ Ibid, 4.

¹⁷ Ibid.

¹⁸ Ibid, 4-5.

¹⁹ Ibid, 2.

²⁰ Ibid, 8-9.

²¹ Ibid, 20-21.

²² Ibid, 22-23.

²³ Ibid, 26-27.

²⁴ Ibid, 24.

²⁵ Ibid, 24-25.

²⁶ Ibid, 24.

²⁷ Ibid, 25.

²⁸ Joint Chiefs of Staff, J4 Logistics – Roadmap, Joint Deployment/Rapid Distribution, (Washington, D.C.: U.S. Joint Chiefs of Staff), available at <<http://www.dtic.mil/jcs/j4/projects/deploy/deploy1.html>>. Internet. Accessed on 31 January, 2002.

²⁹ Joint Chiefs of Staff, J4 Logistics – Roadmap, Information Fusion, (Washington, D.C.: U.S. Joint Chiefs of Staff), available at <<http://www.dtic.mil/jcs/j4/projects/foclog/info-fus.html>>. Internet. Accessed on 31 January, 2002.

³⁰ Joint Chiefs of Staff, J4 Logistics – Roadmap, Joint Logistics C2, (Washington, D.C.: U.S. Joint Chiefs of Staff), available at <<http://www.dtic.mil/jcs/j4/projects/foclog/jtlogc2.html>>. Internet. Accessed on 31 January, 2002.

³¹ Joint Chiefs of Staff, J4 Logistics – Roadmap, Multinational Logistics, (Washington, D.C.: U.S. Joint Chiefs of Staff), available at <<http://www.dtic.mil/jcs/j4/projects/foclog/multi.html>>. Internet. Accessed on 31 January, 2002.

³² Joint Chiefs of Staff, J4 Logistics – Roadmap, Multinational Logistics, (Washington, D.C.: U.S. Joint Chiefs of Staff), available at <<http://www.dtic.mil/jcs/j4/projects/foclog/multi.html>>. Internet. Accessed on 31 January, 2002.

³³ Joint Chiefs of Staff, Force Health Protection, (Washington, D.C.: U.S. Joint Chiefs of Staff), available at <<http://www.dtic.mil/jcs/j4/projects/forcemed/capstone.pdf>>. Internet. Accessed on 31 January, 2002.

³⁴ Ibid.

³⁵ U.S. Army Materiel Command, Contracting and Contractors Supporting Military Operations, AMC Pamphlet 715-18, (Alexandria, VA: U.S. Army Materiel Command, June 2000), 1-2.

³⁶ Steven Zamparelli, "What Have We Signed Up For? Competitive Source and Privatization, Issues and Strategy 2000, Contractors on the Battlefield," Air Force Journal of Logistics, (December 1999), 10.

³⁷ Ibid, 10-11.

³⁸ Ibid, 10.

³⁹ Richard Schenck, Contractors: A Strategic Asset or Achilles Heel?, Strategy Research Project, (Carlisle Barracks: U.S. Army War College, 10 April 2001), 1.

⁴⁰ Ibid, 1.

⁴¹ Zamparelli, 10.

⁴² Schenck, 2.

⁴³ Julian Thompson, The Lifeblood of War: Logistics in Armed Conflict, (London: Brassey's, 1991), 28.

⁴⁴ Zamparelli, 10.

⁴⁵ Schenck, 2.

⁴⁶ Vincent Demma, Contractors on the Battlefield: An Historical Survey from the Civil War to Bosnia, Study Commissioned by the U.S. Army Materiel Command, Washington, D.C., not dated, 4. Used with permission of the U.S. Army Center for Military History, Dr. Steven Gough.

⁴⁷ Schenck, 3.

⁴⁸ Schenck, 2-3.

⁴⁹ Schenck, 3.

⁵⁰ Ibid, 3.

⁵¹ "Vietnam: How Business Fights the War by Contractors", Business Week, No. 1905, (5 March 1965), 58-62.

⁵² Schenck, 3.

⁵³ Carrol H. Dunn, Vietnam Studies: Base Development in South Vietnam, 1965-1970, (Washington, D.C.: U.S. Department of the Army, 1972), 42.

⁵⁴ Zamparelli, 10.

⁵⁵ Ibid, 10.

