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Growing Reliance on Contractors in Military Operations Demands Greater Control by Commanders

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The American military faces a turning point in its conduct of warfare but has failed to recognize this reality. It is now highly dependent on contractors to perform a myriad of functions in support of deployed forces with the trend indicating even greater reliance in the future. In spite of this, the American military does not fully understand the level of its reliance and has not planned to mitigate the risk of contractor non-performance. This paper demonstrates this fact as well as the need for the American military to come to grips with the ramifications of its sourcing decisions and the possible loss of organic mission capabilities as back ups in instances where contractors fail to perform. It will include a list of recommendations for joint force commanders to mitigate the risk posed by reliance on contractors. The most significant recommendations contained herein are that joint force commanders must have a single point of contact for all contractors to ensure visibility and accountability, they must also have complete visibility of all contractor personnel supporting the mission and they must exercise caution when deciding to outsource functions to contractors due to the long lead time necessary to regenerate those functions in the military once they are lost. Finally, commanders must include all aspects of contracts and contractors in the planning process from the very start.

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GROWING RELIANCE ON CONTRACTORS IN MILITARY OPERATIONS
DEMANDS GREATER CONTROL BY COMMANDERS

By

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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

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Abstract

GROWING RELIANCE ON CONTRACTORS IN MILITARY OPERATIONS DEMANDS GREATER CONTROL BY COMMANDERS

The American military faces a turning point in its conduct of warfare but has failed to recognize this reality. It is now highly dependent on contractors to perform a myriad of functions in support of deployed forces with the trend indicating even greater reliance in the future. In spite of this, the American military does not fully understand the level of its reliance and has not planned to mitigate the risk of contractor non-performance. This paper demonstrates this fact as well as the need for the American military to come to grips with the ramifications of its sourcing decisions and the possible loss of organic mission capabilities as back ups in instances where contractors fail to perform. It will include a list of recommendations for joint force commanders to mitigate the risk posed by reliance on contractors. The most significant recommendations contained herein are that joint force commanders must have a single point of contact for all contractors to ensure visibility and accountability, they must also have complete visibility of all contractor personnel supporting the mission and they must exercise caution when deciding to outsource functions to contractors due to the long lead time necessary to regenerate those functions in the military once they are lost. Finally, commanders must include all aspects of contracts and contractors in the planning process from the very start.
Introduction

History is replete with challenges and opportunities created by shifting means and methods of warfare. Several years ago, the United States had suffered the worst attack on American soil in its history and found itself engaged in a worldwide struggle to defend its way of life. America quickly discovered that the nature of this struggle was different than any that had come before, and, that in order to have any hope of defeating its adversaries, it had to adapt and change its approach to warfare. One might assume that this refers to the current Global War on Terror but in fact this is the situation the United States was in during the opening days of World War II. Among the adaptations made by the United States was the creation of the Naval Construction Force (NCF) as a way of projecting power against the Axis powers. This was no easy task and the founders of the NCF had to start from scratch to develop an innovative solution to the problem of outfitting and training this military construction organization. Among the obstacles to overcome were trade unions that were adamantly opposed to losing control of the construction trades and the journeymen themselves who feared the loss of pay and benefits should they enlist in the Navy to join the NCF.\(^1\) It took the visionary leadership of Admiral Ben Moreell to resolve these problems. He recognized the fact that America needed the NCF to fight World War II. He used his vision and strength of personality to bring the issue to the fore and overcame obstacles in the way of founding the NCF.\(^2\) By the end of the war, the NCF was a 250,000-man military force.\(^3\)

The thesis of this paper is that today the American military faces a similar turning point in the conduct of warfare but has failed to recognize this fact. It has become highly dependent on contractors to perform a myriad of functions in support of deployed forces
and the trend continues towards even greater reliance. In spite of this trend, the military has not fully embraced the level of reliance nor has it planned to mitigate the risk of contractor non-performance. Reliance on contractors is not a new phenomenon but unlike its World War II predecessors today’s American military has yet to take the first step required to solve the problem: recognize that the problem exists!

