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ABSTRACT

OPERATIONAL DECISION TO EXECUTION GAPS IN OPERATIONS OTHER THAN WAR: CEDING THE INFORMATION INITIATIVE. by MAJ Gregory J. Borden, USA, 41 pages.

This monograph considers whether existing US Command, Control, Communications, Computers, and Intelligence (C4I) systems enhanced the effectiveness of US operational commanders' decision-making processes in Operations Other Than War (OOTW) in Somalia. The author accepts an inherent lag in time between the decision to employ military forces and the execution of missions by tactical units which those decisions generate. The work considers operational agility as a function of the decision making processes employed at the strategic, operational and tactical levels and the transition of decision between the levels of conflict.

The study initially considers the challenges of strategic and operational decision making for Operations ~~Under~~ Other Than War under UN auspices. It then addresses the difficulty of incorporating disparate defense service command philosophies into a coherent joint command architecture. Efforts to achieve unity of command are further compounded by the consideration of employing combined forces in a multinational command structure. The monograph then analyses the impacts of strategic and operational decision making on the agility of US forces employed in Somalia.

The author concludes that strategic and operational decision processes disabled operational agility in Somalia. Failed analysis of the strategic environment resulted in strategic ambivalence at the UN and US National Command level. No long term vision of the desired end state of operations was provided to operational commanders. As a result, a campaign plan was not developed. The decentralized nature of Somali clan operations limited the effectiveness of strategic intelligence systems. Despite this, given global communications capability, operational commanders maintained centralized tactical control of forces in Somalia, placing tactical commanders in a reactive cycle of planning and execution. Finally, recommendations for a more effective system of distributed decision making across the levels of conflict are offered.

OPERATIONAL DECISION TO EXECUTE GAPS IN OPERATIONS OTHER THAN WAR: Ceding the Information Initiative

A Monograph
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TABLE OF CONTENTS

INTRODUCTION

Military periodicals hark that the era of information warfare is upon us. This sound-bite is often the central theme of consideration of an ongoing "Revolution In Military Affairs" (RMA). This ignores that warfare has historically revolved around information. Over 2000 years ago, Sun Tzu advised that "If you know your enemy and know yourself, you need not fear the results of a hundred battles."[1] Knowledge is the possession of accurate information which reduces uncertainty. Knowledge enables commanders to determine the appropriate disposition and employment of military forces in a given situation. While exceptions exist, commanders with more accurate information on the interactive forces on a battlefield have achieved victory. The struggle for information, therefore, is not, of itself, revolutionary.

Revolutions must give rise to a fundamentally different structural environment, be it social, political, or military. In this sense, the battle between belligerents for more complete and timely information is unchanged. Commanders seek information to reduce their level of uncertainty while denying information to their opponent. The object of information warfare is to enhance the effectiveness of one's own decision-making process while degrading the effectiveness of the opponent's process. By achieving decisions with limited risk levels more rapidly than the foe, a military force gains agility: the ability to execute operations more rapidly than the opposition.

Recent writings on information warfare have predominantly focused on the acquisition of technical systems for information collection and dissemination. Such systems, however, are merely *means* to accomplish the objective stated above. To achieve the object of information warfare, it is critical to analyze the *ways* in which technical resources are employed to enhance

force agility. Recognizing the enhanced capabilities of the new means available, military organizations must adapt their intellectual and organizational approaches to information warfare in order to optimize decision processes, the root of decisive victory.

This monograph considers whether existing US Command, Control, Communications, Computers, and Intelligence (C4I) systems have enhanced the effectiveness of US operational commanders' decision-making processes in Operations Other Than War (OOTW) in Somalia. It appears that antiquated command philosophies, organizational structures and concepts of decision-making which rely heavily on information systems poorly suited for OOTW ceded the operational initiative by extending rather than compressing the duration of decision windows at the operational level.

The leaders of the information battlefield operating system (BOS) highlight the coming of a "seamless intelligence system of systems" providing a near real-time intelligence picture shared by command systems from the operational level to the brigade task force. Satellite communications directly link strategic, operational, and tactical commands. Such capabilities should compress the decision-making process of operational commands by decreasing information collection and transmission times between the decision-maker and the tactical units executing the campaign plan. Such a compressed decision cycle would make US forces relatively more agile than belligerent forces, allowing rapid tactical unit responses to higher directives.

In Somalia, operational commanders confronted an environment of conflict which had changed from the Cold War paradigm. It was rife with uncertainty. Strategic guidance was an

ambiguous amalgam of variant multinational interests. Feudal clans, the belligerent forces, lacked the centralized, formal structure of a Soviet model force. Friendly US maneuver forces were of brigade size, placing relatively junior leaders in positions where tactical actions had potential for strategic impact in a shrinking global environment with an intrusive media. Technical information systems fell short of expectations. This combination of factors may have encouraged operational commanders to step down from a long-ranging campaign perspective into a tactical orientation in an effort to minimize the risk associated with high levels of uncertainty. As a result, the aggregate decision cycle from the strategic to tactical level was extended, leaving tactical commanders short-shrifted at the sharp edge of the sword.

Mission accomplishment is a result of the *execution* of operations. An institution's execution of a task, however, is contingent upon the decisions of its executive to generate effective plans to overcome an identified problem. These plans must be communicated throughout the organization to allow its parts to interoperate and achieve a stated objective. In simplistic form, institutional operations comprise three components: planning, which culminates in decision; communication of plans; and the execution of plans.

Joint defense forces are stratified, hierarchical organizations. The plans of higher headquarters establish boundaries for the planning of subordinate organizations when the superior commander selects a specific course of action. The approval decision initiates the communication of the plan and enables detailed planning and decision by subordinates. Thereby, the earliest time for execution of the composite organization's plans is a function of the aggregate time required to generate and disseminate decisions through multiple levels of command. The time period between the initiation of planning at the operational headquarters to

the initiation of tactical unit actions will be referred to as the "decision to execution" gap (See Graphic Model, Appendix A).

In this analysis, we will consider the gap generated by the interaction of command across three levels of war: strategic, operational, and tactical. The headquarters at each command level are assumed to conduct parallel planning. In this process, multiple echelons of command share available information to enable tentative development of feasible courses of action pending a final decision by the higher headquarters. The United States has divided the world into geographical areas of responsibility (AORs) under the command of Unified Commanders In Chief (CINCs), each functioning at the operational level of war. Therefore, we will place the onus for the execution of military missions upon these CINCs; CINC US Central Command (CINCCENT) for Somalia. This headquarters and the sufficiency of the organizational structure of its subordinate commands to generate and execute decisions are the central focus for this study.

Command consists of two principal elements: leadership and decision-making. Our analysis is principally concerned with the operational decision-making process and will begin by exploring decision theory. Of primary concern are identification of operational information collection and transmission requirements which enable a decision and the issue of risk in achieving that decision. Having established these critical aspects of decision, we will consider the intellectual and organizational constraints which selected systems of operational command impose on the decision process. The research will then examine the sufficiency of current concepts of operational command to maintain operational agility in recent operations in Somalia. Of particular interest will be whether the oft-voiced American favor for "mission-type

orders" was alive and well or lying in state. The results of the analysis will support conclusions on the adequacy of the existing US philosophy of operational command to cope with uncertainty in Operations Other Than War. Modifications will be proposed, as appropriate, to more fully exploit the information initiative to enhance operational and tactical agility.

ORGANIZATIONAL DECISION MAKING AND THE DECISION TO EXECUTION GAP

> *"Where, oh where are the good old days of the simple wars when, as the hour of battle approached, the commander got on his white horse, someone blew the trumpet, and off he charged toward the enemy."*
>
> *Moshe Dayan*[2]

Decision is the essence of command. Command decisions establish the current and future direction of military operations. Having established the organization's direction, leadership actualizes the potential of an organization to achieve its objectives. In any large organization, command is stratified, establishing multiple echelons of responsibility for component actions which, in concert, will accomplish these objectives. The effectiveness of the composite command system is measured by its ability to accurately define the nature of the component actions through subordinate layers of decision and execute those actions under the orchestration of the supreme commander. Thus, the gap between decision and execution is inherent to organizational activities. The duration of the gap is a function of both the internal decision processes of individual command levels and the effective transfer of decision between the levels. The goal is to minimize the lag of time, consistent with the accurate transfer of the desired objective through decision linkages at the strategic-operational and the operational-tactical levels. In order to evaluate any system of command, it is necessary to understand the nature of the decision-making process.

The National Command Authority (NCA) establishes a National Security Strategy (NSS) to pursue and defend national interests. This body orchestrates four elements of national power to accomplish these objectives: diplomatic, economic, informational, and military. The defense services of the United States provide the military element of national power, theoretically acting in concert with the other elements. In a unilateral decision to employ military power, this creates two strategic layers of decision: the NCA and the federal agencies with responsibility for each of the elements of power. (Appendix A, Command Structures.

The layers of strategic decision expand when we consider multinational efforts which employ military power. The United Nations provides a forum for consideration of issues of international impact. While diplomacy has been the predominant weapon of power wielded at the UN, the past ten years have shown an increasing tendency to employ the military forces of member nations in a variety of "peace" and humanitarian assistance operations. At a minimum, this adds a layer of decision to the strategic level, with UN resolutions providing boundaries to member nations concerning that nature of these operations and their desired objective.

In OOTW conducted under the auspices of the United Nations, the NCA has direct input to the strategic guidance generated by the UN through US membership in the Security Council. However, US interests will normally be subordinated to a consensus resolution which melds conflicting international interests. Rarely will such guidance, as expressed in UN Security Council Resolutions (UNSCR), provide a clear end state for military operations. The NCA includes the Secretary of Defense and the Chairman of the Joint Chiefs of Staff as military advisers to the President. Until recently, however, the UN had no organized structure to incorporate military necessity into political desirability in shaping strategic guidance. The

variety of interests which are melded into UNSCR create great potential for division of purpose in international strategic guidance, resulting in strategic ambivalence. [3]

Compounding this lack of unity of purpose is disunity of command. Individual nations retain command authority of their forces provided to the UN. Thus, while the UN establishes a multinational command structure at the operational level, national governments maintain separate and distinct strategic-operational structures. This may place greater restrictions on certain participating forces than desired by the multinational force commander. In actions to pursue a potentially ambiguous strategic goal, this disunity of command may limit the multinational commander's range of options for employment of forces. The combination of divided purpose and command can expand the gap in the decision linkage between the strategic and operational levels of command.