⁵⁶ U.S. Army Center for Military History, Oral History Interview with COL(P) John Zierdt, Commander, 1st Corps Support Command, (Fort Bragg, NC: U.S. Army Center For Military History, 10 June 1991), no pp.

⁵⁷ William G. Pagonis, Moving Mountains: Lessons in Leadership and Logistics from the Gulf War, (Boston, MA: Harvard Business School Press, 1992), 123.

⁵⁸ Eric A. Ornitz and Gary T. Bublit, "Contractors on the Battlefield, Risks on the Road Ahead," ArmyLog, (January 1999), available at [http://www.cascom.army.mil/rock drill/c contractors on the battlefield/integrated concept](http://www.cascom.army.mil/rock%20drill/c%20contractors%20on%20the%20battlefield/integrated%20concept)>. Internet. Accessed on 1 November 2001.

⁵⁹ Foster, 8.

⁶⁰ Zamparelli, 10.

⁶¹ Joseph B. Michels, "A Civil Sector Multiplier for the Operational Commander: Focused Logistics 2010," Air Force Journal of Logistics, (December 1999), 22.

⁶² Executive Office of the President, Performance of Commercial Activities, OMB Circular A-76, (Washington, D.C.: Office of Management and Budget, 4 August 1983/W Change in 1999), 1-2.

⁶³ Contracting for Certain Supplies and Services Required When Cost is Lower, Title 10, U.S. Code, Subtitle A, Part IV, Chapter 146, Section 2462.

⁶⁴ Department of Defense, Continuation of Essential DOD Contractor Services During Crises, W Change 1, DOD Instruction 3020.37, (Washington, D.C.: U.S. Department of Defense, 26 January 1996), 2.

⁶⁵ OMB Circular A-76, 1.

⁶⁶ Department of the Army, Contractors Accompanying the Force, Army Regulation 715-9, (Washington, D.C.: U.S. Department of the Army, 29 October 1999), 15.

⁶⁷ Defense Federal Acquisition Regulation Supplement (DFARS), Section 201, (17 August 1998) and Defense Acquisition Deskbook, both are available at <http://www.web1.deskbook.osd.mil>>. Internet. Accessed on 20 January 2002.

⁶⁸ Joint Chiefs of Staff, Doctrine for Logistics Support of Joint Operations, Joint Publication 4-0 (JP 4-0), Chapter V, Contractors in the Theater, (Washington, D.C.: U.S. Joint Chiefs of Staff, 6 April 2000), V-1

⁶⁹ Ibid.

⁷⁰ Ibid, V-2.

⁷¹ Ibid.

⁷² Ibid, V-3.

⁷³ Ibid, V-3 to V-4.

⁷⁴ Ibid, V-2 to V-9.

⁷⁵ Joint Chiefs of Staff, J4 Logistics – Roadmap, Joint Deployment/Rapid Distribution, (Washington, D.C.: U.S. Joint Chiefs of Staff), available at <<http://www.dtic.mil/jcs/j4/projects/deploy/deploy1.html>>. Internet. Accessed on 31 January, 2002.

⁷⁶ Ibid.

⁷⁷ Joe A. Fortner, "Institutionalizing Contractor Support on the Battlefield," Army Logistician, Vol. 32, Issue 4, (July/August 2000), 13.

⁷⁸ FAS Military Analysis Network, AH-64 Apache, available at <<http://www.fas.org/man/dod-101/sys/ac/ah-64.htm>>. Internet. Accessed on 1 February 2002.

⁷⁹ U.S. Army Materiel Command, Logistics Civil Augmentation Program, U.S. Army Materiel Command Pamphlet 700-3, (Alexandria, VA: U.S. Army Materiel Command, 31 January 2000), 4.

⁸⁰ United States General Accounting Office, Contingency Operations: Opportunities to Improve the Logistics Civil Augmentation Program, (Washington, D.C.: U.S. General Accounting Office 11 February 1999), 66.

⁸¹ Maria J. Dowling and Vincent J. Feck, "A Joint Logistics and Engineering Contract", Air Force Journal of Logistics, (December 1999), 64.

⁸² Ibid, 65.

⁸³ Ibid, 64.

⁸⁴ Ibid.

⁸⁵ Joe Russell LCDR USN, "Tip of the Spear Contracting Solutions ...," U.S. Navy Supply Center Homepage, USNAVSUP Newsletter, (July/August 2000), available at <<http://www.navsup.navy.mil/lintest/julaug2000/russell.htm>>. Internet. Accessed on 14 November 2001.