The issue of contractors on the battlefield has been written about and discussed for many years. Authors have discussed the fact that pressure to decrease Department of Defense (DoD) end-strength and the need to reduce expenditures have driven DoD to send more capabilities to contractors in the face of increased operational requirements. Between 1991 and 2003 the Army was reduced by about 31 percent⁴ while post-Cold War deployments have far exceeded those of the entire Cold War.⁵ The literature is also replete with papers discussing force protection requirements and the legal status of civilians accompanying the force. This paper will demonstrate that the American military has yet to come to grips with the ramifications of its sourcing decisions and the possible loss of organic mission capabilities as back ups in instances where contractors fail to perform. It will include a list of recommendations for joint force commanders to mitigate the risk posed by reliance on contractors.

**History of Contractors Supporting American Forces**

Even before the United States gained its independence, our military forces relied on outside entities for sustainment using both a direct purchase system and the first contracted system which was put in place by Robert Morris.⁶ During the years immediately following the Revolutionary War and throughout the Nineteenth Century, the contracted system put in place by Morris slowly transitioned to a system of arsenals
with procedures for centralized procurement which was managed by the Logistical Bureau of the Army. However, during this time the military still relied on contractors and contracted support to supplement its capabilities during times of peak demand.\(^7\) With the turn of the Twentieth Century, the U.S. Army faced a need for both skilled and unskilled deployable labor which would be subject to military control and discipline. In 1912, the Army met this need by establishing the quartermaster corps.\(^8\) With the onset of World War I came an expanding requirement which was primarily met through basic enlistments and the draft. While contracting was still a secondary source of support, supplementing the primary military efforts,\(^9\) the Army did make use of some French and Belgian contractors for extra labor, transportation and housekeeping requirements.\(^10\)

The functions performed by contractors in the field began a fundamental shift during the World War II. While contracting for things like transportation and low-end labor remained, the increased complexity of weapons systems and their rapid development and employment created an increased role for contractors’ technical representatives to accompany military forces into the field.\(^11\) Even while becoming more reliant on contractors for high-end technical support, the American military continued to depend on contracted labor for low-end work. Some have estimated that without contracted Japanese labor in the Korean War, the American military would have required an additional 250,000 uniformed personnel in country.\(^12\)

The trend towards high-end support came to full bloom in the Vietnam War when great leaps in weapons and equipment technology drove a large increase in the number of technical representatives in the field.\(^13\) Even as early as 1966, there were discussions revolving around the concern that the military would not be able to maintain the organic
technical expertise to operate and maintain the new generations of weapons. As in the
Korean War, the American military relied on contractors for other services including
trucking, construction and base support. During the First Gulf War, American forces
continued to make extensive use of contractors with over 9,000 contractor personnel
meeting requirements across a gamut of services and support. Additionally, the
American military relied heavily on coalition partners and host nation support to meet its
heavy transportation requirements.

Another way to view the American military’s history with contracted support is to
review the ratio of contractor personnel to uniformed military personnel. It remained
steady at about 1:6 from the Revolution until World War I when it was about 1:24. It
was during this time period that the American military was somewhat less dependent on
contractor support. During World War II it was 1:7 and was as low as 1:2.5 during the
Korean War, again indicating the heavy reliance on third country labor. The ratio in
Vietnam went back up to about 1:5, but as discussed above the nature of contractor
support was quite different in Vietnam. The ratio skyrocketed to 1:100 during the First
Gulf War and it dropped to about 1:1 during operations in the Balkans. While these
numbers provide some insight into the relationship between the American military and
the contractors who support it, care must be taken to ensure that they are viewed in the
context of the historical period and the nature of support provided.

In his 1999 work titled Contractors on the Battlefield, Charles Shrader provides
an outstanding conclusion to the history of contractors supporting American forces in
battle and provides an exceptional segue for the rest of this work.

