

The Impact of Sustainment on Operational Art in Humanitarian Aid Operations

A Monograph

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Abstract

THE IMPACT OF SUSTAINMENT ON OPERATIONAL ART IN HUMANITARIAN AID OPERATIONS by Major Sherdrick S. Rankin, Sr., United States Army, 43.

This monograph examines the vital role that operational sustainment plays in the application of critical elements of operational art and operational design. The operational art and sustainment issues examined in this monograph are assessed using the operational environments of Operation Restore Hope and Operation Uphold Democracy. This monograph concentrates on the military activity of campaigning. The operational level of war is conducted by operational commanders who organize, employ, and sustain campaigns in order to accomplish strategic aims. Determining time, location, and for what objective military forces will be utilized within a joint area of operation to attain strategic objectives is at the very core of operational art and operational design. Sustainment is a supporting function of operational art and operational design. Operational sustainment supports the commander in achieving unity of effort, flexibility, and opportunity in the execution and design of military campaigns.

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What is the Impact of Sustainment on Operational Art in Humanitarian Aid Operations?

This monograph assesses the crucial elements of operational art and the important function sustainment provides in supporting the operational art model. The focus is on the operational campaigning of joint task force commanders. The purpose is to describe how operational commanders accomplish strategic aims through the design and organization of campaigns with an emphasis on sustainment. Specific attention is devoted to an important feature of campaigning, operational sustainment.

The United States Government historically has responded to foreign countries requiring humanitarian aid due to famine or disaster relief resulting from a hurricane or earthquake. Visualize a Joint Task Force Commander not being able to sustain the humanitarian operation due to the lack of operational reach from the industrial base to the base of operations. This would be unacceptable, mainly because of what the United States Army's sustainment capabilities provide at the operational level.¹ Operational sustainment delivers logistics and personnel services required to preserve and extend operations until successful mission accomplishment. Sustainment in joint operations provides the Joint Task Force Commander the necessary flexibility, endurance, risk mitigation and ability to extend operational reach. The objective of this monograph is to consider the impact of sustainment on operational art for joint task force commanders in humanitarian aid operations.

The United States Army has given minimal attention to the sustainment challenges operational commanders face during humanitarian operations in non-permissive environments. What challenges will commanders at the operational level encounter because of shortfalls in sustainment caused by inadequate operational reach in these extended lines of operations? Operational reach is the distance and duration across which a joint force can successfully employ

¹John J. McHugh and George W. Casey, *2011 Army Posture Statement* (Washington, DC: Government Printing Office, 2011), 1.

military capabilities.² This monograph shows how the United States Army's operational sustainment affects the operational commander's lines of operation, flexibility, anticipation, operational reach, risk, and tempo of humanitarian operations. It also shows the negative effects if sustainment is not a consideration in operational art. Operational art is the cognitive approach by commanders and staffs supported by their skill, knowledge, experience, creativity, and judgment to develop strategies and operations to organize and employ military forces by integrating ends, ways, and means.³ Operational design employs various elements to develop and refine the commander's operational approach. These conceptual tools help commanders and their staffs think through the challenges of understanding the operational environment, defining the problem, and developing this approach, which guides planning and shapes the concept of operations.⁴

Operational sustainment is the related tasks and systems that provide support and services to ensure freedom of action, extend operational reach, and prolong endurance.⁵ Sustainment offers the direct, tangible means to perform military functions and tasks in order to accomplish goals and achieve objectives. Should operational sustainment be viewed as an art form rather than a linear succession of actions providing supplies and services? Sustainment is much more than information and statistics. Understanding the physical aspects of sustainment figures enables planners and commanders to weigh options that allow for what is possible, what is required, and the possible drawbacks that facilitate operational risk versus opportunities.

The case studies in this monograph evaluate two United States-led joint combined military operations using the operational art and operational design model. These two operations

²United States Army, Field Manual 3-0, *Operations* (Washington, DC: Government Printing Office, 2008), 6-74.

³United States Joint Forces Command, Joint Publication 3-0, *Doctrine for Joint Operations* (Washington, DC: Government Printing Office, 2011), xii.

⁴United States Joint Forces Command, Joint Publication 5-0, *Joint Operation Planning* (Washington, DC: Government Printing Office, 2011), xxi.

⁵United States Army, Field Manual 3-0, G-14.

were Operation Restore Hope in Somalia in 1993 and Operation Uphold Democracy in Haiti in 1994. These major humanitarian aid relief efforts were classified as “military operations other than war.” Nevertheless, these operations featured tensions for the joint task force commanders and operational sustainment commanders similar to those faced in major combat operations. These two case studies prove that the integration of operational sustainment in the application of operational art and operational design of humanitarian operations in Somalia and Haiti during the 1990s improved the military effectiveness of the joint task forces. Integration resulted in improvements in operational reach, tempo, arrangement of operations, simultaneity, synergy and prevention of culmination. This improved the ability of the joint task force commanders to accomplish their missions.