> Strategic direction by the theater commander should define the end conditions to be achieved. If the guidance...is lacking or ambiguous, the joint task force commander must articulate his own.
>
> LTG (Ret) John Cushman[4]

For military commands at the operational level of war, problem definition translates the strategic guidance of the National Command Authority (NCA) into a military mission. Once the military mission is defined, the operational commander gathers information to enable development of feasible courses of action. The United States has the most robust information-gathering capabilities in the world, providing an abundance of data to operational commands. The value of information is that it reduces the commander's uncertainty and the risk of failure associated with uncertainty. As noted in the introduction, increasing emphasis has been placed on technical systems designed to support the Cold War paradigm. In Operation Desert Storm,

the products of signal intelligence (SIGINT), imagery intelligence (IMINT), and electronic intelligence (ELINT) were of great value and reinforced operational reliance on electronic collectors. These capacities create two dangers for the operational commander. First, "the increasing capacity of systems...may increase the tendency...to demand...substantial amounts of data which have little utility other than to ease anxiety"[5], thereby delaying timely decision. Second, reliance on technical systems assumes that belligerents in theater rely on the electromagnetic spectrum to conduct operations. Feudal bands in Somalia indicate that this assumption may be invalid. Thus, decision is deferred pending collection of inaccessible information.

To institutionalize decision-making, organizations adopt models that provide a frame of reference for problem solving. A wide variety of such models exist, dividing the decision-making process into component processes.[6] Each service has developed their own process and institutionalized its practice through their respective education systems. While these various models vary in specific structure, their emphasis is the planning process by which staffs support commanders. Three aspects of this process are universal: information collection, development of alternative courses of military action, and decision on the preferred action. Communication of this decision is not a component of a specific headquarters decision process, but the linkage that initiates detailed planning by subordinates. Effective decision is founded on the presumption of proper problem definition and acquisition of sufficient, accurate and relevant information to achieve decision. The tendency of staffs is to collect sufficient information to reduce the commander's uncertainty and risk to acceptable levels.

There are two primary schools of decision under conditions of uncertainty: algorithmic and

heuristic.[7] The algorithmic approach generates a uniform problem solution by establishing mathematical rules within specific environmental criteria. Data input feeds the algorithm; expanding the sample of accurate data increases the accuracy of its solution. The heuristic relies on the experience of the decision-maker to adapt internalized, historical templates to an existing situation. Sufficient information is required to allow the decision-maker to relate the existing situation to his template. Studies have demonstrated that heuristics were better suited to both well-defined tasks with limited decision time and for ambiguous tasks with limited data.[8] The prevailing condition in conflict is uncertainty; in UN OOTW operations it is the ambiguity of the mission. This would imply that heuristic decision models would have great application in military decision-making. Existing models, however, are more algorithmic in nature, extending the duration of the decision process at both the operational and tactical levels of war.

Opposition to the use of heuristic decision-making begins at the strategic level. Taxpayers are reluctant to fund activities based on the instinct of individuals. The general public is unfamiliar with the requirements of defense activities and this unfamiliarity can breed mistrust. To overcome this mistrust, Secretary of Defense McNamara's "Whiz Kids" established the Planning, Programming, and Budgeting System as an objective means to justify defense requirements to Congress. Algorithmic decision processes became the lifeblood of defense spending. The necessity for such a decision process at the highest levels of the Department of Defense (DOD) has established a cultural bias for quantitative decision-making throughout the defense services. The algorithmic approach takes time to collect and input sufficient data to validate its conclusions. While this time is available in the five year budget cycle, it is lacking in military contingency operations.

In a combat environment, the most crucial information to be developed regards the enemy: his capabilities, limitations, composition, and disposition. This information can be expressed with relative statistical accuracy. However, in developing an enemy's possible and likely courses of action, the commander has left the domain of quantifiable science and entered the realm of interpretive art. The decisions of the enemy commander are always in the realm of the uncertain. .[9] The friendly commander may reduce but not eliminate this uncertainty by assessing the enemy commander's patterns of behavior. His selection of actions which best oppose the belligerent is ultimately the result of intuitive analysis. This is the irony of American military decision-making: we have developed a cultural bias for rational, algorithmic decision-making, although we recognize the ultimately heuristic nature of operational decisions. To incorporate the benefits of the algorithmic process while reducing the time consumed in generating operational decision, the commander must limit the time consumed by the staff in information collection by initially specifying the information considered relevant to his decision.

Battle Command, introduced in the 1993 Army Field Manual 100-5, Operations, suggests a shift from a staff-centered decision-making process to a command-centered process where the commander's intuition drives staff efforts from the receipt of the higher mission. It emphasizes that the Command Group is at the commander's location on the battlefield and assumes that the commander's movement on the battlefield provides a more accurate situational awareness than would his staff at the Command Post.[10] This enhanced situational awareness allows rapid and intuitive development of a vision for upcoming operations that drives future planning. Only significant changes in critical aspects of the situation would cause the commander to substantially alter that vision. In essence, the commander knows, at a certain point in time, the

general boundaries of his desired ways to conduct future operations. His intuition also recognizes those select situational factors that would cause him to revise this concept. In LTG John Cushman's words, "Good commanders...will know what information they need and will go for it, solving for themselves the problems of information overload."[11] These factors form the basis for information collection: the Commander's Critical Information Requirements (CCIR). By providing the staff with this initial concept and CCIR at the outset of the decision process, the commander expresses his initial intent and the information that confirms or denies his ability to execute it. This could significantly reduce the duration of the aggregate gap between decision and execution by reducing the time consumed by *internal* decision-making at the operational level. Providing the CCIR to subordinates in their initial warning order aids in nesting operational and information concepts, thereby compressing reactive planning at the tactical level and further reducing the aggregate gap between decision and execution.

COMMAND, C2, C3I, etc.

To this point, we have analyzed decision as the essence of command. We will now consider a more expansive view of command, emphasizing the intellectual and organizational components which impact on the effectiveness of the decision process at the operational level of command. The discussion will focus on planning for the effective use of resources, organizing military forces, and directing organizational components which impact on the effectiveness of the decision process. In Principles of Command and Control, Frank Snyder states that organizational decision, which establishes the chain of command for operations, the flow of information, and the intermediate processing necessary to support decision, should be made prior to operational decision.[12] Conceptually, Snyder argues for the construction of the brain

before building the body. This section considers the conceptual challenges this presents for joint and combined organizations in optimizing their capacity for effectively generating and executing decision.

Much of the failure of military organizations to adapt to the enhanced capabilities of information resources is tied, unfortunately, to terminology and service culture. The terms used in the past decade have led the analysis of command down the garden path to technological solutions at the expense of integrated human solutions which actualize technical capabilities. The "Technical Fix" emphasizes information collection. The "Human Fix" transforms information into knowledge and includes organizational design that assists distributed decision-making.[13]

Since World War II, we have expanded the command function through successive extensions of control (C2); communications (C3); computers (C4), information (C4I), and intelligence (C4I2). It was in this light, that General Frederick M. Franks introduced the term Battle Command into Army jargon in the 1993 version of FM 100-5. He wanted to distinguish the command function from the supporting functions of technology and other operating systems.[14]

Of the additions listed above, control is most closely linked to command. Thomas Coakley describes the relationship as follows: "Command...pushes forces out into the environment to do something; control pulls them back or restrains them."[15] Control also monitors the progress of subordinates in achieving the commander's intent. Communications and computers enable the commander to more flexibly collect and analyze information and disseminate his vision of operations on a dispersed battlefield. Intelligence falls in a distinct functional category, or

operating system, which includes information-gathering on enemy forces and non-allied actors. The remainder of information deals with friendly force capabilities and current situations provided by the remaining friendly force operating systems.

The emphasis on technological development in the absence of a vision for how to exploit new capabilities in generating decision is disconcerting. Systems are concrete aspects of an improving command system. They are easier to understand than theoretical considerations of intellectual revisions to our *method of command.* As an example of this misdirection, Roger Beaumont devoted considerable emphasis to the human factors of command in his research. However, he defined command and control as "essentially,...the communications networks that radiate out from and back into central nodes of authority in a system, carrying information related to organizational maintenance, external and internal activity, plans and goals of central directors".[16] This definition is devoid of consideration of decision, the essence of command, and is echoed in numerous publications and presentations regarding the direction of efforts to build the Army of the 21st century. This seems related to the ability to quantify the capabilities of technical systems to acquire resources from Congress as opposed to qualitative justification of the need for improved organizational efficiency. As a joint community, the budgetary approach has produced a melange of hardware and software applications within services that are often incapable of interface in increasingly joint operations.

This has been recognized repeatedly in joint operations in the past decade, most recently after Operation Desert Storm. In the Final Report to Congress: Conduct of the Persian Gulf War, a central command issue was the "need for a comprehensive joint architecture for which supporting communications architectures can be built and interoperability issues resolved".[17] To

optimize operational capabilities, a coherent statement of joint requirements is necessary that provides a common vision of a joint command system. A vision of the nature of integrated joint command structures will establish the requirements for its supporting technical systems and drive the research and development efforts of the private sector to meet these needs. This statement is currently under development at the Joint Warfighting Center.

Each service has a unique philosophy of command born of the nature of their force, its systems, and the resulting service culture. Naval command emphasizes higher level planning "set(ing) up a well-understood playbook, communicating a game plan, then operating flexibly through on-site commanders...exercising 'command override' when the situation calls for it."[18] This is loosely analogous to the Israeli system of command: optional control.[19] In this system, higher headquarters provide resources to division or brigade level headquarters then allow these commands to exercise initiative in the execution of operations in accordance with mission directives. There is minimal subsequent direction from the higher headquarters unless actions violate the prescribed intent, when the "optional" portion of the system is exercised to redirect operations.

The naval philosophy seems culled from the nature of their operations. Battle groups are widely dispersed on the vast sea, limiting the capacity of senior commanders to maintain simultaneous, real-time situational awareness throughout the bounds of the formation. Each ship within a battle group is a self-contained *system*, integrated into a formation, and tasked with specific responsibilities within the battle group's structure. Within the mission, each group and ship execute battle drills modified to the specific situation.

The Air Force ascribes to a succinctly expressed command philosophy: centralized planning and decentralized execution. Though composed as wings and squadrons for administrative control and maintenance purposes, the Air Force executes battle by multi-ship packages of *systems with specific capabilities* to accomplish a specific task. Missions assigned have limited duration, allowing individual aircraft to execute multiple missions in a day. To optimize the capabilities of theater resources, centralized management generates maximum sorties with limited emphasis on subordinate organizational structure. This differentiates the practical aspects of Air Force command from command of integrated ground organizations engaged in continuous operations.

The Army philosophy of command often appears schizophrenic. While doctrine emphasizes mission-type orders and maximum leeway to the initiative of subordinate commands, practice does not equal theory, largely as a result of current training practices and the "comfort zone" of senior Army commanders. Army missions typically involve brigade or larger organizations. Field training for these organizations requires large training areas and considerable funding, neither of which has been available in quantity during the past decade. The National Training Center (NTC), Combined Maneuver Training Center (CMTC) and Joint Readiness Training Center (JRTC) provide opportunities for brigades to practice maneuver warfare and have recently included OOTW components in their scenarios. Divisions normally conduct "virtual training" on computer simulations in BCTP. Each of these training scenarios has emerged as an evaluative measure of the capabilities of the organizational commanders. There is considerable personal risk associated with failure in these evaluations.