The current environment of reduced government spending and consequent
grave reductions in the military force structure, coupled with continued
high mission requirements and the unlikely prospect of full mobilization, mean that to reach minimum required levels of support the extant Army logistical personnel will have to be augmented by civilian contractors. Since the late 1950s, no major operation undertaken by the Army - including the Vietnam and Gulf wars as well as a host of large and small contingency operations - could have been successfully completed without the assistance of civilian contractors.¹⁸

The question is not whether contractors will accompany American forces into the field, but rather what commanders can do to best prepare to manage them and prepare to replace them in the event of non-performance.

**Nature of Contractors on the Battlefield Today**

Joint Publication (JP) 4-0, *Doctrine for Logistics Support of Joint Operations*, provides definitions for the three broad categories of contracts used in support of military forces: systems support, external theater support and theater support. It clearly states that the terms of the contracts define and establish the relationship between the military and the contractor. The commander’s link to the contractor runs through the contracting officer who executed the contract or via that contracting officer’s representative.¹⁹

Systems support contractors support deployed forces under contracts awarded independent of operations. They are typically awarded by service program managers or military service component logistics commands. Services may run throughout the systems life cycle and can include spare parts and maintenance in addition to systems fielding and operations. These are written for specific weapons systems or families of equipment.²⁰ A further categorization of systems support contractors breaks them down to mission-enhancing and mission-essential support based on the function performed by the contractors. Mission-enhancing contractors are typically associated with new equipment during its initial fielding or as upgraded models are fielded. This work is
funded by the program manager and is usually performed by a field service representative. An example of a mission-enhancing system contract would be the contract with Steward and Stevenson used to assist in the fielding of the M88A2 Hercules. Mission-essential systems contractors do not augment or support military efforts to operate and maintain a system, they possess a capability which the military does not have. Examples of mission-essential systems contracts include those in place for the maintenance of some unmanned aerial vehicles.

External theater support contracts are contracts awarded by any procurement authority or supporting headquarters outside the theater. They may be prearranged, may utilize American or third country contractors and are typically, although not always, worldwide in scope. These contracts can include a wide array of services, including but not limited to construction, operation and maintenance of nearly any facility type, transportation and stevedoring services, billeting and food services, and utilities services. The three most prominent examples are the Army’s Logistics Civilian Augmentation Program (LOGCAP), the Air Force’s Armed Forces Contract Augmentation Program (AFCAP) and the Navy’s Construction Capabilities contract (CONCAP). Another example is the Civil Reserve Air Fleet (CRAF) contract.

Finally, theater support contracts are contracts awarded within the mission area in direct support of deployed operational forces. The range of services provided parallel those of the external theater support contracts but are heavily reliant on the local market or nearby offshore sources. They are awarded by contracting personnel accompanying the deployed force who work through the authority of the service component of the joint
task force contracting chief. Typical examples include purchasing small quantities of construction material or contracting for the delivery of bottled water.

DoD has yet to fully gain control of the management of contractors on the battlefield. While JP 4-0 provides the foundation for DoD doctrine, DoD Instruction 3020.37, Continuation of Essential DoD Contractor Services During Crises, dated 6 November 1990 also spells out basic policy and requirements. Of all the services, the Army has been the most aggressive in attempting to gain control of the issue of contractors on the battlefield and they have developed two Field Manuals (FM) which address the topic. FM 100-10-1, Contracting Support on the Battlefield, is aimed specifically at the non-contracting audience who is involved in the planning or acquisition of supplies or services and it is intended to “define battlefield contracting, also referred to as contingency contracting, in terms of its structure, organization, and process at the operational and tactical levels.”

FM 3-100-21, Contractors on the Battlefield, is more inclusive. “Its purpose is to define the role of contractors, describe their relationship to the combatant commanders and the Army service component commanders, and present their mission of augmenting operations and weapons support.”