At the operational level of war, operational commanders plan, arrange, conduct, and sustain campaigns or major operations to attain strategic goals.⁶ Actions at the operational level of war are not totally controlled by scientific rules or principles. Operational commanders also consider their endeavors more a form of art than an exact science. Determining time, space, and for what purpose military forces will be utilized inside a theater of operations to accomplish strategic goals is the very core of operational art. Operational sustainment performs an essential function in operational art. Operational sustainment shapes considerably what is operationally feasible.

The operational level of war is fought primarily by combatant commanders and joint task force commanders, utilizing operational art and operational design to govern the deployment of those forces and the arrangement of operations to achieve operational and strategic objectives.⁷ The military is not the only instrument of national power that operational-level commanders

⁶United States Joint Forces Command, Joint Publication 3-0, I-13. The focus at this level is on design, planning, and executing operations using operational art. The Joint Task Force Commander is the “operational commander” for both case studies. He is using operational design to determine how major forces are employed.

⁷Ibid., I-14.

apply in using operational art. The operational commander understands that diplomacy, information, and economics demand attention and requires integration, coordination, and close cooperation with military power.⁸

The operational level could perhaps be a lot simpler to understand if its conditions were controlled exclusively by prescriptive, methodical laws or rules. However, its conditions reflect a great amount of hostility, ambiguity, operational risk, tension and limited resources. These different factors cause operational commanders to approach the operational design and conduct of major combat operations and military campaigns as primarily an art form and, to a lesser degree, a science. The military fittingly describes actions at the operational level of war as operational art.⁹

In order to effectively apply the elements of operational art, operational commanders have to answer four essential questions: (1) What military conditions will create a successful desired end-state?, (2) What arrangement of movement and actions are required to accomplish these conditions?, (3) How should forces and operational sustainment available resources be arranged in the most efficient and effective way to undertake sequencing actions?, and (4) What are the likely operational risks and opportunities in executing that sequence of actions?¹⁰

Operational sustainment is a significant component of operational art. It supports operational commanders in dealing with one of their most fundamental responsibilities; the allocation and prioritization of resources in the most effective and efficient method possible in order to accomplish strategic aims. Operational sustainment impacts opportunity, concentration, and flexibility. Operational sustainment is a supporting action that outlines the realm of the possible.

⁸United States Joint Forces Command, Joint Publication 5-0, ix.

⁹John F. Meehan III, "The Operational Trilogy," *Parameters* (Autumn 1986): 12-17.

¹⁰United States Joint Forces Command, Joint Publication 5-0, IV-1.

Similar to the levels of war, according to Joint Publication 4-0, Joint Logistics, sustainment is frequently characterized in three different echelons: strategic, operational, and tactical. Strategic sustainment encompasses the development, procurement and arrangement of war stocks and supplies to sustain military forces. Strategic sustainment involves force flow defined as the movement of personnel and material from the continental United States and intermediate staging bases to different theaters of operation. On the other end of the scale lies tactical sustainment. This echelon involves actions by highly trained modular sustainment forces to sustaining tactical units in battles. These actions are integrated and synchronized with the operational plan. Tactical sustainment includes the execution of sustainment operations with sources of supply that are directly on hand or pending availability.¹¹

Operational sustainment involves the actions and movements necessary to sustain military forces engaged in campaigns and major operations inside a theater of operations and supports continuous operations theater wide. It also supports the campaign plan that links battles and engagements. Significant operational sustainment actions include: the reception, staging, onward movement and integration of military forces, equipment and supplies from the communication zone to tactical units areas of operations; the medical evacuation and interim hospitalization of casualties; and the formation of a joint theater sustainment system which includes lines of communication, sustainment units, and any host nation support.¹² Operational sustainment must provide sufficient resources in order to mitigate the operational commander's risk of culmination, limiting operational reach, and disrupting operational tempo throughout all phases of the campaign.¹³

¹¹United States Joint Forces Command, Joint Publication 4-0, *Joint Logistics* (Washington, DC: Government Printing Office, 2008), I-5.

¹²United States Joint Forces Command, Joint Publication 4-0, xvii.

¹³United States Joint Forces Command, Joint Publication 5-0, IV-29.

Operational sustainment is a form of art in its own right. As a discipline, it must settle the tension and friction amongst the opposing sustainment principles of effectiveness and efficiency. The principles of sustainment are integration, anticipation, responsiveness, simplicity, economy, survivability, continuity, and improvisation.¹⁴ Strategic sustainment exploits the benefits of regulation, consistency, certainty, and economy of scale. Tactical sustainment encourages flexibility, responsiveness, simplicity, and survivability.¹⁵ “Bridging that gap between the efficiency of strategic sustainment and the effectiveness of tactical sustainment is the challenge for the operational sustainment artist.”¹⁶

Balancing current operations’ consumption with the requirement to shape operational sustainment for follow-on campaign phases or transitions, extending lines of communication, and staging sustainment support forward to maintain operational tempo are among the complex responsibilities for operational sustainment commanders. Because there are so many high levels of uncertainty means that an operational sustainment artists cannot rely exclusively on science. The first task of operational sustainment is opening the theater of operations.