As home station training dollars have declined, units have become less capable of building

the teamwork which nests warfighting concepts between commanders. The training centers place these units, which need further team-building, under the microscope of external evaluators. The centers emphasize the planning process in their critiques. Unsatisfactory evaluations have potentially hazardous career effects in a significantly down-sized Army. As a result, a trend seems to have developed for higher headquarters to issue relatively prescriptive orders to their subordinates to eliminate the role of chance in execution. Such a trend indicates a lack of trust in the capabilities of junior leaders to comply with intent statements on their own initiative and has had a deleterious effect on decision to execution times.

Marine forces *practice* the command-centered philosophy of command which the Army's 1993 doctrine *preaches*: battle command, a commander-centered concept.[20] Marines train to exacting standards in peacetime, which develops trust between successive levels of command. Their philosophy vests ultimate responsibility in designated commanders at each level. Commanders personally derive their own mission statements from the higher order, develop an intent and concept of operations, then task the staff to flesh out the details of its execution. The staff operates within a prescribed time-line that affords maximum available time to subordinates, the executors of the plan. Once orders are issued, subordinates operate on their own initiative within the stated intent.[21]

What does this have to do with operational systems of command? In a word: everything. Joint command at the operational level is a product of the *modus operandi* developed by senior leaders at the tactical level in accordance with their respective service cultures. Lacking a clear vision and mechanism for operational command of joint forces, the philosophy of operational command for any particular mission is subject to the idiosyncrasies of the individual exercising

command.

The various service philosophies of command may highlight the need to classify resources by the type of command and control that best suits them. Acknowledging the systems nature of specific assets would form the basis for a joint concept of command that could be referred to as "selective control." Under such a command system, assets provided to the unified commander would be categorized by their operational capacity as "systems" or organizations. Much as the Air Force favors a Joint Force Air Component Commander (JFACC) for command and control of aerial fighting systems, direct operational control of system-type assets with rapid, quantifiable response capability could be directly exercised by the CINC or an established JTF. Systems tied to an organization appear to require only a single command linkage to that organization. With a variety of assets available, the operational commander need only choose the effect desired and the asset preferred for execution of a task. If multiple similar assets are available, the subordinate headquarters then selects the specific assets that will execute the task. Decision is thus stratified but responsively linked to the operational commander.

Organizational resources are entities offering a wide variety of capabilities within a broader mission charter. The organization is a composite resource that includes its own mechanism to task organize combined arms capabilities after analysis of the local situation. Using the Somalia case, provision of humanitarian aid to a particular locale could require the following assets: air resupply, amphibious resupply, medical aid teams, ground transportation, convoy escort, road and bridge repair teams, supply storage and inventory capability. The operational command would establish the mix of assets necessary based on demand, supporting infrastructure, and responsiveness relative to the urgency of a requirement and task appropriate air, naval, or ground

organizations. Taskings would identify broad requirements such as location, urgency, duration, and complementary assets tasked, and specify the commander with primary responsibility for coordination of the joint resources, thereby maintaining unity of command. A single subordinate headquarters would be capable of task organizing assigned resources to accomplish the mission. Any subordinate commander who felt that insufficient resources had been allocated could request further assets for execution in a process similar to the US Army Artillery doctrine of "top-down planning and bottom-up refinement." This approach recognizes the cognitive limitations of higher organizations to specific local conditions. The higher command develops a plan that orchestrates aggregate capabilities and while subordinate decision makers establish the details required for their units' specific tasks which support that plan. It reduces the time consumed in detailed planning by reducing the number of decision points above the tactical level. Force agility is increased by reducing the time consumed by layers of "sheer decision."

The preceding discussion produces certain theoretical conclusions. First, the agility of tactical units, or their ability to react quickly to a changing situation, is largely a function of the effectiveness of the decision-making process that directs their actions. To maximize agility, commanders must integrate organizational decisions regarding subordinate command structures with the concept of operations. This requires identifying the nature of decision at specific command levels in terms of time, space, and the means to collect information to support decision-making. Commanders must focus staff information collection by specifying CCIR: the information they intuitively see as critical to their decision. By reducing the collection of irrelevant information, the commander compresses the initial stage of the decision process. Interoperable technical systems must allow exchange of CCIR between headquarters to reduce

redundant collection. Finally, communications technology allows prompt transmission of plans, formalized decisions, to subordinates, allowing execution of the mission. In General George S. Patton's words: "Plans...only form a datum plane from which you build as necessity directs or opportunity offers. They should be made by the people who are going to execute them."[22] Operational commanders choose when and where to fight in pursuit of strategic objectives; tactical commanders execute the battles.

The second issue of operational command is the need to adopt an intellectual philosophy of command sufficiently flexible to accommodate the varied nature of joint service capabilities. Centralized command seems appropriate for technical systems. Organizational capacities are inherently constituted of a distributed command system that allows flexible organization of resources *given time*. Agility is relatively greater for system type resources than for organizational resources. The gap from the decision to employ a system to execution of the task is relatively narrower than for organizational resources. The gap comprises the time required to transmit an order, to select the specific asset, and to provide the data to the system necessary to complete the assigned task. The time lag between the decision to employ organizational assets and mission execution is relatively broad. It is a function of the requirement for subordinate mission analysis, development and selection of a course of action, the transmission of decision to the executing resources, and the time required to assemble the components of the task force.

In the next section, we will analyze the agility achieved by the operational decision processes in Operations Restore and Continue Hope (1992-93).

PRACTICING WHAT WE PREACH: SOMALIA

In Somalia, the gap between decision and execution was expanded, initially, by strategic ambivalence. In establishing a short-term strategic purpose without defining the environment of chaos that generated the crisis, the UN set the preliminary conditions for operational failure. In like form, operational commanders failed to define a long term vision of mission and end state, the information requirements to generate decision, and the organizational structure required to achieve ambiguous ends. In an environment of high uncertainty and risk, reactive decision-making led to a command system that centralized tactical command at the operational level and severely constrained operational agility.

An international desire to reduce human suffering did not anticipate the need to conduct combat operations against hostile clan forces, though the chaotic nature of the situation indicated this possibility. Global media focused world opinion on the starving population of a state formed by European colonial powers, nurtured in Soviet sponsorship, and orphaned by civil war. There was neither a unified national will nor a government with the means to provide for its people. Following the ouster of the Siad-Barre regime, the UN and international non-governmental organizations (NGOs) assumed responsibility for attending to the needs of a people united only by their hunger. Only in this regard was there unified support for a UN mission in the General Assembly.

Disunity of purpose. The United Nations short-term vision resulted in a series of resolutions that lacked precision in expressing an end state for the outcome of military operations (Annex B, UN Resolutions Concerning Somalia).[23] The UN failed to recognize the fundamental strategic problem that caused the starvation: the absence of a state structure.

Strategic decision did not *direct* military operations in Somalia, but was a product *of them.* The strategic decision to engage in Chapter 7[24] actions directed toward nation building occurred after the deployment of tactical units of the member nations. This change in purpose was inconsistent with member nations' unified support of humanitarian assistance and fractured the strategic-operational decision linkage.

UN Security Resolution (UNSCR) 751, rendered in April 1992, inherently recognized that a state of conflict existed in Somalia by "call(ing) on all parties to cease hostilities and maintain a cease fire", yet constrained the use of force by UNISOM I by authorizing that body's actions under Chapter 6 of the UN charter. The emphasis of this initial resolution was to support the humanitarian efforts of NGOs. By December 3, UNSCR 794 had created the United Task Force (UNITAF) under Chapter 7, authorizing less restrictive use of force to restore order in the nation. By the end of that month, Secretary General Boutros-Ghali was calling on US forces, specifically, to "disarm the Somali clans". Member nations responded to changing UN "call for forces" at various times after interpreting mission requirements as perceived through their own shade of lenses. By December, the resolutions clearly passed from a humanitarian venture to more intrusive effort directed toward nation-building. With this change, the commitment of certain nations, notably Italy, waned. Unity of purpose, trust, and cohesion of forces faltered in turn.

At the national level, several unilateral actions over a two-year period recognized the growing state of chaos, but failed to generate a coherent strategy which linked the elements of national power. In January 1991, the NCA directed a Non-Combatant Evacuation of the US Embassy in Somalia. This signature event is a national statement of "no confidence" in a

national government to maintain order. If US interests were at stake in Somalia, a contingency planning directive should have been issued by the Joint Chiefs of Staff (JCS). Since unilateral interests were not deemed to be at stake, such a directive was not issued.[25] This omission sacrificed nearly a year of time for contingency planning of strategic and operational options for later decision. When the UN chose to intervene in Somalia, the US entered a reactive decision cycle.

President Bush directed unilateral humanitarian airlift operations on 13 August 1992, followed by an offer on 25 November to send less than 30,000 troops to "restore order and allow food distribution". Bush's statement precedes the UNSCR 794, authorizing UNITAF, but clearly recognized the need for a force capable of action to restore order where none existed. This reinforced the national lack of confidence in the capabilities of Somali government, but fell short of calling for the nation-building actions required to establish conditions that would obviate the need for a continuing UN force presence.

Bush's actions occurred prior to consultation with the Congress. Joint Resolution 45, which "authorized" such action, did not pass until 5 February 1993, fifty-eight days *after* the first Marine forces landed in Mogadishu.[26] Dissenting Congressional opinion established the foundation for retrospective criticism of military operations reflected in the Senate Armed Services Committee testimonies by MG Thomas Montgomery, Commander, US Forces Somalia (COMUSFORSOM), and MG William Garrison, Commander of the Special Operations Task Force that conducted the October 1993 raid in Somalia.[27] The tug-of-war between the executive and legislative branches may contribute to risk-averse behavior in military commanders. This disunity of strategic purpose comprised nearly one calendar year in the gap between decision and

execution, from the passage of UNSCR 751 until "unified" American support was achieved on 5 February. In the interim, deployed US forces executed a policy still under debate.

The delay in decision at the strategic level was compounded by a lack of planning initiative at the operational level, beginning with USCENTCOM. Geographic CINCs are responsible for situation assessment within their Areas of Responsibility (AOR). While *required* to prepare operations plans when directed by JCS, they are *expected* to consider military alternatives to developing crises without strategic direction. The combination of the January 1991 NEO and the growing humanitarian disaster were signals for potential expansion of the US reaction to disorder in that nation. By early initiation of contingency plans, operational commanders proactively distribute planning responsibility to tactical executors. Earnest planning for Somalia did not begin until after the 21 November 1992 NSC Deputies' Committee conference. This deferral of decision compromised force agility since USTRANSCOM deployment options were not developed until late November or early December.[28] Lack of proactive analysis at the operational level limited the ability to rapidly initiate operations with a minimum of on-the-fly improvisation. While the precise nature of operations in Somalia could not be predicted, CENTCOM could have developed an array of potential contingency actions to "jump-start" parallel planning.