FM 3-100-21 introduces the concept of a habitual relationship between business and the military for support of a unit, organization or system. The key aspect of a habitual relationship is that it is first and foremost established by requirements and conditions spelled out in the contract. The concept involves establishing a long-term personal relationship between contractor employees and the military members they support, a step beyond the organizational relationship normally established. The intended
effects include establishing a tight kinship, building a harmonious work environment and establishing a mutual confidence between the contractor and military personnel.31

JP 4-0 requires that the combatant commander or joint force commander designate a lead service as the agent for contracting, finance and resource management. This agent then assigns a mission chief responsible for contracting.32 FM 100-10-2 introduces the concept of the Principal Assistant Responsible for Contracting (PARC). The PARC is the commander’s senior acquisition advisor and is responsible for planning and managing all U.S. Army contracting executed within the commander’s area of operations.33 These are the elements of the organization responsible to the commander for contracted support of the mission, but as will be clearly shown, they do not have control or even visibility of all contracts that influence the commander’s ability to accomplish the mission, only those they award.

A final example from doctrine illustrates a systematic lack of coordination related to contractors on the battlefield today. JP 4-0 makes contractors responsible for their own force protection unless the contract states otherwise, however it further states that contractors should not be armed.34 Army doctrine places responsibility for force protection of deployed contractors on the military commander.35 One can easily see where this single conflict in doctrine could lead to confusion, wasted resources or, even worse, mission failure or casualties.

Trend of Growing Reliance on Contractors

The American military has always depended on contractors and outside suppliers to accomplish its mission. In recent years however, the level of dependence has increased and its nature has shifted. The following examples clearly illustrate this fact.
During the First Gulf War, the Joint Surveillance and Target Attack Radar System deployed with and was operated by contractors on board flights adjusting radar waveforms to improve performance.\textsuperscript{36} American military units accounted for only 38 percent of the heavy equipment transportation assets while commercial sources and coalition partners accounted for the rest.\textsuperscript{37} General Dynamics Services had a hundred employees deployed to support the Army’s Thyssen Henschel Fox NBC vehicles and also had employees deployed to help maintain M1A1 tanks. General Dynamics had 40 employees deployed to assist in the maintenance of the Apache, Black Hawk, and Cobra helicopters.\textsuperscript{38} The Fourth Infantry Division (Mechanized) depended on DynCorps to deploy with them to maintain their aircraft and General Dynamics Land Systems for maintenance of ground combat systems.\textsuperscript{39} The table in Appendix A provides an overview selected services recently provided by contractors in three deployed locations.

Its dependence on contractors touches many aspects of the DoD. The Aerospace Guidance and Metrology Center is now a wholly contractor run operation. This center is responsible for maintenance, repair and calibration of missile guidance systems and U.S. Air Force measurement standards.\textsuperscript{40} In many cases, fielding of new weapons and systems has become entirely dependent upon contractors. An author who personally executed tactical fieldings of the M88A2 Hercules, M1A2 SEP Abrams Tank, M2A3 Bradley Fighting Vehicle, Family of Medium Tactical Vehicles (FMTV) from Steward and Stevenson,\textsuperscript{41} stated that “each of these fieldings was totally dependent upon contractors for each step of the execution process to include operator and maintainer field testing and training.”\textsuperscript{42} A key element of this heavy reliance on contractors for
operations and maintenance is that many new weapons systems’ warranties require that contractors perform all maintenance for the warranty to remain in effect.43 Currently over 25% of all weapons systems are maintained by contractors and the current administration would like to increase that number to as high as 50%.44 In the past DoD used contractors more for low-end, easily replaced labor. DoD relies more and more on them to ensure that its high-end equipment functions and often does not have the ability to perform the work in-house. For example, “the F-117A stealth fighter, reconnaissance aircraft, and Global Hawk unmanned aerial vehicle rely on system contractors for maintenance and logistics support. Contractors must deploy with the military, since organic support is limited or nonexistent.”45 The asymmetric nature of the modern battlefield places an increased risk on all support personnel including contractors. The single most deadly event during the First Gulf War was a scud missile hit on reservists providing services that today would most likely be provided by contractors.46