⁸⁶ Ibid.

⁸⁷ Michael G. Ahern, "V-22 Aircraft's Commercial Engine and Commercial Logistics Support," U.S. Navy Supply Center Homepage, USNAVSUP Newsletter, (July/August 2000) available at <<http://www.navsup.navy.mil/lintest/julaugweb/hiv22.htm>>. Internet. Accessed on 14 November 2001.

⁸⁸ Department of the Navy, U.S. Navy Web Site, "Engineering Assessment Team Deploys to Roosevelt Roads," Navy Office of Information, (24 September 1998), available at <<http://www.chinfo.navy.mil/navpalib/news/navywire/nwsa98/nwsa0924.txt>>. Internet. Accessed on 14 November 2001.

⁸⁹ Ibid.

- ⁹⁰ U.S. Marine Corps, Purchasing Procedures Manual, not dated, B-2.
- ⁹¹ Ibid.
- ⁹² Department of the Army, Contractors on the Battlefield, Field Manual 3-100.21 (FINAL DRAFT), (Fort Monroe, VA: U.S. Army Training and Doctrine Command, 8 November 2001), Preface, viii.
- ⁹³ Katherine Peters, "The Price of Peace," Government Executive, (March 1997), 2.
- ⁹⁴ Zamparelli, 11.
- ⁹⁵ U.S. General Accounting Office, Major Management Challenges and Program Risks: Department of Defense, Washington, D.C.: U.S. General Accounting Office, Performance and Accountability Series, (January 2001), 13.
- ⁹⁶ Stephen E. Newbold, "Sourcing and Privatization: An Essential USAF Strategy," Air Force Journal of Logistics, (December 1999), 46.
- ⁹⁷ Castillo, Airpower, Fall 2000.
- ⁹⁸ Newbold, 46.
- ⁹⁹ Ibid.
- ¹⁰⁰ Newbold, 47.
- ¹⁰¹ Foster, 9.
- ¹⁰² Foster, 9.
- ¹⁰³ Eric C. Wagner, "Contingency Contracting for a Special Forces Group", Army Logistician Magazine, (May-June 1999), available at <<http://www.almc.army.mil/ALOG/issues/MayJun99/MS333.htm>>. Internet. Accessed on 16 November 2001.
- ¹⁰⁴ Castillo, Airpower, Fall 2000.
- ¹⁰⁵ Young, ALOG, May-Jun 99.
- ¹⁰⁶ U.S. Army Materiel Command Pamphlet 715-18, 1-1.
- ¹⁰⁷ Martin van Creveld, Technology and War – From 2000 BC to the Present, (London: Brassey's, 1991), 312.
- ¹⁰⁸ FM 3-100.21 (Final Draft), 1-9.

¹⁰⁹ Jason Sherman, "Welcome to the Future: The US Army Tests its Information-Age Brigade in the Desert," Armed Forces Journal International, (May 1997), available on-line at <<http://www.afji.com/mags/1997/May/future.html>>. Internet. Accessed on 16 November 2001.

¹¹⁰ The observation was made by an officer who visited the U.S. Army War College on 7 November 2001 and who had observed the Digital Corps Exercise at the U.S. Army National Training Center.

¹¹¹ Zamparelli, 12. It must be noted that the employment of the B-2 in recent years has been primarily from the Continental U.S. and that contractors performing these functions would likely not be in the battlespace.

¹¹² U.S. GAO, Major Management Challenges and Program Risks: Department of Defense, 9.

¹¹³ LOGCAP, 15.

¹¹⁴ JV2020, 7.

¹¹⁵ Based on conversation with COL Don Yates, project advisor, and the liner notes he provided to me on the first draft of this report on 11 September 2002

¹¹⁶ Ibid.

¹¹⁷ Ibid.

¹¹⁸ Ibid.

¹¹⁹ FM 3-100.21 (FINAL DRAFT), 4-20.

¹²⁰ Ibid.

¹²¹ Department of Defense Inspector General, DOD IG Report on the Audit of Contractor Maintenance Support for Operation Desert Shield and Desert Storm, Report 91-120, (Washington, D.C.: U.S. Department of Defense, 20 September 1991), 9-10.