Perhaps the most frequently used term regarding Somalia is "mission creep". MG Waldo Freeman, DCINC/Chief of Staff, USCENTCOM states: "USCENTCOM ...influenced mission execution by shaping a clear, achievable mission statement for the operational commander in Somalia....Omitted from the mission statement were other tasks that could only be achieved over an extended period, that offered no measurement criteria...tasks that diluted the command's

focus from ensuring that relief supplies could be moved and distributed...were not included." He continues to explain that the NCA held an interagency coordination meeting which considered issues to "bolster Somalia's future as a nation" but chose to emphasize near-term objectives."[29]

In this perspective, we find the root cause of long-term failure in Somalia: CENTCOM did not exercise operational command but tactical command writ large. "Mission creep" was not a product of additional tasks generated by strategic decision-makers, but of a conscious decision to ignore the operational end-state necessary in Somalia. Operational art determines when, where, and for what purpose major forces will fight over time.[30] Campaign plans are the means by which operational commanders sequence operations to successively lead to achieving strategic objectives. In conjunction with the delay in initiation of planning, the decision to ignore the decisive phase of "restoring order" to Somalia created a short-term focus at CENTCOM. From this initial stage of planning through May 1993, and potentially beyond, CENTCOM operated in the tactical decision window which restricted the flexibility of subordinate organizations and failed to provide an end state for operations. As a result, upon final withdrawal of US forces from Somalia in spring of 1995, the same chaotic conditions that generated Operation Restore Hope continue to exist.

This tactical perspective compounded the existing disunity of national command, failed to define the information requirements to support situational development at the operational level, and made reactive decision-making the norm in theater. A variety of factors contributed to this outcome, most notably the failure of joint doctrine, the intellectual core of military operations, to address a changing operational environment.

The environment of conflict in Somalia does not match the paradigm upon which American defense forces and doctrine have been constructed. Somalia is a developing nation with limited infrastructure, limiting the host nation assets available to receive and support a modern military force. Belligerents do not rely on advanced technology to conduct their operations, reducing the effectiveness of electronic intelligence systems in providing data upon which to base decision. There are no large mechanized formations for JSTARS to monitor; "technicals", armed civilian trucks, formed the lethal mobility of clan militias in Somalia. The majority of forces were infantry with supporting mortar and artillery systems. Command communications occurred on a local basis, often face to face. To exploit such communications requires human intelligence (HUMINT) capability, the bill-payer for the electronic systems we now possess. Finally, the cultural foundations of Somalia are non-western. The conventional norms of rational conduct in war and peace did not apply. These conditions created high levels of uncertainty for operational commanders.

The chaos and uncertainty of military operations on the lower end of the spectrum of conflict create diverse requirements for command that are substantially more complex than those in conventional war. In many ways, current doctrine does not respond to these changes. The 1993 version of Army FM 100-5 included a single chapter on Operations Other Than War (OOTW). The brevity of the chapter and its unfortunate classification of military operations into categories labeled "War" and "Not War" are surface indicators of the distance we have yet to travel to exercise command in this new environment. US operations in Somalia demonstrate many of the shortfalls of the joint and combined doctrine we preach relative to the command we practice.

AirLand Battle doctrine and the force structure that enables its execution emphasizes the high end of the spectrum of conflict. Mechanized forces provided high mobility, protection, and sufficient firepower to confront a numerically superior mechanized force on a maneuver battlefield. The dispersion of forces in the twentieth century mandated development of electronic communications systems to exchange the information that allowed commanders to exercise their authority over subordinate organizations. The nature of our Cold War foe encouraged development of electronic systems that could detect war machines and intercept the electronic exchanges between opposing force headquarters. In Somalia, operational intelligence was frequently provided by tactical collectors. At some point, the Deputy Chief of Staff for Intelligence (DCSINT) recognized this and contracted for Somali linguists. The contract provided only 100 linguists for all US agencies in Somalia, 37 of whom did not receive security clearances.[31]

The Somalia example provides insight into the lack of attention paid to the criticality of command architecture in US operational planning. Though planning identifies the force capabilities required to execute tactical missions, sufficient analysis is not given to the *requirements* for subordinate *command.* Often, the creation of organizational layers seems shaped by the *desires of the parent headquarters of supporting organizations* to be present in the area of operations. Operational commanders must consider what capabilities exist and establish subordinate headquarters for control of like functional assets. The organizational span of control of a headquarters should be the dominant factor in determining sufficiency of command in theater. In the information era, overabundance of command structures may create equal or greater lethargy in decision than insufficiency.

The incapacity of strategic intelligence systems to reduce uncertainty against a low technology foe and excessive layers of intermediate command combine to expand the transfer of decision to executing tactical units. Operational commanders delay decision pending risk-reducing information that is not available through technical means. The most timely and relevant information may be acquired by tactical units in theater. This must be passed up a lengthy chain of command and analyzed before decision is achieved. The delayed operational decision is then passed back down the chain, consuming more time. When orders reach the tactical unit, the intelligence generated at their level may no longer be relevant and agility has been ceded.

Organizationally, the intrusion of service parochialism burdens joint command structures. Retention of "stove-pipe" service component commands has created unnecessary layers of decision. Consider Operation Restore Hope's organizational structure. USCENTCOM exercised Combatant Command over US forces in their area of responsibility. CENTCOM initially designated I MEF as JTF-Somalia, then later deployed a portion of their staff to Somalia with MG Thomas Montgomery designated as COMUSFORSOM. Montgomery and his staff were dual-hatted as UNOSOM II staff; Montgomery being designated as the Deputy Commander UNOSOM. Montgomery's headquarters issued orders to tactical units, but CENTCOM retained approval authority for tactical operations; requiring FAX transmission of battalion-level orders to Tampa, Florida for their review. This system of command is referred to as *directive control* "in which every least move is dictated or at least influenced from the highest level practicable."[32] In essence, USFORSOM did not exercise command, but provided a planning cell for CENTCOM, which held authority for execution of operations at their level.

The centralization of decision authority at the operational level restricts the initiative of tactical organizations which must *execute* the mission in order to achieve the desired end state. To complete the analysis of the effect of the gap between decision and execution in Somalia, we must finally consider the linkage of the operational to the tactical level of command.

The tactical headquarters initially deployed to Somalia relative to the units deployed seems excessive and may have stifled agility by creating unnecessary layers of sheer decision. The 10th Mountain Division deployed two infantry battalions, a two company assault aviation battalion, a Reconnaissance Squadron, components of the DISCOM, and selected Division Troops. The command structure included a division headquarters and *four* brigade headquarters, in addition to the battalion headquarters' of the listed units.[33] The divisional headquarters was designated as the Army Component Command (ARFOR), subordinated to JTF-Somalia, the core of which was I Marine Expeditionary Force (I MEF). The ARFOR role is puzzling. The I MEF ground force consisted of a Marine Expeditionary Unit and a Marine FSSG. The JTF was sufficiently robust to control the additional Army forces mentioned above. Service component headquarters are traditionally responsible for logistics support of their service organizations. In Somalia, CENTCOM did not even consider a Joint Forces Support Command (JFSC) until D+21.[34] By default, the Marine FSSG assumed this role. An ARFOR headquarters, therefore, seems unnecessary until an Army Logistics element was established beyond the internal 10th DISCOM. When the JFSC was established, it should have been subordinated to a JTF, thereby relieving the 10th Mountain of additional ARFOR responsibilities.

To consider the effects of decision at the small unit level, we will consider the case of 1st

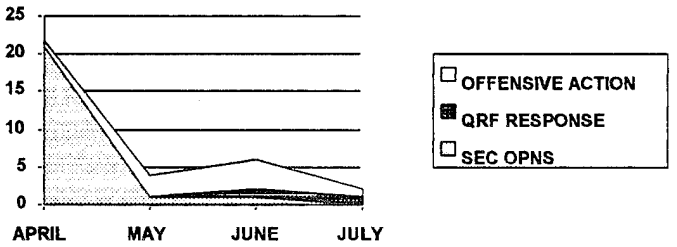
Battalion, 22d Infantry, which conducted both Humanitarian Assistance Operations and was designated the theater Quick Reaction Force (QRF), responding to the US operational commander in Somalia, MG Thomas Montgomery. LTC William Martinez commanded the unit on 30 November 1992, when XVIII Airborne Corps notified the 10th Mountain of their likely deployment to Somalia. Limitations were imposed on his battalion's agility by a) disunity of command at the combined, operational level, b) the failure of the US combatant commander to recognize the decentralized nature of intelligence gathering and c) the failure of the operational commander to define the organizational framework of decision required to maintain agility in OOTW. This combined lack of strategic and operational foresight generated significant problems.

TF 1-22 was alerted for deployment in December, but did not arrive in Somalia until 5 April 1993. They were shifted to a "be prepared" status in December as CENTCOM became concerned that forces would exceed the 30,000 personnel cap established by the NCA. MG Arnold's desire to maintain greater tactical freedom of action by deploying the unit was overridden by an emphasis on a numerical force cap.

TF 1-22's initial training was oriented to UN Chapter VI operations. By deployment day, the UN had transitioned to Chapter VII operations under UNITAF. This required reactive training to familiarize units with the changed Rules of Engagement inherent to these charters. The Task Force initially conducted Humanitarian Assistance operations in the city of Marka under the Operational Control (OPCON) of the 10th Mountain Division. Four days later, while retaining the responsibility for Marka and their command relationship to 10th Mountain Division, they were additionally designated as the Quick Reaction Force for UNISOM I. This

established a split command relationship for distinctly different missions.

By the end of April, TF 1-22 was executing a mix of HR and combat operations. The chart below demonstrates the increasing predominance of combat actions, reflecting the shift of UN emphasis toward offensive military action. The dual tasking ignored the limited capacity of a battalion to execute multiple missions in a given space and time. It was the result of two failures in operational decision. JTF Somalia had elected to maintain a Marine QRF afloat. UNOSOM I insisted on a land-based force *after* the arrival of forces in theater. CENTCOM's decision to exclude tasks to "restore order" to Somalia resulted in deployment of "just enough" forces to accomplish HR tasks. It failed to incorporate a more robust capability to respond to increasing hostility levels which threatened the security of deployed forces. When the sea-based QRF option was withdrawn, CENTCOM had insufficient resources to designate a distinct QRF. This shortfall implies the need for intuitive analysis in planning for operations in chaos which provides operational reserves offering operational agility in conditions of uncertainty.