In Bosnia, Brown and Root, a steadfast American company, was the prime contractor for supporting personnel in theater. However, they relied on 5,500 local nationals to perform most of the work.47 This reliance on contractors can have serious consequences. For example, the Canadian military relies on employees from the British company Serco for maintenance on search and rescue helicopters. However, when the employees went on strike, the Canadians did not have uniformed personnel capable of maintaining the aircraft and they were grounded for five weeks.48 Brown and Root would have been hard pressed to maintain services to forces in Bosnia had the Bosnian locals chosen not to cooperate as in the example of Serco’s employees.
Examples from Operation Iraqi Freedom (OIF) will hit even closer to home. Recently OIF veteran US Army Colonel James Chambers, support commander for the 3rd Corps at Fort Hood, was quoted in National Defense, “There was no single source collecting, either in the theater or outside the theater, [information about] how many contractors we have”. He estimated there may have been as many as one contractor for every ten uniformed personnel. A member of the Contractor Coordination Cell, an organization set up by the Army Materiel Command in Iraq, was quoted in Army AL&T that he “believes we have captured about 85 percent of the total number” of contractors in the theater. DoD was put on notice about 15 years ago that there was a gap in the management of contractors on the battlefield. Yet DoD is still only capable of estimating the number of contractor personnel in theater and the hole remains. DoD cannot say with any reliability that it knew where up to 15 percent of them were at that time. Clearly DoD can and must do better!

In another example, an Army support battalion was issued two new Movement Tracking Systems (used for tracking fuel consumption, etc.) just prior to moving into Iraq but did not receive training or systems support with it. It was unable to adequately make use of this system and thus had no visibility of a broad array of logistical functions.

Contrack International, a major contractor in Iraq, citing issues related to security, recently terminated its participation as the leader of a joint venture that had a $325 million agreement to rebuild portions of the Iraqi transportation system.

The final example relates to the Philippine Government’s decision to withdraw from the coalition after one of its citizens was taken hostage and the captives demanded that the Philippines withdraw. They left only one month early and removed only 51
personnel, but this should still be viewed as an indicator or warning of a potential line of attack against American forces in the future. It could have been much worse. The Philippines has about four thousand citizens working for contractors in Iraq\textsuperscript{55} and there are about 1.5 million Filipinos working throughout the Middle East.\textsuperscript{56} While the coalition easily absorbed the loss of 51 Filipino military personnel, it might have had a much more difficult time adjusting to the loss of the four thousand contract employees in Iraq or losing many more throughout the rest of the Middle East.

**Institutional Knowledge**

As early as 1988, DoD began to acquire institutional knowledge that its dependence on contractors for mission accomplishment has created a vulnerability to its ability to accomplish its mission. In a report dated 7 November 1988, the DoD Inspector General (DoD IG) developed the following four findings relating to contractor performance during war or mobilization:

- The DoD did not have the capability to ensure continued contractor support for emergency-essential services during war or mobilization.
- There was no central oversight of contracts.
- There was no legal basis to compel contractors to perform.
- There was no means to enforce contractual terms.\textsuperscript{57}

As a result of the 1988 findings, DoD issued DOD INST 3020.27, Continuation of Essential DoD Contractor Services During Crises. Three years later, the DoD IG issued a second report with remarkably similar results:

- DoD still does not have the capability to ensure continued contractor support in war or mobilization (hostile situations).
Loss of support would have a degrading effect on the Armed Forces capabilities in a protracted war.

There was still no central oversight.