¹²² Department of Defense, Maintenance of Military Materiel, DOD Directive 4151.18, (Washington, D.C.: U.S. Department of Defense, 12 August 1991), 3.

¹²³ JP 4-0, V-6.

¹²⁴ Geneva Conventions, Convention III, Article 4(A)4, (12 August 1949).

¹²⁵ Department of Defense Inspector General, Civilian Contractor Overseas Support During Hostilities, Audit Report 91-105, (Washington, D.C.: U.S. Department of Defense, 26 June 1991), 8.

¹²⁶ Oral History Interview with COL(P) Zierdt, 10 June 1991.

¹²⁷ Zamparelli, 14. This incident is not well documented. I have every indication that the personnel cited were DoD civilians and not commercial contractors, though this could not be completely verified.

¹²⁸ Demma, 9.

¹²⁹ Dowling and Feck, 63.

¹³⁰ Zamparelli, 14.

¹³¹ U.S. Army Materiel Command Pamphlet 715-18, 7-1.

¹³² U.S. Army Materiel Command Pamphlet 715-18, 7-2.

¹³³ Ibid., 7-3.

¹³⁴ U.S. Army Materiel Command, Logistics Civil Augmentation Program Briefing, provided by COL Don Yates on 14 February 2002 (Alexandria, VA: U.S. Army Materiel Command).

¹³⁵ JV2010 Focused Logistics, 7-8.

¹³⁶ JP 4-0, V3-V4.

¹³⁷ FM 3-100.21 (FINAL DRAFT), 4-8 to 4-10.

¹³⁸ Joint Chiefs of Staff, Doctrine for Personnel Support of Joint Operations, Joint Publication 1-0, (Washington, D.C.: U.S. Joint Chiefs of Staff, 19 November 1998), Appendices G and O.

¹³⁹ Castillo, Air Power, Fall 2000.

¹⁴⁰ Stephen P. Ferris and David M. Keithly, "Outsourcing the Sinews of War: Contractor Logistics," Military Review, (September-October 2001), 77.

¹⁴¹ Norman E. Williams and Jon M. Schandelmeier, "Contractors on the Battlefield," Army Magazine, (January 1999), 34-37.

¹⁴² Department of the Army, Logistics Assistance, Army Regulation 700-4, (Washington, D.C.: U.S. Department of the Army, 31 July 1995), Section 1-5.

¹⁴³ Ibid, Sections 1-5 and 2-1.

¹⁴⁴ Personal experience, Logistics Assistance Officer, 1st Cavalry Division, Fort Hood, TX, 15 July 1996 – 4 June 1997.

¹⁴⁵ Ibid.

¹⁴⁶ Allen V. Burman, "A-76: The Program Everyone Loves to Hate," Government Executive, (1 February 2001), available at <<http://GovExec.com>>. Internet. Accessed on 16 November 2001.

¹⁴⁷ Susan M. Gates and Albert A. Robbert, Comparing the Costs of DOD Military and Civil Service Personnel, (Santa Monica, CA: Rand Corporation, National Defense Research Institute, 1998), prepared for the Office of the Secretary of Defense, 47-62.

¹⁴⁸ Personal experience as J4/Comptroller and Chief of Staff for Special Operations Command Joint Forces Command, June 1999 – June 2001. As the J4/Comptroller and Chief of Staff, I served as the Contracting Officer Representative for a contract with TRW and conducted multiple analyses of contract, military and DOD civilian labor costs, concluding that contract labor was consistently more economic.

¹⁴⁹ JV 2010 Roadmap, 35.

¹⁵⁰ R. Philip Deavel, "Political Economy of Privatization for the American Military," Air Force Journal of Logistics, (December 1999), 35-43.

¹⁵¹ Personal recollection, U.S. Army War College Industry Day, 1 November 2001.

¹⁵² U.S. Army Materiel Command, Logistics Civil Augmentation Program Briefing, provided by COL Don Yates on 14 February 2002 (Alexandria, VA: U.S. Army Materiel Command).