QRF MISSION TASKINGS UNDER UNITAF

The dual-hatting of MG Montgomery, DCINCCENTCOM, as Deputy Commander, UNOSOM and Commander, US Forces Somalia (COMUSFORSOM) diluted clarity in decision. The deputy's role dictated that he execute COMUNOSOM decisions, precluding independent

decision concerning employment of US forces. Montgomery's J-3 told Martinez that the QRF would act "only when a coalition country does not have enough troops to combat a problem within their area of (operations) [*sic*]". COMUSFORSOM allowed the force to be tasked for security missions supporting other coalition forces with sufficient assets. Thus, the battalion QRF became *de facto* a company QRF with supporting rotary aviation. This limited the freedom of action of the operational commander in rapidly directing a robust force against developing threats. On 5 June, Somalis ambushed a Pakistani battalion on 21 October Road. The QRF TF (-) was deployed to Kismayo in support of a *six company* Belgian battalion, leaving a single light infantry company to respond to a turning point in the nature of UN operations in Somalia.[35]

Failure to recognize the decentralized nature of intelligence operations. The operational command failed to recognize the predominance of human intelligence in situation development. The Somali clans operated in enclaves. A national communications architecture did not exist, limiting SIGINT collection. The localized nature of the forces allowed communication by word of mouth; plans could be rapidly disseminated. Intelligence collection relied on informants and the observations of friendly forces to ready UNITAF forces to counter Somali actions. Operational decision should have established the limits of force considered appropriate and the assets that would execute the tasking, as well as the nature of the intelligence source that would dictate such action, allowing tactical units to execute in accordance with the enduring intent. This was not the case.

TF 1-22 did not have a streamlined chain of command. OPERATION PRIZE, tasked to the QRF on 26 June, was a mission to capture Mohammed Farah Aideed.[36] The mission demonstrates the discontinuity of strategic and operational vision over time. After the 5 June

ambush, the UN Security Council passed Resolution 837, which condemned the attack and authorized Bouthros-Ghali to "take all necessary measures against those responsible, including arrest, detention, trial, and punishment".[37] Combined with UNOSOM II's assumption of responsibility for operations under UN chapter 7, this signaled a distinct change in the strategic intent; martial law was replacing nation building. On 17 June, UNOSOM II issued a $25,000 reward for Aideed and conducted a cordon and search of a six block area around Aideed's compound. This indicates a belief that his capture would restore order to Somalia's chaos. The nature of the clan culture made this unlikely. Had Aideed been captured, another warlord was ready to take his place.

The Operations Order for PRIZE was issued the same day that Aideed threatened the lives of US citizens in Mogadishu and offered a $1 million bounty for US Special Envoy (Admiral, Ret.) Jonathan Howe.[38]

These signals indicate that Aideed felt he had sufficient power to resist UNOSOM II on his own turf. PRIZE would place LTC Martinez and a .50 caliber sniper in a helicopter spotting for Aideed's vehicle, which was typically second in his motorcade. Martinez would determine if the mission was possible yet CENTCOM retained final execution authority. A Cobra gunship would destroy the lead vehicle while the sniper disabled Aideed's vehicle. A "snatch team", on alert at the airfield, would fly to the sight, isolate Aideed, and capture him. An agility problem existed. CENTCOM first required a FAX copy of the OPORD, then required Martinez to delay action until his on-site situation report was passed through COMUSFORSOM to CENTCOM. Only when CENTCOM gave voice approval via TACSAT communications to Montgomery, could Martinez initiate combat action against the moving target.

This highlights several disconcerting issues. First, that enhanced technical capabilities may lead operational commanders to withhold decision authority from on-scene tactical commanders *because they can exercise direct control via TACSAT*, not because they have more highly refined intelligence. In OOTW, the reverse is likely to be true. Second, authority may be withheld because the decision achieved was not a decision, but a potential course of action, the ramifications of which had not been thought through. Rather than authorize initial tactical planning and execution within the framework of the operational intent, CINCCENT deferred decision to the moment of tactical execution. He elected to exercise tactical command of a battalion in Mogadishu from his command post in Florida, USA. We must also question the role of intermediate commands as CENTCOM, three command levels up the chain, retained approval authority for the battalion order and execution.

Failure to define clearly the decision required at the operational level that enables agility. The structure of command arrangements suggests their consideration came late in course of action development. The 10th Mountain Division's order for Operation Provide Hope contained only six lines in paragraph five, Command and Control and had no annex for C2.[39] Rather, the division included an annex which addressed the technical aspects of communication systems. This reflects the increasingly technical approach to C2. It ignores the vast complexity of an environment in which tactical units are the trusted broker for the military with NGOs, coalition forces and the local government. It would be far more appropriate to consider the architecture of command as an essential element of course of action development, tied not only to internal force capabilities, but to external agencies, as well.

In examining the command structure of operations in Somalia, we must question what

decisions were required of the variety of headquarters involved. The difficulty in assessing this at present is the limited availability of records and personal memoirs of the experience to analyze. We can, however, derive certain relevant issues from the organizational structure and the aspects of the case considered to this point.

It is noteworthy that the initial objective of providing humanitarian relief to the starving was accomplished temporarily. This was the only aspect of the operation that was well thought out. The operational command ignored the objective established by President Bush: "to restore order". The objective should have generated an implied task at CENTCOM to conduct some form of nation building operations. A phased campaign plan which led to an end state where a national government assumed responsibility for maintenance of order as US/UN forces withdrew from theater was required. CENTCOM, the operational command, had no such campaign plan. This was the root of the command's reluctance to empower tactical units to exercise initiative: initiative cannot be exercised in the absence of intent. CENTCOM made tactical decisions because of a lack of expansive consideration of future situational change, disabling subordinate decision processes.

We have a preoccupation with the formation of service component headquarters when a need does not exist. Logistics appears to be the driver behind service component commands despite an increasing commonality of end items between Army and Marine forces. In Somalia, a Marine FSSG provided non-doctrinal sustainment for all US forces in Somalia until D+50.[40] Not until 30 December 1992, did operational plans consider the need for a Joint Task Force Support Command. Even the short term plan did not address this critical aspect of operational responsibility: sustainment of the force deployed.

The dual responsibilities of MG Montgomery and his staff raise another decision issue. Humans make decisions. It is unrealistic to consider that an individual can make independent decisions on a multinational and national basis. When the staff supporting that decision-maker is collecting data to support both decisions, the outcome will likely be the same. This may be another factor in CENTCOM's decision to withhold execution authority from Montgomery as COMUSFORSOM. It does not explain why CENTCOM ever established the headquarters. A distinct JTF should have held responsibility for exclusively national force decisions in a multi-national UN coalition.

CONCLUSIONS AND RECOMMENDATIONS

US operations in Somalia indicate that current C4I systems did not enhance the effectiveness of US operational commanders' decision-making processes in an operation other than war. The reverse was true: the gap between decision and execution was expanded by misapplication of technical capabilities resulting from insufficient intellectual consideration of their application in the specific environment of conflict. CINCCENT failed to develop a campaign vision and executed tactical command of forces in an effort to centralize risk management and because tactical satellite communications made this technically possible. This analysis failed to recognize that strategic intelligence assets would not provide sufficient information to achieve the desired reduction in uncertainty and risk. In-theater HUMINT assets of tactical units provided this data. The analysis indicates that a decentralized command structure built on an architecture of distributed decision-making would have enhanced operational and tactical agility.

Military operations require the effective exercise of command. The complex nature of military organizations requires an architecture of command that distributes decision-making on

specific issues to the appropriate level. At a minimum, three levels of command will exist: strategic, operational, and tactical. The responsibilities of these levels of command seem analogous to the composer, conductor, and orchestra in preparing and performing a new symphony.

The strategist composes the symphony, comprising multiple movements, which form the artist's overarching vision of an effect on the audience. The score need not provide the complementary harmonies for the woodwinds, strings, brass, and percussion sections of the orchestra. The operational commander is the conductor and interprets the melody line, seeking to share the composer's vision. He assembles an orchestra of the necessary musicians to bring the score to life with the breadth and depth envisioned then composes the music for supporting harmonies. The members of the orchestra, the tactical components of the force, interpret the written score and actualize it through their instruments, the technical systems for making music. Rehearsal begins at the individual level, followed by the assembly of the orchestra, at which time, the conductor orchestrates the components of the force, blending their capabilities to achieve his interpretation of the composer's vision. The actual performance of the symphony is a process occurring over time, with each actor responsible for interpretation of varying degrees of detail generated by the initial composition.

In OOTW under the auspices of the UN, the score is a product of consensus on variant visions of a central theme. The product rarely meets the full expectations of any individual contributor. There are multiple conductors, each with a valid claim to the baton, having been employed by one of the composers. Rehearsal time is limited. Thereby, lacking a united vision of the desired effect of the work, the performance is likely to receive bad reviews. Could

strategy provide a clear vision of the desired effects of directed operations, a single operational artist could more capably orchestrate forces to achieve it. Increasing the layers of interpretation, or decision, delays and complicates the process of transferring that vision to the players. What is required is to determine the nature of decision required by each actor and establish a commonly understood command structure which facilitates rapid and consistent transfer of a consistent vision.

Strategic planning must establish the interests that are threatened by a developing situation and establish a vision that applies diplomatic, military, economic, and informational elements of power to reduce or eliminate the threat in an enduring manner. In OOTW, the intervention of UN forces in a sovereign nation implies the inability of the existing mechanism of state government to maintain order. Military power only provides a transitional phase in reducing the existing chaos. Operational art, thereby, establishes a campaign plan which orchestrates a variety of capabilities to restore order to a level that allows other elements of power to assume predominance in achieving the desired end state. Tactical commanders apply military resources to provide humanitarian assistance, limited civil assistance, and to combat armed belligerents who seek to extend the duration of chaos. Their organizational capabilities limit the duration and scope of their decisions. However, each must be nested to the desired operational end state. When an end state is lacking, decision, initiative and agility are disabled.

Parallel planning between commands does not imply simultaneous decision; subordinate decision is made within the boundaries of the decisions of the superior headquarters. The higher decision empowers the subordinate to decide and to act, the decision point establishing a boundary of the subordinate's decision window. The sequential nature of hierarchical decision

dictates that a lag exists in time between strategic decision and tactical execution. The object is to minimize the lag by enhancing the effectiveness of one's own decision-making process while degrading the effectiveness of the opponent's process. By achieving decisions with limited risk levels more rapidly than the foe, a military force gains agility: the ability to execute operations more rapidly than the opposition. To maximize the agility of US joint forces, our doctrine and practice must minimize layers of decision to those essential for the effective conduct of operations.