The greatest decisive factor in expeditionary theater opening and theater sustainment distribution is the strategic-to-operational seam. Expeditionary Theater Opening (ETO) operations, according to the Headquarters Department of the Army (HQDA) G4, includes the critical initial actions involved in the rapid insertion and expansion of force capabilities into an area of operations.¹⁷ At the strategic level, the key to victory is velocity, mobility, and information sustained by a single logistics system using collective situational understanding to

¹⁴United States Army, Field Manual 4-0, Sustainment (Washington, DC: Government Printing Office, 2008), 6-74.

¹⁵Martin Van Creveld, *Supplying War: Logistics from Wallenstein to Patton* (New York: Cambridge University Press, 1977), 231-237.

¹⁶James A. Brabham, “Operational Logistics: Defining the Art of the Possible,” *Marine Corps Gazette* (April 1994): 26.

¹⁷U.S. Department of the Army, Army Chief of Staff G4: “ETO Information Paper” (Washington, DC: U.S. Army, 2008), 1.

enable real-time sustainment visibility.¹⁸ Essentially, sustainment visibility is the nexus to close the gap and allow the distribution pipeline to operate from the base of operations to combat brigades along the lines of communication. Operational commanders can then perform reception, staging, onward movement, and integration operations to carry out their campaign plans. This monograph shows case studies that are evaluated against the elements of operational art in achieving the campaign objectives in Operation Restore Hope and Operation Uphold Democracy.

In comparison to the logistics support necessary for major combat operations, the sustainment needs for Operation Restore Hope and Operation Uphold Democracy were minimal in terms of deployment length, material, and troop requirements. Both of these humanitarian and disaster relief operations involved a total of less than 40,000 troops.¹⁹ In contrast, during Operation Desert Storm in 1991 there were over 950,000 coalition troops. This monograph focuses on operational sustainment. These two case studies offer both joint commands that consolidated command and control of operational sustainment into a single command.

The operations in Somalia and Haiti provide an opportunity to analyze the effectiveness of the Army's operational sustainment in an austere environment without the assistance of host nation logistics architecture. An evaluation of how well these joint commands executed the sustainment system in these two different missions offers insight to future operational missions. The chosen case studies involve operational-level sustainment commands that executed short notice deployments to immature environments with ad hoc organizations. The outcomes of this analysis recognize possible shortcomings and risks associated with operational sustainment in disaster relief operations.

There have been numerous books and reports emphasizing the capabilities of Army operational sustainment support. A dominant theme is recognition of the requirement for

¹⁸Army Logistics White Paper, *Defense Transportation Journal* (February 2004), 15.

¹⁹United Nations, "United Nations Stabilization Mission in Haiti," <http://www.un.org/en/peacekeeping/missions/minustah/facts.htm> (accessed 6 June 2011).

operational sustainment commands to integrate into campaign planning from beginning to end and the shortcomings of piecemeal, ad hoc sustainment commands to support operations. Gary Wade's research survey, "Rapid Deployment Logistics: Lebanon, 1958," identified the general inadequacies and accomplishments of operational logistics support during Operation Bluebat in a very coherent and thorough methodology.²⁰ However, the main effort of his research focuses on demonstrating how a logistical command could set up a logistics base and a task force with programmed requests and phased resupply. In contrast, this monograph centers exclusively on sustainment in humanitarian operations relative to operational art.

Michael J. Curry's 1999 monograph titled "21st Century Combat and the Operational Logistics Link" considers the ability of a corps support command to accomplish operational sustainment missions in a corps level contingency. He concluded that forthcoming operations will not support the development of ad hoc organized logistical elements, and the best way to meet future operational sustainment requirements is to create a corps support command with all of the resources to execute operational and humanitarian operations.²¹ Curry claims that the corps support command has had difficulties in accomplishing its missions because it is not organically structured, manned, and resourced to support operational sustainment in full spectrum operations. Army doctrine recognizes the need to supplement the corps support command, now called expeditionary sustainment commands, during a contingency with reserve forces. The idea of forming ad hoc units in these late stages was found by Curry to be ineffective, unresponsive, and lacked continuous support.²² The current expeditionary sustainment commands still form ad hoc units during deployment but no longer maintain organic subordinate units with the exception of

²⁰Gary H. Wade, "Rapid Deployment Logistics: Lebanon, 1958" (Research Survey No. 3/Combat Studies Institute, U.S. Army Command and General Staff College, October 1984), 80.

²¹Michael J. Curry, "21st Century Combat and the Operational Logistics Link" (Monograph, School of Advanced Military Studies, Fort Leavenworth KS, 1999), 40.

²²Ibid., 41.

its special troops battalion, which serves only as an administrative and internal logistics headquarters and not an external logistics provider.