BIBLIOGRAPHY

- Adams, Thomas K., "The New Mercenaries and the Privatization of Conflict", Parameters, (Summer 1999), 103-116.
- Ahern, Michael G., "V-22 Aircraft's Commercial Engine and Commercial Logistics Support," July/August 2000, available at <<http://www.navsup.navy.mil/lintest/julaugweb/hiv22.htm>>. Internet. Accessed on 14 November 2001.
- Allard, Kenneth, Somalia Operations: Lessons Learned, Washington, D.C: National Defense University, 1995.
- Althouse, James E., "Contractors on the Battlefield: What Doctrine Says, and Doesn't Say," Army Logistician (ALOG), November-December 1998, available at <<http://www.almc.army.mil/ALOG/issues/NovDec98/MS323.htm>>. Internet. Accessed on 20 November 2001.
- Brooke, Lynton J., Contracting, An Alarming Trend in Aviation Maintenance, Strategy Research Project, Carlisle Barracks, PA: U.S. Army War College, 16 April 1998.
- Business Week, "Vietnam: How Business Fights the War by Contractors," No. 1905, 5 March 1966, 58-62.
- Burman, Allen V., "A-76: The Program Everyone Loves to Hate," Government Executive, 1 February 2001, available at <<http://GovExec.com>>. Internet. Accessed on 16 November 2001.
- Castillo, Lourdes A., Waging War with Civilians: Asking Unanswered Questions, Airpower Magazine, December 1999, available at <<http://www.airpower.maxwell.af.mil/airchronicals/apj/apj00/fall00/castillo.htm>>. Internet. Accessed on 16 November 2001.
- Davidson, Susan A., "Where is the Battle Line for Supply Contractors," Air Force Journal of Logistics, December 1999, 52-59.
- Deavel, R. Phillip, "Political Economy of Privatization for the American Military," Air Force Journal of Logistics, December 1999, 35-43.
- DeBow, Michael J., Construction Contracting: Strategic and Operational Engineering Harnesses the Private Sector in Support of United States National Security Objectives, Strategy Research Project, Carlisle Barracks, PA: U.S. Army War College, 9 April 1996.
- Defense Federal Acquisition Regulation Supplement (DFARS), Section 201, 17 August 1998 and Defense Acquisition Deskbook, both are available at <http://www.web1.deskbook.osd.mil>>. Internet. Accessed on 20 January 2002.
- Demma, Vincent, Contractors on the Battlefield: An Historical Survey from the Civil War to Bosnia, study commissioned by the U.S. Army Materiel Command, Washington, D.C., not dated, 4. Alexandria, VA: U.S. Army Materiel Command, not dated. Used with permission of the U.S. Army Center for Military History, Dr. Steven Gough.

- Dowling, Maria J, and Feck, Vincent J., "A Joint Logistics and Engineering Contract", Air Force Journal of Logistics, December 1999, 60-71.
- Dunn, Carrol H., Vietnam Studies: Base Development in South Vietnam, 1965-1970, Washington, U.S. Department of the Army, 1972.
- Executive Office of the President, Performance of Commercial Activities, OMB Circular A-76, Washington, D.C.: U.S. Office of Management and Budget, 4 August 1983.
- FAS Military Analysis Network, AH-64 Apache, available at <<http://www.fas.org/man/dod-101/sys/ac/ah-64.htm>>. Internet. Accessed on 1 February 2002.
- Ferris, Stephen P. and Keithly, David M., "Outsourcing the Sinews of War: Contractor Logistics," Military Review, September-October 2001, 72-83.
- Flournoy, Michele A., QDR 2001: Strategy-Driven Choices for America's Security, Washington D.C.: National Defense University Press, April 2001.
- Fortner, Joe A., "Institutionalizing Contractor Support on the Battlefield", Army Logistician, Vol. 32, July/August 2000, Issue 4, 12-15.
- Foster, Susan C., Contractors on the Battlefield: Force Multipliers or Detractors, Strategy Research Project, Carlisle Barracks, U.S. Army War College, 7 April 1999.
- Friel, Brian, "DoD Downsizing, Other Reforms Make Progress," Government Executive, 9 October 1998, available at <<http://www.govexec.com/dailyfed/1098/100998b1.htm>>. Internet. Accessed on 22 February 2002.
- Gates, Susan M. and Robbert, Albert A., Comparing the Costs of DOD Military and Civil Service Personnel, Santa Monica, CA: Rand Corporation, National Defense Research Institute, 1998, prepared for the Office of the Secretary of Defense.
- Geneva Conventions, Convention III, Article 4(A)4, (12 August 1949).
- Human Rights Watch, BOSNIA and HERZEGOVINA: Beyond Restraint, Politics and Agenda of the United Nations International Police Task Force, Volume 10, No. 5(D), June 1998.
- Huston, James A., The Sinews of War: Army Logistics 1775-1953, Washington, D.C.: Office of the Chief of Military History, U.S. Department of the Army, 1966.
- Johnson, Cassandra, Associate Counsel, HQ AMC Office of Command Counsel, Information Paper, Military Extraterritorial Jurisdiction Act of 2000, (not dated), available at <<http://www.cascom.lee.army.mil>>. Internet. Accessed on 1 November 2001.
- Lovett, Troy L., Army Contract Aircraft Maintenance – Can We Afford It?, Strategy Research Project, Carlisle Barracks, PA: U.S. Army War College, 9 April 2001.
- Michels, Joseph B., "Focused Logistics 2010: A Civil Sector Multiplier for the Operational Commander," Air Force Journal of Logistics, Issues and Strategy 2000, Selected Readings, December 1999, 20-25.