Operations other than war create unique challenges in decision-making at the operational level of command. The moniker implies the absence of war. The inherent disorder of situations requiring employment of military forces includes the presence of violence. Opportunity is the eldest child of disorder and it is naive to discount the need to manage violence in such operations. It may be wise to dispense with the term OOTW to minimize the political inconsistency of violence against our military forces during "peace". The inconsistency may discourage more rapid, intuitive decisions by operational commanders subject to algorithmic political examination of their actions

What is evident in this operation is that the boundary between the tactical, operational, and strategic levels of war are blurred in OOTW. The operational commander and his supporting staff frequently control relatively smaller forces than envisioned by the existing doctrine, yet the actions of these forces potentially have strategic implications. These tactical-strategic impacts may have always existed, but have been magnified by media presence and capabilities for real-time reporting. The operational commander walks astride the boundary of his confidence in experiences at the tactical level and his fears at the outcome of operational decisions made in

the absence of definitive political guidance. In such a precarious pose, it is perhaps difficult to maintain the trust and confidence in subordinate commanders of which our doctrine speaks. Coupled with communications technology to execute direct control of distant forces, operational commanders must resist the temptation to operate at the tactical level

The technical intelligence systems so vital to reducing uncertainty in mechanized warfare are less effective against feudal bands in developing nations. Limited HUMINT resources and the nature of the foe infer the need for operational commanders to apply intuition, or heuristic decision-making, in the absence of detailed strategic intelligence. Rapid exploitation of HUMINT in decision-making may be best achieved at the tactical level, with trust in the capabilities of subordinates to comply with a clearly stated intent. Decision will entail risk, but is essential to secure and retain operational agility

Clearly, the complete delegation of authority to local commanders is anathema to the concept of a consolidated end state for operations. Operational commanders must establish campaign plans that set common boundaries for tactical commanders. Accepting the preeminence of the political element of power in OOTW, our national policy should establish a formal, joint, civil-military structure for the conduct of such operations. The transitory nature of military operations other than war dictate that CINCs will act as a supporting commander to DOS in the strategic plan. A key question is the extent to which military operations will intrude on the right of self-determination of the country in question. DOS should bear the responsibility of liaison with the United Nations Secretary General to ensure that US and UN visions are nested.

Joint doctrine must be more prescriptive regarding JTF organizations and functions. Such doctrine should build on existing organizations at the division and corps level, or their joint service equivalent, in order to maintain the staff cohesion developed in peacetime training. This will aid in reducing the time spent by JTFs on initial organization of their headquarters and its personnel, thereby emphasizing direct entry into decision-making on the mission directed by the CINC.

Reducing the gap between decision and execution is a product of two considerations in intellectual analysis By defining the nature of decisions and distributing these across the levels of war, we reduce time consumed by decision overlap between levels and still achieve harmony in the pursuit of a common vision By minimizing redundant organizational structure of sheer decision, the time consumed in transfer of decision is reduced. The net effects should reduce the operational agility of forces in the uncertain environment of Operations Other Than War.

[1] Sun Tzu, On The Art of War, as translated in Roots of Strategy, ed. BG T. R. Phillips, (Harrisburg, PA: Stackpole Books, 1985) p. 28.

[2] Alexander H. Levis and Michael Athans, "The Qeust for a C3 Theory: Dreams and Reality", Science of Command and Control: Coping with Uncertainty, (Washington, DC: AFCEA International Press, 1988) p. 6.

[3] This term is used by Dr. Robert Epstein, US Army School of Advanced Military Studies, Ft. Leavenworth, KS, to describe a strategy which lack clarity in defining its objectives.

[4] LTG (Ret) John Cushman, Thoughts for Joint Commanders, (Annapolis, MD, 1993) p. 7.

[5] Roger Beaumont, The Nerves of War: Emerging Issues and References to Command and Control, (Washington, DC: AFCEA International Press, 1986) p. 55.

[6] An excellent treatment of the range of decision-making models in use is Israel Mayk and Izhak Rubin, "Paradigms for Understanding C3, Anyone?", Science of Command and Control, (Washington, DC: AFCEA International Press, 1988) pp. 48-61. The authors list sixteen "Generic structures for C3 paradigms", ranging in complexity of subordinate processes from three to seven steps.

[7] Daniel Kahneman and Amos Tversky, "Judgment Under Uncertainty: Heuristics and Biases", Science (185, 1974): 1124-31 and Michael D. Armour, MAJ, "Decision-Making Processes", Military Review, (LXXIV, no.4, Apr 94) pp. 70-74.

[8] Gary A. Klein, "Naturalistic Models of C3 Decision Making", Science of Command and Control, (Washington, DC: AFCEA International Press, 1988) p. 88.

[9] The difficulty with applying algorithmic decision processes to combat operations is that so many aspects of the assessment of combat power are subjective issues. To place a value on these areas requires heuristic judgment or intuition. BG Huba Wass de Czege, a central writer of Airland Battle doctrine in the 1980s, wrote a seminal analysis which provides algorithmic formulas for the assessment of combat power. It provides a rationale for adoption of a more heuristic method of evaluating the relative combat power of opposing forces. By identifying the subordinate components of the elements of combat power, Wass de Czege demonstrated the complexity of the search to establish an accurate, quantifiable assessment of combat power. Leadership, the human dimension of combat power, was a largely subjective factor. Lacking the necessary time to collect and validate data, *intuition and judgment* are applied based on the experience of the commander and staff to establish *reasonable* estimates of the *relative* capabilities of opposing forces. Huba Wass de Czege, Generating Combat Power, (Fort Leavenworth, KS: US Army Command and General Staff College, 10 Feb 1984).

[10] Frederick M. Franks, Jr., GEN, "Full-Dimensional Operations: A Doctrine for an Era of Change", Military Review (LXXIII, 12, Dec 93), p.8.

[11] Cushman, op. cit., p. 45.

[12] Frank Snyder, "Command and Control and Decision Making", in Principles of Command and Control, ed. Jon L. Boves and Stephen J. Andriopole, (Washington, DC: AFCEA International Press, 1987) p. 18.

[13] Levis and Athans, op. cit., p. 8.

[14] TRADOC Pamphlet 525-200-1, Battle Command: US Army Battle Dynamic Concept, (Fort Monroe, VA: HQ, US Army Training and Doctrine Command, 1 Dec 1994), p. 2. GEN Franks stated: "I have stopped using command and control--not because I like to invent new terms, but because it has too much excess intellectual baggage that I find gets in the way of discussing the art of command." We must be captured by a vision of battle command.

[15] Thomas P. Coakley, Command and Control for War and Peace, (Washington, DC: National Defense University Press, 1992) p. 38.

[16] Beaumont, op. cit. p. 1.

[17] Department of Defense, "Appendix K, Command, Control, Communications, and Space" to Final Report to Congress: Conduct of the Persian Gulf War (Pursuant to Title V of the Persian Gulf Conflict Supplemental Authorization and Personnel Benefits Act of 1991-Public Law 102-25), (Washington, DC: DOD, April 1992, p. 574, as reprinted in US Army Command and General Staff College Student Text C530, Academic Year 1993-94.

[18] Cushman, op. cit., p. 20.

[19] Edward Luttwak and Daniel Horowitz, The Israeli Army, 1948-1973, (Lanham, MD: University Press of America, 1975) p. 173.

[20] United States Marine Corps, FMFM 1, Warfighting, (Washington, DC: Department of the Navy, Mar 89) p. 62, describes this philosophy of command: "*in order to generate the tempo of operations we desire and to best cope with the uncertainty, disorder, and fluidity of combat, command must be decentralized*(text italics)...Further, a competent subordinate commander who is at a point of decision will naturally have a better appreciation for the true situation than a senior some distance removed..." US Army FM 100-5, Operations, (Washington, DC: Department of

the Army, June 1993) p.2-15 says the following of command: "Command occurs from the location of the commander...The need for flexibility in command is greatest for the committed maneuver unit commander. He can neither cope with constant direction from above nor can he constantly provide detailed direction to his staff and subordinate commanders. He and his organization must know the intent of the commander two levels above, understand the concept of operation and intent of the immediate commander...then (he) can fight his unit confidently. He can anticipate events and act freely and boldly to accomplish his mission with minimal guidance..."

[21] The USMC base maneuver force is the Marine Expeditionary Unit (MEU). Each Marine Division/Marine Expeditionary Force (MEF) maintains a MEU afloat which responds to national crises, thereby operating at the operational level of war. Prior to "going afloat", the MEU conducts extensive training which culminates in a MEUSOC certification. The certification is an intensive field exercise in which the task force must satsifactorily conduct each of their potential missions. From receipt of an OPORD from the higher headquarters, the MEU commander has six hours to commence mission execution. (MAJ Dan Schuster, USMC, former MEU operations officer).

[22] GEN George S. Patton, War As I Knew It, (Boston, MA: Houghton Mifflin Publishers, 1975) p. 310.

[23] US Central Command, Somalia Reference Guide (U), (USCENTCOM, MacDill AFB, FL, 15 Aug 94) p. H-1 to H-10.

[24] UNSCR 794, 3 December 1992, created the United Task Force authorized to perform under Chapter 7 of the UN Charter of Nations. Chapter 6 "gives the UN power to mediate international disputes between states and recommend terms of a settlement....(it) relies on the states to carry out voluntarily the decisions of the Security Council. Chapter 7 is more powerful...(and) gives the UN authority to use the armed forces of member states to 'maintain or restore international peace and security' ". John F. Hillen III, "UN Collective Security: Chapter Six and a Half", Parameters, Spring 1994, p. 28.

[25] It appears that unilateral interests were never at issue. The NSC recommendation to the President to provide forces to the UN was generated by a Deputies Committee meeting. The Deputies concluded that US action was appropriate based on two criteria: the scope of the humanitarian disaster and a realization that the US was the "only world power able to do something about the problem." Ibid, p. H-5.

[26] Ibid, p. H-3, H-5, H-10.

[27] Transcript of Testimony to the Senate Armed Services Committee Hearing by MG Thomas Montgomery, USA and MG William Garrison, USA, 17 May 1994. In the Somalia hearings, Senator Cohen questioned MG Garrison at length as to "whether or not the President approved the deployment" of his Joint Special Operations Command forces to Somalia. When Garrison responded appropriately that "all deployments...must be approved by the Secretary of Defense", Cohen snapped "that's not the question I asked you". In the later hearings on Haiti, Senator Warner, while questioning Mr. Deutsch, felt compelled to state that "we ought to encourage Presidents to come before Congress and get...concurrence...before we put our men and uniform at risk." Such pugilistic exchanges merely serve to reinforce a notion of senior military leaders as pawns in the power struggle within national political branches.

[28] David Kassing, Transporting the Army for Operation Restore Hope, (Santa Monica, DA: RAND Corp., 1994) p. 7-8. MG Waldo Freeman presents an opposing position in "Operation Restore Hope: A CENTCOM Perspective", Military Review, Sep 93. "USCENTCOM was well-prepared with an 'on-the-shelf' response to humanitarian and natural disasters in the Central Region." The regional nature of the plan provided a conceptual framework for humanitarian operations in a variety of nations. It was not specifically oriented to the Somali situation nor did it provide the detailed force deployment data required for rapid force projection. In "Somalia: An Operation Other Than War", Military Review, Dec 93, MG Steven Arnold, CG, 10th Mountain Division, states "As deployment began, missions still were unclear." Combined with Kassing's analysis of TRANSCOM planning, MG Freeman's comments may be technically accurate, but avoid the absence of a plan which provided sufficient detail for supporting CINCs and tactical commanders to initiate the decision-making processes required for their own operations.

[29] Waldo Freeman, MG, "Operation Restore Hope: A CENTCOM Perspective", Military Review, Sep 93, p.64.