Robert L. Chadwick examined the 13th Corps Support Command in its role as a Joint Task Force Support Command during Operation Restore Hope in Somalia in 1993. The subordinate sustainment elements that made up this command were a transportation group, medical group, and an area support group (ASG). These three elements were primarily responsible for inland transportation of supplies, preventive medicine and air ambulance support, and direct support for maintenance respectively.²³ Chadwick asserts that the deployment and incorporation of the various subordinate units from all over the continental United States (CONUS) was very inefficient and provided the 13th Corps Support Command with minimal visibility of units that arrived to the theater of operations.²⁴

In 2006, Thomas K. Gainey analyzed the need for a Joint Logistics Theater Command by arguing that frequently the United States Army's sustainment response, in periods of emergency, has been very slow to respond to major combat operations as well as operations other than war. The norm had always been to compose an ad hoc structural arrangement to administer sustainment operations in the theater of operations.²⁵ Ultimately, these ad hoc structures have sustained United States forces, but often at a significant cost while slowly responding with a logistical build up and structure to direct theater logistics. Gainey advocated that the best solution to these reoccurring problems was the formation of a dedicated sustainment command and control organization. This headquarters would have the ability to resolve, prioritize, and coordinate logistics operations and capabilities.

²³Robert L. Chadwick, "A Joint Logistics Command—Is it Needed?" (Monograph, School of Advanced Military Studies, Fort Leavenworth KS, 1999), 18.

²⁴Ibid., 19.

²⁵Thomas K. Gainey, "Taking Charge of Joint Theater Logistics: The Case for a Theater Logistics Command" (Thesis, Joint Advanced Warfighting School, Norfolk, VA, 2006), 67.

A RAND report analyzing the Operation Restore Hope deployment makes five observations on how to improve future humanitarian operations. First, consider adapting planning and operating processes to place less reliance on detailed plans. Second, humanitarian operations place high demands on engineering, medical, and transportation support functions. Third, by employing six of the nation's best sealift ships, it undercut the Army's capability to carry out its strategic mobility plan and other ships should be considered. Fourth, procedures for offloading prepositioning ships should be reassessed. Finally, the Army must develop methods for defining measures of effectiveness and performance of humanitarian missions.²⁶

A reoccurring theme among operational sustainment writings is that the authors recognized the primary concern of the inadequacies and limitations of the ad hoc structuring of sustainment commands capabilities and lack of logistics involvement in the planning process of contingencies prior to execution. Nonetheless, none of the writings examined the dilemma at the operational level using the elements of operational art. The limited analysis of sustainment at the operational level may be why the topic has not created much interest. Only when presented under these conditions, will it gain the appropriate level of appreciation.

²⁶David Kassing, *Transporting the Army for Operation Restore Hope* (Santa Monica, CA: Rand Corporation, 1994), 3.

Somalia-Sustainment during Operation Restore Hope

This case study examines impact of sustainment elements on elements of operational art. The operational art and sustainment concerns illustrated in this case study are analyzed using the operational environment of Operation Restore Hope in Somalia in 1992. This important humanitarian aid effort was classified as an “operation other than war.”²⁷ This operation revealed a number of similar challenges faced by both operational level commanders and logisticians.

In late 1992, the United States military was ordered to provide access and security in war-torn Somalia in order to initiate and sustain a humanitarian mission to that country under the auspices of the United Nations. This effort, dubbed Operation Restore Hope, was the first instance in which the United Nations invoked Chapter VII of its charter to justify the use of force for a humanitarian intervention. Despite the high hopes of the international community, however, Operation Restore Hope provided an example of the problems faced in executing humanitarian operations in non-permissive environments. In nonpermissive areas, security is the first priority and therefore must be established before other external actors can enter the operational area. Such areas typically require the initial use of military forces to achieve security and set the conditions that enable the success of those actors.²⁸

Major General Mohammed Siad Barre swiftly assumed control of the new Supreme Revolutionary Council after President Abdirashid Ali Shermarke was assassinated on 15 October 1969. The 1980s and early 1990s were not an easy period for the Barre regime, however. In spite of its attempts to rid the country of the influence of “tribalism,” the government was increasingly identified with the Marehan, Barre's own clan.²⁹ In addition, corruption in the government created

²⁷Lee S. Gingery, “Principles of Military Operations Other than War as Applied to the UN Operation in Somalia” (Research Project, U.S. Naval War College, Newport RI, 1997), 2.

²⁸United States Army, Field Manual 3-07, *Stability Operations* (Washington, DC: Government Printing Office, 2008). 6-74.

²⁹Dennis P. Mroczkowski, *Restoring Hope: In Somalia with the Unified Task Force 1992-1993* (Washington, DC: History and Museums Division, Headquarters, U.S. Marine Corps Office, 2006), 5.

more discontent. By 1988, armed opposition to the Barre regime began with a rebellion in northern Somalia.³⁰ Three main opposition groups formed by 1990 around clan affiliations: the Somali National Movement (SNM), the Somali Patriotic Movement (SPM), and the United Somali Congress. By December, these forces had pushed the Somali Army back to the outskirts of the capital, Mogadishu. Violence and disorder grew within the city itself, creating a dangerous atmosphere for the foreign personnel and diplomats living there.