- Newbold, Stephen E., "Competitive Sourcing and Privatization: An Essential USAF Strategy," Air Force Journal of Logistics, Issues and Strategy 2000, Selected Readings, December 1999, 44-51.
- Ornitz, Eric A. Ornitz and Bublitz, Gary T., Contractors on the Battlefield, Risks on the Road Ahead, ArmyLog, January 99, available at <[http://www.cascom.army.mil/rock drill/c contractors on the battlefield/integrated concept](http://www.cascom.army.mil/rock%20drill/ccontractors%20on%20the%20battlefield/integrated%20concept)>. Internet. Accessed on 1 November 2001.
- Pagonis, William G., Moving Mountains: Lessons in Leadership and Logistics from the Gulf War, Harvard Business School Press, Boston, MA 1992.
- Peters, Katherine, "The Price of Peace," Government Executive, Volume 29, No. 3, March 1997, 22-26.
- Russell, Joe, Tip of the Spear Contracting Solutions ..., US Navy Supply Center Homepage, USNAVSUP Newsletter, JUL/AUG 2000, available at <<http://www.navsup.navy.mil/lintest/julaug2000/russell.htm>>. Internet. Accessed on 14 November 2001.
- Schenck, Richard, Contractors: A Strategic Asset or Achilles Heel?, Strategy Research Project, Carlisle Barracks, PA: U.S. Army War College, 10 April 2001.
- Sherman, Jason, "Welcome to the Future: The U.S. Army Tests its Information-Age Brigade in the Desert," Armed Forces Journal International, May 1997, 12-13. Available at <<http://www.afji.com/mags/1997/May/future.html>>. Internet. Accessed on 16 November 2001.
- Thompson, Julian, The Lifeblood of War: Logistics in Armed Conflict, London: Brassey's, 1991.
- U.S. Army Center for Military History, Oral History Interview with COL(P) John Zierdt, Commander, 1st Corps Support Command, Fort Bragg, NC: U.S. Army Center for Military History, 10 June 1991.
- U.S. Army Materiel Command, AMC Contracts and Contractors Supporting Military Operations, AMC Pamphlet 715-18, Alexandria, VA: U.S. Army Materiel Command, 26 June 2000.
- U.S. Army Materiel Command, Logistics Civil Augmentation Program (LOGCAP), Pamphlet 700-3, Alexandria, VA: U.S. Army Materiel Command, 31 January 2000.
- U.S. Army Materiel Command, Logistics Civil Augmentation Program Briefing, provided by COL Don Yates on 14 February 2002, Alexandria, VA: U.S. Army Materiel Command.
- U.S. Code, Title 10, Contracting for Certain Supplies and Services Required When Cost is Lower, Subtitle A, Part IV, Chapter 146, Section 2462.
- U.S. Defense Logistics Agency, Organization and Responsibilities for the Defense Logistics Agency Contingency Support Team, DLA Regulation 3020.6, Alexandria, VA: U.S. Defense Logistics Agency, 6 June 2001.