[30] US Army, FM 100-5, Operations, (Washington, DC: Department of the Army, June 1993), p. Glossary 6.

[31] Joint Lessons Learned System, File # 11535-01115 "Somali Linguist Contracting".

[32] Richard Simpkin, Human Factors in Mechanized Warfare, (Oxford, England: Brassey's Publishers Ltd., 1983) p. 149.

[33] A third battalion was subsequently deployed as the QRF, responsive to UNITAF.

[34] USMC, "Discussion of Command and Control Topics (Mission Area 11), Marine Corps Lessons Learned System (CD-ROM) (Quantico, VA: USMC, 1994).

[35] William Martinez, op. cit., p. 3.

[36] Martinez, op. cit., p. 47-48.

[37] CENTCOM, op. cit., p. H-13.

[38] Ibid, p. H-15.

[39] TF MOUNTAIN OPLAN RESTORE HOPE, 6 December 1992.

[40] USMC, "Discussion of Command and Control Topics (Mission Area 11), Marine Corps Lessons Learned System (CD-ROM) (Quantico, VA: USMC, 1994).

BIBLIOGRAPHY

BOOKS

Andriopole, Stephen J. and Boyes, Jon L., Editors, Principles of Command and Control, Washington, DC: AFCEA International Press, 1987.

Beaumont, Roger, The Nerves of War: Emerging Issues in and References to Command and Control, Washington, DC: AFCEA International Press, 1986.

Coakley, Thomas, Command and Control for War and Peace, Washington, DC: National Defense University Press, 1992.

Cushman, John, LTG, USA, Ret., Thoughts for Joint Commanders, Annapolis, MD: Whitmore Printing, 1993.

Newell, Clayton R., The Framework of Operational Warfare, New York: Rutledge Publishing, 1991.

Kepner, Charles H., The Rational Manager: A Systematic Approach to Problem Solving and Decision Making, New York: McGraw-Hill, 1965.

Johnson, Stuart E. and Levis, Alexander H., Editors, Science of Command and Control: Coping With Uncertainty, Washington, DC: AFCEA International Press, 1988.

Lind, William S., Maneuver Warfare Handbook, Boulder, CO: Westview Press, 1985.

Luttwak, E and Horowitz, D., The Israeli Army, 1948-1973, Lanham, MD: University Press of America, 1983.

Kassing, David, Transporting the Army for Operation Restore Hope, Santa Monica, CA: RAND Corp., 1994.

Patton, George S., GEN, USA, War As I Knew It, Boston, MA: Houghton and Mifflin Publishers, 1975.

Simpkin, Richard, Human Factors in Mechanized Warfare, Oxford, England: Brassey's Publishers Ltd., 1983.

Sun Tzu, On The Art of War, as translated in Roots of Strategy, ed. BG T.R. Phillips, Harrisburg, PA: Stackpole Books, 1985.

van Creveld, Martin, Command In War, Cambridge, MA: Harvard University Press, 1985.

van Creveld, Martin, Technology In War, New York: The Free Press, 1989, 1991.

MONOGRAPHS, THESES, AND DISSERTATIONS

Bryant, Albert, Agility: A Key to the Operational Art, Ft. Leavenworth, KS: US Army Command and General Staff College, School of Advanced Military Studies, 1 May 1988.

Butler, W.G., Operational Decisions: What is the Nature of the Information Required?, Ft. Leavenworth, KS: US Army Command and General Staff College, School of Advanced Military Studies, 21 May 1987.

Hill, R.R., Operational Initiative: What Is It and How do We Get It?, Ft. Leavenworth, KS: US Army Command and General Staff College, School of Advanced Military Studies, 11 May 1990.

Martinez, William J., LTC, USA, Somalia: A Lesson In Peace Enforcement/Personal Experience Monograph, Carlisle Barracks, PA: US Army War College, 24 February 1994.

Martinez, William J., LTC, USA, Somalia: A Lesson In Peace Enforcement/An Individual Study Project, Carlisle Barracks, PA: US Army War College, May 1994.

Wass de Czege, Huba, COL, USA, Understanding and Developing Combat Power, 10 February 1984, Unpublished Manuscript provided by School of Advanced Military Studies, Fort Leavenworth, KS 66027.

MAGAZINES AND PERIODICALS

Armour, Michael D. MAJ, "Decision-Making Processes." Military Review, vol. LXXIV, no. 4 (April 1994): 70-74.

Arnold, S. L., MG, USA, "Somalia: An Operation Other Than War", Military Review, vol. LXXIII, no. 12 (Dec 93): 26-35.

Boyd, Morris J. BG and Woodgerd, Michael MAJ , "Force XXI Operations." Military Review, vol. LXXIV, no. 11 (November 1994): 17-28.

Franks, Frederick, GEN, USA, Ret., "Full-Dimensional Operations: A Doctrine for an Era of Change", Military Review, vol. LXXIII, no. 12 (Dec 93): 5-10.

Freeman, Waldo, MG, USA, "Operation Restore Hope: A CENTCOM Perspective", Military Review, vol. LXXIII, no. 9 (Sep 93): 61-72.

Hillen, John III, "UN Collective Security: Chapter Six and a Half", Parameters, Spring 1994, 27-37.

Kahneman, Daniel and Tversky, Amos, "Judgment Under Uncertainty: Heuristics and Biases", Science, no. 185 (1974): 1124-1131.

Madigan, James C. MAJ and Dodge, George E. MAJ, "Battle Command: A Force XXI Imperative." Military Review, vol. LXXIV, no. 11 (November 1994): 29-39.

Sullivan, Gordon R. GEN and Dubik, James M. COL, "War in the Information Age." Military Review, vol. LXXIV, no. 4 (April 1994): 46-62.

MILITARY MANUALS, PUBLICATIONS, AND GOVERNMENT DOCUMENTS

Center for Army Lessons Learned, US Army Operations in Support of UNOSOM II, Operations Other Than War, Fort Leavenworth, KS: US Army Combined Arms Center, October 1994.

Center for Army Lessons Learned, Operation Restore Hope Lessons Learned Report, 3 December 1992-4 May 1993/Operations Other Than War, Fort Leavenworth, KS: US Army Combined Arms Center, 15 November 1993.

Department of Defense, Final Report to Congress: Conduct of the Persian Gulf War (Pursuant to Title V of the Persian Gulf Conflict Supplemental Authorization and Personnel Benefits Act of 1992-Public Law 102-25, Washington, DC: Department of Defense, 1992, (Appendix K as reprinted in US Army Command and General Staff College Student Text C 530, Academic Year 1993-94.

Joint Lessons Learned System, File # 11535-01115, "Somalia Linguist Contracting".

Transcript of Testimony to Senate Armed Services Committee Hearing by GEN Thomas Montgomery, USA, and MG William Harrison, USA, 17 May 1994 provided by LEGISLATE Services.

U.S. Army Field Manual 100-5, Operations , Washington, DC: U.S. Govt. Printing Office, Aug. 1982.

U.S. Army Field Manual 100-5, Operations , Washington, DC: U.S. Govt. Printing Office, 1986.

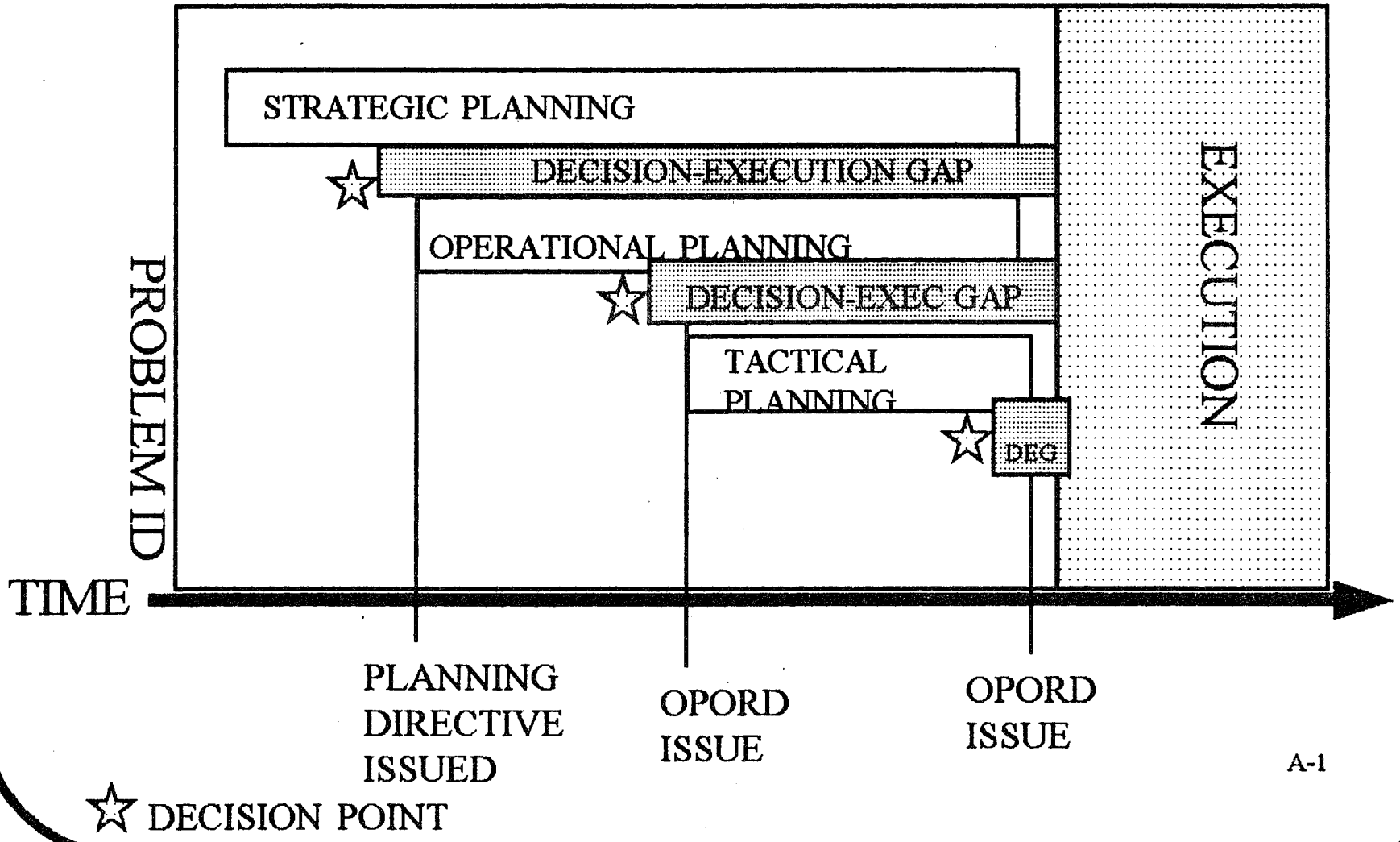
U.S. Army Field Manual 100-5, Operations , Washington, DC: U.S. Govt. Printing Office, June 1993.