By the end of January 1991, Siad Barre was forced to flee Mogadishu, and Somalia descended into chaos and turmoil as the different armed groups clashed with forces of the old national government. By May 1992, Barre's forces were defeated and he fled the country entirely. To add to the misery of the Somali population, a severe drought overwhelmed the countryside for a three-year period. Because farmers were unable to raise crops, food became a source of power. To have provisions made that particular faction stronger; to deprive provisions from rival clan weakened that clan as it strengthened oneself. By November 1992, deaths by starvation and associated diseases numbered over 300,000 and were expected to continue increasing rapidly.³¹

Due to the deteriorating security and humanitarian aid situation in Somalia, the United Nations Security Council adopted Resolution 794 on 3 December 1992. Resolution 794 sanctioned the establishment of the Unified Task Force (UNITAF) to establish and maintain a safe and secure environment in order to provide humanitarian assistance to the Somali population.³² This resolution declared that the extent of the catastrophe produced by the different clan clashes posed a threat to the distribution of humanitarian aid assistance and international peace and security. Within days of the passage Resolution 794, the first Joint Task Force Somalia

³⁰Ibid., 6.

³¹ Ibid., 9.

³²Department of Public Information, United Nations, "United Nations Operation in Somalia I," Last updated 21 March 1997, <http://www.un.org/Depts/DPKO/Missions/unosomi.htm> (accessed 8 June 2011).

troops arrived in Mogadishu. It was the first Security Council resolution that approved the use of force under Chapter VII to deliver humanitarian aid hindered by warlords.³³

On 4 December 1992, President George H.W. Bush announced his decision to send United States forces into Somalia to stop the famine and destruction of a culture torn by a destructive confluence phase of clan rivalry, starvation, and lawlessness. President Bush's specific goal was to create a safe and secure environment inside Somalia that permitted a well-ordered stream of food distribution to the starving population. The President anticipated the operation to have a limited objective "of opening the supply routes, to get the food moving, and to prepare the way for a UN peacekeeping force to keep it moving."³⁴

The President's clearly defined strategic end state and conditions, presented an opportunity for the operational commander to focus on defining and achieving the military end state.³⁵ The joint task force commander had to clearly describe the decisive conditions for the operation so that subordinate commanders and logisticians would not lose focus due to unclear mission and operations would drive toward a clearly distinct, decisive, and realistic end state. The end state is an operational art element in which a desired future condition is represented by the expressed conditions that the commander wants to exist when an operation ends. End state promotes unity of effort, facilitates integration and synchronization, and mitigates risk.³⁶

³³Dennis P. Mroczkowski, *Restoring Hope: In Somalia with the Unified Task Force 1992-1993* (Washington, DC: History and Museums Division, Headquarters, U.S. Marine Corps Office, 2006), 21. Joint Task Force Somalia included 1st MEF as the JTF Headquarters. 1 MEF subordinate elements included 1st Marine Division; 3rd Marine Aircraft Wing; 1st Surveillance, Reconnaissance, and Intelligence Group; and 1st Force Service Support Group, 10th Mountain Division, Naval Forces, Air Force Forces Somalia, and the 13th Corps Support Command.

³⁴Ken Menkhaus and Terrence Lyons, "What Are the Lessons to be Learned from Somalia," *CSIS Africa Notes* no. 2 (January 1993), 8.

³⁵Operational commander and joint task force commander (LTG Robert B. Johnston) are one and the same. Somalia fell within the CENTCOM area of responsibility.

³⁶United States Army, Field Manual 3-0, 6-7.

Supporting Operation Restore Hope was an operational sustainment task of substantial magnitude. Due to the short notice deployment, the Army's Joint Task Force Support Command was unprepared for the level of host nation infrastructure destruction and community disorder that they found as they arrived in the new operational environment. Somalia was a sustainment planner's nightmare: the nation's communication, rail, and road networks were destroyed by years of civil war. There was only a limited supply of electricity, water, fuel, and food to go along with a non-existent financial system or government control within Somalia.

Operational art is demonstrated in a commander's conduct of a campaign; hence, it is the fundamental instrument operational-level commanders utilize to accomplish the theater strategic objective. Developing theater strategy and managing campaigns falls under the responsibility of a theater joint force commander. Campaigns are joint in order to synchronize air, land, sea, space, and special operations forces to accomplish a theater strategic objective.³⁷ In the case of Operation Restore Hope, the 1st Marine Expeditionary Force Commander commanded Joint Task Force Somalia. Campaigns are joint in order to synchronize air, land, sea, space, and special operations forces to accomplish a theater strategic objective.

The Joint Task Force Somalia commander's most important job in planning and carrying out the military campaign was defining the military conditions required to accomplish the theater strategic goal. Put differently, the campaign's end state had to be clearly communicated, translated, and articulated. The end state outlined conditions for operational success and, in turn, achievement of the strategic aim.³⁸

Joint Task Force Somalia could achieve operational success either in increments, a single intermediary objective at a time, or by accomplishing multiple objectives simultaneously. To achieve the end state, the operational commander needed to deliver focus. Tactical actions or

³⁷Joint Staff, Joint Publication 1, Joint Warfare of the US Armed Forces (Washington, DC: Joint Staff, 1991), 45-48.

³⁸John F. Meehan III, "The Operational Trilogy," *Parameters* (Autumn 1986): 12-17.

engagements, regardless of how successful or effective, would lack significance unless they supported the overall campaign's end state. The operational commander delivered this focus by communicating his vision in a campaign plan centered upon the commander's concept.³⁹

The theater strategic aim for Operation Restore Hope was to establish a safe environment in the famine stricken and war torn parts of Somalia so that subsistence and additional humanitarian aid could be moved freely from the ports of debarkation to the people in areas overwhelmed by hunger and illness. The Unified Task Force would achieve the operation's end state when it ended the food shortage, ransacking, and lawlessness within the humanitarian relief zones, and set up a dependable and secure system to turn over to United Nations peacekeeping forces.