The majority of contracts surveyed (over 91 percent) did not have contingency plans to ensure uninterrupted services.\(^58\)

Referring to DoD INST 3020.27, “The Instruction satisfies the recommendation for contingency plans, but does not satisfy the recommendation to identify war-stopper services.”\(^59\)

The next report, issued by the General Accounting Office (GAO) in June 2003, found that not much progress had been made in actually implementing the requirements. “However, as of April 2003, 12 years later, we found little evidence that the DOD components are implementing the DOD Instruction [Instruction 3020.27].”\(^60\) Highlights of the GAO report include:

- “DOD has not fully included contractor support in its operational and strategy plans.”\(^61\)

- “DOD components have not conducted the directed reviews to identify those contracts providing essential services.”\(^62\)

- “We found little in the way of backup plans in operational plans or as separate documents, finding only one written backup plan among the locations we visited, which included the Balkans and several Persian Gulf countries.”\(^63\)

- Visibility of the totality of contractor support does not exist at most combatant commands, component commands and deployed locations which restricts the
commanders’ ability to resolve the myriad of planning issues required for
success.64

“The decision to use contractors is not coordinated at the regional combatant command or
component commands”65 and “no one knows the totality of contractor support being
provided to deployed forces in an area of operations.”66

What is most interesting is the response that service officials provided to GAO
when questioned on the lack of contingency plans and the failure to provide
comprehensive reviews to identify those providing essential services. GAO found that
many commanders believed that since contractors had supported them in the past, they
would continue to support them in the future. They also believed that if a contractor did
fail to perform a given function or requirement, the commander would be able to have the
requirement met by either another contractor or by using military personnel.67 “We are
doing nothing to change the thought processes nor [sic] culture of our leadership by
failing to consider the second and third order impacts of these actions
[contracting/outsourcing] on the force.”68

The most recent GAO report on the matter, Military Operations: DoD’s
Extensive Use of Logistics Support Contracts Requires Strengthened Oversight, found
that little has changed in DoD’s approach to the matter, for example the plan to support
the military forces in Iraq was not developed until May 2003. It concluded that many of
recurring contractor performance problems, including meeting production schedules,
were due in large part to the fact that contractors were not included in planning efforts.69
The report noted an example in which nearly $2 million worth of tools and equipment
purchased for the U.S. Air Force is unaccounted for due to lack of adequate property
accountability. Neither the contractor nor the military has accepted responsibility for this lost materiel. In another example, the report noted an instance in which the contractor failed to meet the deadline for providing billeting for the 101st Airborne Division and provided none of the pest control and water production required under the contract.

Conclusion

One of the first steps to solving any problem is recognition that a problem exists. Unlike their World War II counterparts who founded the NCF, today’s military leadership has not taken the vulnerability created by increased reliance on contractors seriously. Despite numerous official reports with specific findings and recommendations and countless real world examples, only a smattering of which were detailed here, the DoD level of management, visibility and control of contractors on the battlefield has improved very little over the past 15 years. The specific reasons for non-performance or lack of contracted support is less important than the possible impact such failure would have on mission accomplishment. In the past, DoD could turn the task that contractors were performing over to military personnel who either possessed some basic skill or could quickly learn the skills required to perform the task. “The trend is unmistakable—as more and more functions have been transferred to the private sector through competitive sourcing, privatization, and changed business practices, reliance on contractors in all functional areas has increased. Perhaps what is even more significant is that the requirements of warfare and the weapons systems employed have altered the scope and significance of the support tasks that contractors provide.” It has been demonstrated above that today’s situation is not conducive to backfilling failed contracts with military personnel.
Lack of knowledge of contractors in theater, military units in theater with useless equipment, contractors who fail to meet delivery deadlines or lose equipment, loss of coalition partners, or the potential abandonment by contractors can directly affect mission accomplishment and must be addressed or planned for by commanders. It is not acceptable to have visibility of only 85 percent of the contractor personnel in theater, nor is it acceptable for planners to wave a magic wand and assume that someone else will perform in the place of non-performing contractors, lost coalition partners, or contractors who chose to leave the theater. Military personnel who fail to perform in contingencies are quickly fired and replaced with those who will. The same cannot be said for contractors.