- U.S. Department of Defense Inspector General, Civilian Contractor Overseas Support During Hostilities, Audit Report 91-105, Washington, D.C.: U.S. Department of Defense Inspector General, 26 June 1991.
- U.S. Department of Defense Inspector General, Report on the Audit of Contractor Maintenance Support for Operation Desert Shield and Desert Storm, Audit Report 91-120, Washington, D.C.: U.S. Department of Defense, 20 September 1991.
- U.S. Department of Defense, Continuation of Essential DoD Contractor Services During Crises, Instruction 3020.37, Washington, D.C.: U.S. Department of Defense, 6 November 1990 W/Change 1, 26 January 1996.
- U.S. Department of Defense, Maintenance of Military Materiel, DoD Directive 4151.18, Washington, D.C.: U.S. Department of Defense, 12 August 1991.
- U.S. Department of Defense, Quadrennial Defense Review Report, 2001, Office of the Secretary of Defense, Washington, D.C.: U.S. Joint Chiefs of Staff, 30 Sep 2001.
- U.S. Department of the Army, Contractors on the Battlefield, Field Manual 3-100.21 (FINAL DRAFT), Fort Monroe, VA: U.S. Army Training and Doctrine Command, 8 November 2001, Preface, viii.
- U.S. Department of the Army, Contractors Accompanying the Force, Army Regulation 715-9, Washington, D.C.: U.S. Department of the Army, 29 October 1999.
- U.S. Department of the Army, Logistics Support Element Techniques, Tactics and Procedures, Field Manual 63-11, Washington, D.C.: U.S. Department of the Army, 8 October 1996.
- U.S. Department of the Marine Corps, Purchasing Procedures Manual, Washington, D.C.: U.S. Department of the Marine Corps, not dated.
- U.S. Department of the Navy, U.S. Navy Web Site, "Engineering Assessment Team Deploys to Roosevelt Roads," Navy Office of Information, (24 September 1998), available at <<http://www.chinfo.navy.mil/navpalib/news/navywire/nwsa98/nwsa0924.txt>>. Internet. Accessed on 14 November 2001.
- U.S. Department of the Navy, "Engineering Assessment Team Deploys to Roosevelt Roads," 24 Sep 1998, accessed at <<http://www.chinfo.navy.mil/navpalib/news/navywire/nwsa98/nwsa0924.txt>>. Internet. Accessed on 16 November 2001.
- U.S. General Accounting Office, Contingency Operations: Opportunities to Improve the Logistics Civil Augmentation Program, Washington, D.C.: U.S. General Accounting Office 11 February 1999.
- U.S. General Accounting Office, Major Management Challenges and Program Risks: Department of Defense, Washington, D.C.: U.S. General Accounting Office, Performance and Accountability Series, January 2001.
- U.S. Joint Chiefs of Staff, Doctrine for Personnel Support of Joint Operations, Joint Publication 1-0, Washington, D.C.: U.S. Joint Chiefs of Staff, 19 November 1998.

- U.S. Joint Chiefs of Staff, Doctrine for Logistics Support of Joint Operations, Joint Publication 4-0, Washington, D.C.: U.S. Joint Chiefs of Staff, 6 April 2000.
- U.S. Joint Chiefs of Staff, JCS J4 Webpage, Focused Logistics - Joint Logistics Roadmap, 1 August 1997, available at <<http://www.dtic.mil/jcs/j4/projects/deploy/deploy1.html>>. Internet. Accessed on 31 January 2002.
- U.S. Joint Chiefs of Staff, Joint Vision 2020, Washington, D.C.: U.S. Joint Chiefs of Staff, June 2000.
- U.S. Joint Chiefs of Staff, National Military Strategy of the United States of America, Shape, Respond, Prepare Now: A Military Strategy for a New Era, Washington, D.C.: U.S. Joint Chiefs of Staff, 1997.
- Van Creveld, Martin, Technology and War – From 2000 BC to the Present, London: Brassey's, 1991.
- Wagner, Eric C., "Contingency Contracting for a Special Forces Group," Army Logistician Magazine, May-June 1999, 8-9.
- Williams, Norman E., and Schandelmeier, Jon M., "Contractors on the Battlefield," Army Magazine, January 1999, 32-35.
- Young, David L., "Planning: The Key to Contractors on the Battlefield," Army Logistics (ALOG), May-June 1999, 10-13.
- Zamparelli, Steven, "What Have We Signed Up For? Competitive Source and Privatization," Air Force Journal of Logistics, Issues and Strategy 2000, Contractors on the Battlefield, December 1999, 9-17.