The United Nations Task Force remained focused on Operation Restore Hope's end state.⁴⁰ However, the development of relevant measures of effectiveness for achieving the end state proved to be very problematical. Joint doctrine defines measures of effectiveness as “criterion used to assess changes in the operational environment that are tied to measuring the attainment of an end state or an achievement of an objective. They are used to focus on the results or consequences of actions taken.”⁴¹

Identifying and attacking the opponents' center of gravity significantly plays a factor in operational focus. Center of gravity is that “feature, capacity, or position from where alliances, nations, and military forces obtain their willpower to fight, their physical power, or freedom of action.”⁴² If viable, the enemy's strong point should not be struck in a direct manner when employing an operational approach. The enemy's weakness presents a prospect for manipulation,

³⁹United States Joint Forces Command, Joint Publication 5-0, II-21.

⁴⁰Walter S. Poole, *The Effort to Save Somalia: August 1992-March 1994* (Washington, DC: Joint History Office, Office of the Joint Chiefs of Staff, 2005), 9

⁴¹Ibid., xxv.

⁴²United States Joint Forces Command, Joint Publication 5-0, III-22.

the indirect approach, which in essence is perhaps the greatest method to get at his center of gravity.⁴³

Somalia did not have any form of operating administration or military and it was very challenging to distinguish, in the traditional manner, the enemy's center of gravity and subsequent critical vulnerabilities and liabilities. Critical vulnerabilities are critical requirements, or mechanisms, that are vulnerable to defeat in a way that will add to a center of gravity failing to achieve its critical capability.⁴⁴ The operational commander in Somalia identified the adversary's center of gravity as the capability of the criminals and rival clans to terrorize and intimidate humanitarian aid distribution efforts, particularly in Mogadishu. Their critical vulnerabilities were their limited supply of heavy weapons and small number of personnel which rendered them incapable of interrupting the heavily armed United Nations Task Force securing food distribution efforts.⁴⁵

Operational sustainment is an enabling utility that contributes to the operational commander in achieving a campaign's end state. It is a war fighting function in the same vein as the other joint functions of command and control, maneuver, intelligence, operational protection, and operational fires. Every one of them provides the commander with potential for accomplishing the mission or risk of failure. If properly planned and executed, sustainment can provide opportunity and operational flexibility. If sustainment is neither planned nor carried out correctly, the operational commander will only consider it logistics as a risk or liability.⁴⁶ In Operation Restore Hope, operational sustainment proved to be the critical aspect in shaping where and when United Nations Task Forces were able to concentrate their efforts against the

⁴³United States Army, Field Manual 3-0, 6-9.

⁴⁴Joe Strange, *Centers of Gravity and Critical Vulnerabilities* (Quantico, VA: U.S. Marine Corps Association, 1996), 3.

⁴⁵Joseph P. Hoar, "A CINC's Perspective," *Joint Force Quarterly* (Autumn 1993): 56-59.

⁴⁶United States Joint Forces Command, Joint Publication 5-0, III-34.

adversary's center of gravity. Lieutenant General Robert Johnson, Joint Task Force Somalia Commander commented, "you have to realize that my mission is to get as many troops ashore as quickly as we can with the ability to sustain them logistically, and then move in a very deliberate manner to assume control of those relief sectors."⁴⁷

The Joint Task Force Support Command sustainers, wary of the necessity to incorporate operational flexibility and responsiveness into their planning, did not entirely realize the scope to which their operational sustainment would be tested. Political pressure, service indifference, media pressures, operational friction, and mission complexities were all factors that affected execution and planning for Operation Restore Hope. As a result, significant modifications occurred in time-phased force sequencing timetables, force-mix ratios between combat, combat support, and combat service support units, service-mix ratios, and coalition logistical assumptions.⁴⁸ The Joint Task Force Support Command aggressively sought a voice in the operational planning for Somalia and was able to affect, to a small degree, the work-around strategy to adapt to these changes. The Joint Task Force Command's essential objective was to ensure that sustainment continued to be an enabler, and not a risk or liability for the operational commander.

Campaign phasing is a critical aspect of operational art. Phasing allows the joint task force commander to identify requirements for transition and arrange the extended and dispersed lines of the operation into more controllable pieces. They provide the theater commander flexibility in executing the operation and aid in effectively integrating joint and combined forces. Often, the operational commander will identify the primary supporting and secondary supporting

⁴⁷James Kitfield, "Restoring Hope," *Government Executive* (December 1993): 30.