**Recommendations**

Commanders must take their reliance on contractors for mission accomplishment more seriously. They must recognize this vulnerability and take appropriate actions to mitigate the risks stemming from the vulnerability. They must take a very serious look at management and control contractors supporting the joint force. Listed below are specific recommendations to reduce the risk of mission failure created by use of contractors:

- Joint force commanders must have a single point of contact (POC) for all contractors to ensure visibility and control of them. This POC should not be buried in staff, but must be a principal advisor to the commander.

- Commanders must have complete visibility of all contractor personnel supporting the mission. Among the top priorities for the POC for contractors is to develop a tracking and reporting system for the command.
Caution is the watch word when deciding to outsource functions to contractors. Once eliminated, an organic capability could take up to 20 years to grow back again.\textsuperscript{74} DoD must maintain a minimum organic capability of logistics support and must ensure uniformed personnel are trained/experienced to certain minimum levels of competency for operations and maintenance of all weapons systems.

-Ensure that program managers eliminate any warranty provisions in weapons procurement contracts that result in waiving the warranty if uniformed personnel perform maintenance or repairs on the equipment.

-DoD must establish a readiness system for deployable contractors. Poor contractor readiness will quickly become apparent during a contingency deployment. Detecting readiness shortfalls prior to deployment may prove challenging.\textsuperscript{75} However, it is well worth the effort as this one measure will greatly reduce the risk to DoD.

-DoD must train as it fights and fight as it trains. Unit training must include any and all contractors expected to deploy with the unit and establishment of a habitual relationship with all contractors must be the norm. Implementation of this recommendation will aid in the implementation of the preceding recommendation.

-DoD should consider “dual hatting” warfighters as acquisition officers to create unity of command. This will eliminate the conflict that exists between military commanders and contracting officers.

-Finally, contractors must be a principle element of the factor force when planning operations. Commanders must build branches into all plans in the event of contractor non-performance. They must review current contracts to ensure knowledge of the limits of contracted support and contractors must be included in the planning effort.
Implementing these recommendations will greatly increase DoD’s oversight and control of contractors on the battlefield and will reduce the risk of operational failure.

Notes

2 Ibid., 85.
3 Ibid., 25.
7 Ibid., 4-5.
9 Shrader, 6.
10 Friedman, 3.
11 Ibid., 6.
12 Shrader, 8.
13 Ibid., 8.
18 Shrader, 11.
19 Joint Chiefs of Staff, Doctrine for Logistic Support of Joint Operations, Joint Pub 4-0, (Washington, DC 6 April 2000), V-I.
20 Ibid.
22 McBride, 9.
23 Hamontree, 68.
24 JP 4-0, V-2.
25 Ibid.
26 Department of Defense, Continuation of Essential DoD Contractor Services During Crises, DODINST 3020.37 (Washington, DC: 1996).
28 Department of the Army, Contracting Support on the Battlefield, FM 100-10-2 (Washington, DC: 4 August 1999), iv.
29 Ibid.
30 Department of the Army, Contractors on the Battlefield, FM 3-100-21 (Washington, DC, 3 January 2003), preface.
31 Ibid., 1-10.
32 JP 4-0, V-3.
33 FM 100-10-2, 1-4.
34 JP 4-0, V-7.
35 FM 3-100-21, 2-10.
41 McBride, 9.
42 Ibid.
43 Ibid., 10.
45 Blizzard, 4.
50 Ibid.
55 Ibid.
59 Ibid., 3.
60 General Accounting Office, Contractors Provide Vital Services to Deployed Forces but Are Not Adequately Addressed in DoD Plans (Washington, DC: June 03), 15.
61 Ibid., 2.
62 Ibid.
63 Ibid.
64 Ibid., 32.
65 Ibid.
66 Ibid.
67 Ibid., 3.
68 Friedman, 15.
70 Ibid., 23.
71 Ibid., 25.
72 Zamparelli, 10-11.
73 Rebar, 4.

75 Ibid.


## Appendix A

Selected Services Provided by Contractors in Deployed Locations*.

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