US Central Command, Somalia Reference Guide (U), MacDill AFB, FL: USCENTCOM, 19 Aug 1994.

US Marine Corps, FMFM 1, Warfighting, Washington, DC: Department of the Navy, 1989.

US Marine Corps, US Marine Corps Lessons Learned System (CD-ROM), "Discussion of Command and Control Topics (Mission Area 11), Quantico, VA: USMC, 1994.

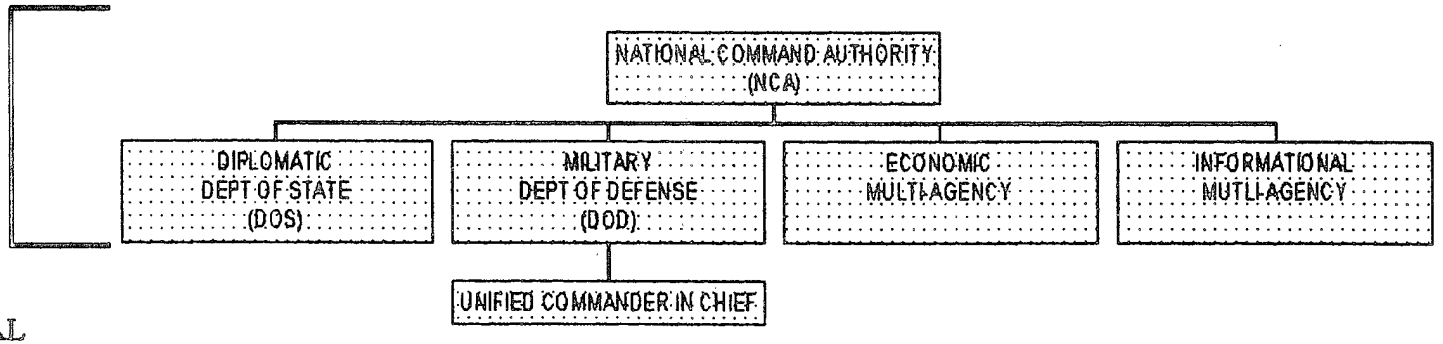
DECISION TO EXECUTION TIMELINE



A-1

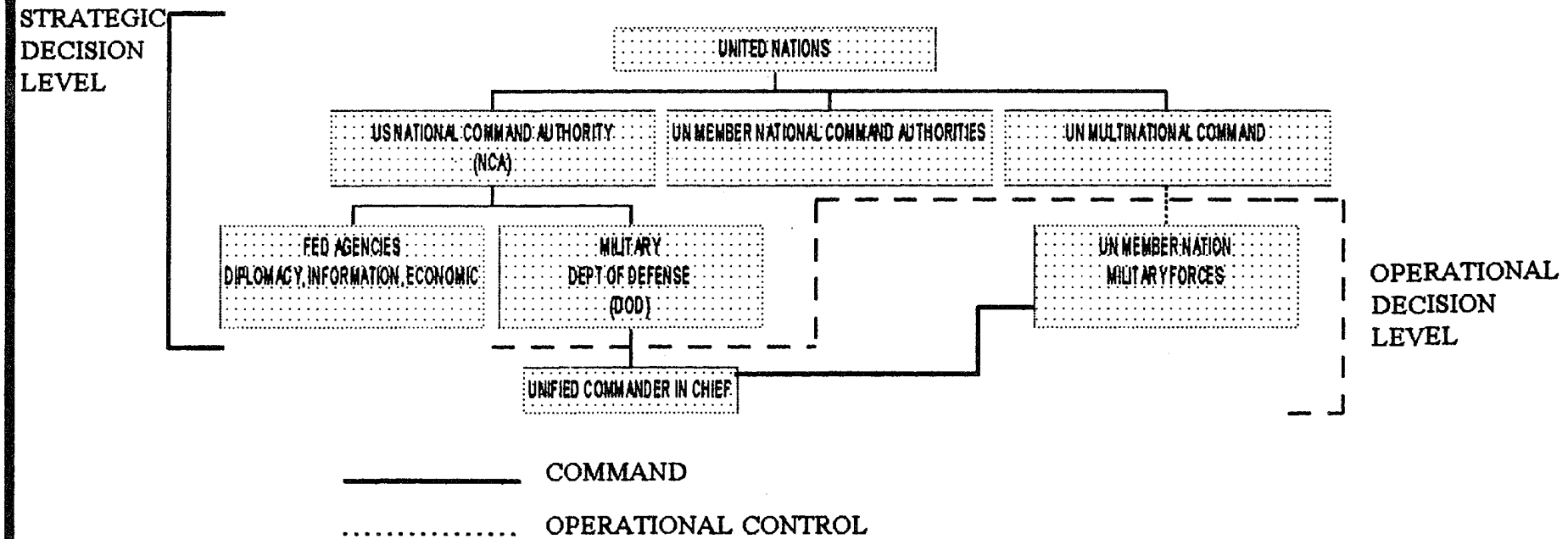
NATIONAL COMMAND STRUCTURE

STRATEGIC DECISION LEVEL



OPERATIONAL DECISION LEVEL

MULTINATIONAL COMMAND STRUCTURE



APPENDIX B: UN RESOLUTIONS CONCERNING SOMALIA[i]

23 JAN 1992, UN SECURITY COUNCIL RESOLUTION 733: Calls for member states to refrain from any action which might contribute to increasing tension and to impeding/delaying a peaceful and negotiated outcome to the Somalia conflict.

17 MAR 1992, UN SECURITY COUNCIL RESOLUTION 746: Calls upon all parties in Mogadishu...and Somalia...to respect security and safety of technical teams and personnel of humanitarian organizations; to guarantee their complete freedom of movements

24 APRIL 1992, UNSCR 751: Calls on all parties to cease hostilities and maintain a cease fire; authorizes UNOSOM I

15 JULY 1992: NGOs request foreign assistance.

27 JULY 1992, UNSCR 767: Calls for cooperation with UNOSOM I to assist stabilization. In the absence of cooperation, UNSC does not preclude other measures to enforce stability.

13 AUGUST 1992: US President Bush announces new Humanitarian Initiative; authorizes Department of Defense airlift of relief supplies to Somalia and Kenya.

28 AUGUST 1992, UNSCR 775: Call for deployment of 3500 UNOSOM personnel.

3 DECEMBER 1992, UNSCR 794: Creates United Task Force (UNITAF) and welcomes US offer of military forces. Calls for members to provide troops, logistic, and monetary support.

12 DECEMBER 1992: UN Secretary General Bouthros-Ghali calls for US forces to disarm Somali clans.

26 MAY 1993, UNSCR 814: Authorizes UNOSOM II; calls members to cooperate in implementing arms embargo established by UNSCR 733.

6 JUNE 1993, UNSCR 837: Condemns Aideed attack on Pakistani Battalion. Asks Sec, Gen. to "take all necessary measures against those responsible, including arrest, detention, trial, and punishment." Requests accelerated troop deployment to meet the 28,000 personnel requirement of UNOSOM II.

22 SEPTEMBER 1993, UNSCR 865: Redouble efforts to promote reconciliation. Asks members to provide full staffing of UNOSOM II.

16 NOVEMBER 1993, UNSCR 885: Suspends arrest warrant for Aideed; establishes a commission to investigate militia attacks against UNOSOM.

18 NOVEMBER 1993, UNSCR 886: Extends troop presence in Somali by six months.

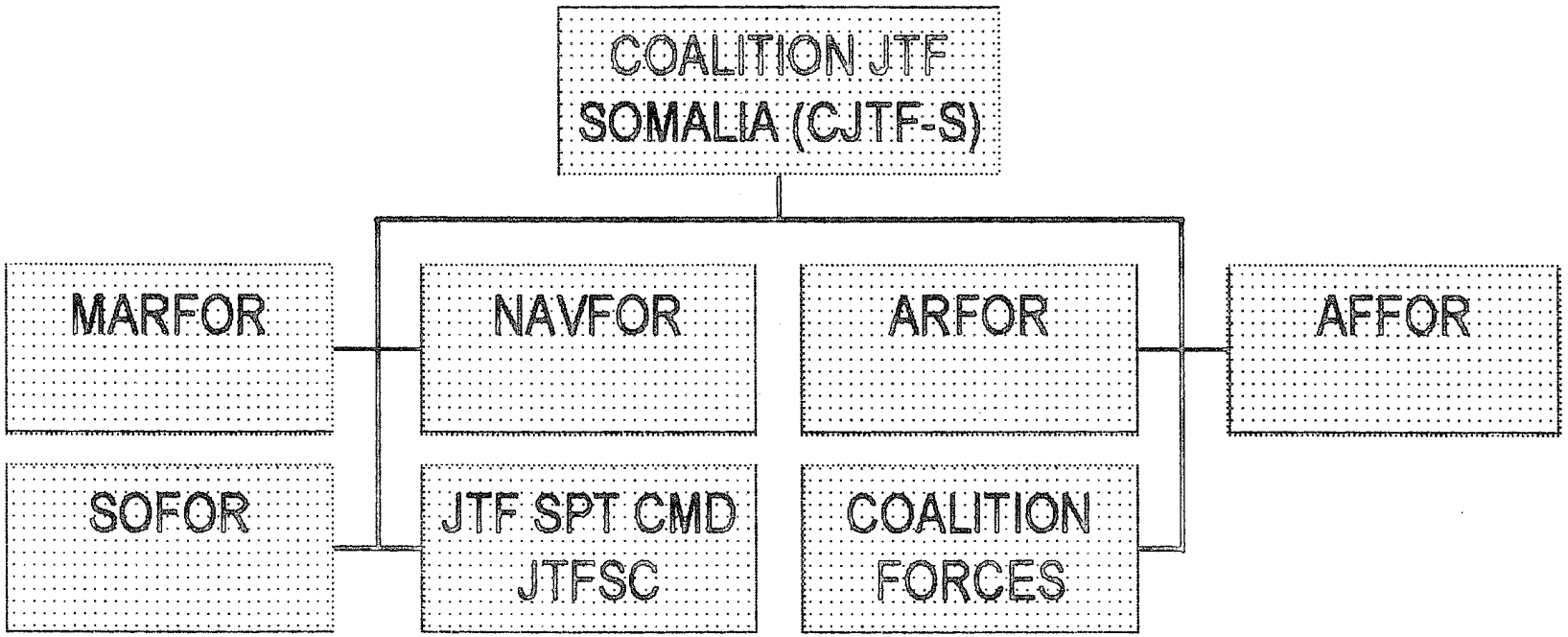
[i] ____, Somalia Reference Guide (U), (MacDill AFB, FL; US Central Command, 15 Aug 94), Appendix H.

APPENDIX C

OPERATION RESTORE HOPE

COMMAND AND CONTROL ARCHITECTURE

COALIITON JOINT TASK FORCE SOMALIA (CJTF)



LAYERS OF DECISION: STRATEGIC TO TACTICAL