⁴⁸Waldo D. Freeman, "Operation Restore Hope: A US CENTCOM Perspective," *Military Review* (September 1993): 64-72.

efforts inside each phase. The joint task force should convert to a new phase based on conditions or events and not necessarily time or on a specific date.⁴⁹

The campaign plan for Operation Restore Hope consisted of four main phases and transitions. Phase I objective called for the Marines to seize, secure, and establish a Mogadishu based sustainment center. Phase II required the joint and coalition services to set up humanitarian relief zones aimed at vital cities outside of Mogadishu. Phase III called for the execution of extended security and escort missions inside each zone. Phase IV consisted of the handover of all humanitarian relief operations to the United Nations.⁵⁰

The phasing of Operation Restore Hope included arrival of the 1st Marine Expeditionary Force as the joint task force headquarters, a Special Purpose Marine Air-Ground Task Force (MAGTF) task organized for the purpose of humanitarian assistance, the Army's 10th Mountain Division as the primary ground force, and the Army's 13th Corps Support Command as the Joint Task Force Support Command. This operation was unique in that it was the first time that a Corps Support Command received a mission to provide theater-level support.⁵¹

The Army's Joint Task Force Support Command relieved the Marine Force Service Support Group (FSSG) that was distributing prepositioned supply stockpiles from both ashore and Maritime Prepositioning Force (MPF) ships out at sea. As the theater's increased troop numbers continued to grow, the Marine support units exceeded their capabilities. Requirements exceeded the capabilities of the Marine Logistics Support Group. At the onset of the mission transfer, the 10th Mountain Division's Support Command managed the theater supply and water distribution until the Joint Task Support Command became operational. The capabilities of the Joint Task Force Command were critical in providing theater logistics, medical support, and

⁴⁹United States Joint Forces Command, Joint Publication 5-0, III-38.

⁵⁰Hoar, 56-63.

⁵¹Katherine A. W. McGrady and David J. Zvijac, *Operation Restore Hope: Summary Report* (Alexandria, VA: Center for Naval Analyses, 1994), 40.

theater sustainment. This task force was also unique in its command relationship to the joint task force in that it served as a functional element and not a separate service force. The operational command immediately identified that sustainment for Operation Restore Hope would be a significant factor, more so than the other war-fighting functions, so this command was on an equal basis as that with the service components.⁵²

The deployment and integration of the Joint Task Force Support Command units from a variety of locations in the United States was a time intense undertaking. This was not as effective as deploying a proficient and prepared sustainment command ready for this mission. Likewise, Joint Task Force Somalia did not form a Joint Movement Control Center in the opening stages of deployment. The Joint Task Force J4 did not receive manpower or resources to manage and control a joint movement center. Subsequently, the J4 was incapable of maintaining visibility of units arriving in theater.⁵³

For operational sustainment, campaign phasing is a critical factor for sequencing mission accomplishment. Phasing allows logistics staff planners to successfully utilize limited troops, equipment, and assets to achieve crucial intermediary objectives. Within phases, sustainment planners must not allow the operational commander to inadvertently arrive at an operational culmination point. Logistics staff planners should suggest to the commander the location, recommended time, and necessity for operational pauses. Operational pauses are generally necessary following the achievement of the phase's main objective.⁵⁴ This is necessary to allow for preparation and transition to the next phase.

⁵²Dennis P. Mroczkowski, *Restoring Hope: In Somalia with the Unified Task Force 1992-1993* (Washington, DC: History and Museums Division, Headquarters, U.S. Marine Corps Office, 2006), 18.

⁵³Center for Army Lesson Learned, *Operation Restore Hope* (Fort Leavenworth, KS: US Army Combined Arms Command, November 1993), v-10.

⁵⁴Eric D. Beatty, "Effects of Operational and Strategic Pauses on Mission Success" (Monograph, School of Advanced Military Studies, Fort Leavenworth KS, 2008), 1.

From the very start of Operation Restore Hope, the Joint Task Force Somalia received demands from the chain of command and the international media to speed up its operations throughout southern Somalia. The operational commander frequently turned to the phased campaign plan to highlight that the progress of Operation Restore Hope was not dependent upon a timetable. General Johnston pointed out that each phase had an objective and a set of conditions that had to be met before transitioning to the following phase. In the end, the operational commander was only partly victorious in sticking to his operational plan. When he was pressed to increase the tempo of operations, the sustainment condition in the theater turned out to be very fragile. Quite frequently, the joint task force was forced to drastically restrict their operations because of the lack of sufficient sustainment support. This resulted from a combination of bad planning and unrealistic external demands. The operational sustainment capability could not maintain the tempo of the supported forces.⁵⁵ This is a key point, as sustainment is a significant factor in the success of a campaign. Integration and synchronization of sustainment with combat operations can anticipate culmination points and help the operational commander control the operational tempo to prevent culmination.

Prioritizing, allocating, and organizing resources and assets within a phased campaign to accomplish a theater strategic goal is a challenging feature of operational art. While basic troops, supplies, and concepts of support are made well before the start of the campaign, the operational commander will constantly revise the plan as the operation develops. In order to get a shared understanding of the chain of command, operational commanders arrange their forces into functional or service components. The joint task force commander can utilize a single or combination of command and support relationships found in Joint Publication 1 (operational

⁵⁵Mark S. McTague, "Operation Restore Hope: Logistics Once Again Defines the Possible" (Research Paper, Naval War College, Newport, RI, 1993), 18.

control, tactical control, and support).⁵⁶ Command relationships are exercised to “adapt the organization of assigned forces to situational requirements and array component operations in time, space and purpose.”⁵⁷ In addition, by defining supported and supporting relationships between components, the operational commander can achieve better unity of effort, clarity, and concentration within a particular campaign phase.

The joint task force commander had to decide how he planned to employ his limited theater assets across the entire Somalia area of operations. Integrating and synchronizing all of his joint forces stimulated a synergistic effect that the joint task force commander required and it allowed him to manage the timing and tempo of the campaign.⁵⁸ The availability of resources in the operational theater is primarily a function of time. A few examples of these planning measures include deployment timetables, sustainment rates, and operational pause times. Throughout planning and execution, the joint task force commander and his staff merged the time-oriented phasing of resource availability with the event-oriented phasing of operations; in this integration of sustainment and operational planning lays the significance of phasing.⁵⁹

A large share of the resource prioritization and allocation decisions that a theater commander must make directly involve sustainment. The joint task force commander is responsible for joint operational sustainment. “He directs sustainment resources to generate, produce, and support theater combat power.”⁶⁰ The joint task force commander also employs directive authority for logistics to ensure efficiency and productivity in operations. While each service is responsible for its sustainment support, the joint task force commander may choose a

⁵⁶United States Joint Forces Command, Joint Publication 1, *Doctrine for the Armed Forces of the United States* (Washington, DC: Government Printing Office, 2007), II-6.

⁵⁷United States Joint Forces Command, Joint Publication 3-0, IV-2.

⁵⁸Meehan, “The Operational Trilogy,” 9-17.

⁵⁹United States Joint Forces Command, Joint Publication 5-0, III-39.

⁶⁰Ibid.

particular service component to supply certain types of sustainment.⁶¹ For example, in Operation Restore Hope, the Army's 13th Corps Support Command managed the storage, transportation and distribution of all petroleum products for the entire joint force. Operation Restore Hope was a campaign that required constant arrangement of operational sustainment resources and distribution decisions by the joint task force commander.

Within three days after additional Marines began to deploy into the theater of operations to reinforce the Marine Expeditionary Unit, the joint task force commander decided to expedite the deployment of Army units to Somalia. Units from the 10th Mountain Division began arriving in the theater. Because of competing priorities, their combat support and sustainment elements kept their initial position in the deployment sequence. The joint task force commander requested and obtained the authorization from the United States Central Command to redistribute Marine Corps equipment and logistics support to incoming Army units. Later, this same technique was used to support arriving coalition forces. Undoubtedly, these were examples of a joint task force commander making resource allocation decisions for the good of the joint force as a whole. The individual service component requirements were of a lesser importance.

Good operational commanders understand that risk is inherent to military campaigning. Operational art entails commanders planning and carrying out campaigns in such a way that reduces or mitigates risk. Although risk is expected, it should not cause undue anxiety before beginning an operation. Understanding the environment, operational experience, and good judgment help commanders determine the distinction between tolerable risks and intolerable gambles. The operational commander can do many different things to reduce risk when planning campaigns. Army doctrine states that, "when commanders accept risk, they create opportunities to seize, retain, and exploit the initiative in order to achieve decisive results. Risk is also a potent

⁶¹United States Joint Forces Command, Joint Publication 4-0, V-1.

catalyst that fuels opportunity.”⁶² Nothing can substitute for the profits of deliberate planning. Mission analysis, clear and well-defined courses of action, logistics estimates, commander’s intent, and understandable operational concepts are all necessary components of mission accomplishment.

Maneuver operational and sustainment planners should build methods for assessing accomplishment of objectives in each phase of the campaign. This is a very important step in risk management. If the joint task force commander and his staff do not outline operational success and neglect to take steps to measure the effectiveness of their actions, the whole campaign stands a bigger risk of failure in accomplishing the mission. Assumptions are used during campaign planning to capture the level of ambiguity and allow for planning to proceed concerning the adversary and operational environment. By the time all of the conceptual and detailed planning is converted into an operations order, important assumptions, to the greatest degree possible, must be either confirmed or removed.⁶³ Appropriate planning assumptions have two characteristics: they are likely to be true and are necessary to continue planning.⁶⁴ Operational commanders must validate staff assumptions during the planning process and make certain that accepted courses of action are not fixed to numerous assumptions.

Expeditionary sustainment planners contribute to the development of options and feasible plans as part of the overall campaign plan. Plans that anticipate future conditions are called branches and sequels. Branches are contingency plans or procedures built into the operation order for modifying the disposition, orientation, or maneuver of forces and accepting or declining

⁶²United States Army, Field Manual 3-0, 6-19.

⁶³Wayne Grigsby, “Integrated Planning: The Operations Process, Design, and the Military Decision Making Process,” *Military Review* (January-February 2011): 28.

⁶⁴Peter D. Woodmansee, “The Need to Validate Planning Assumptions,” *Military Review* (January-February 2005): 58-61.

battle. Sequels are follow-on missions based on the potential result of the current operations.⁶⁵

Branches and sequels assist in mitigating risk to the operation and offer flexible alternatives to the operational commander.

Operation Restore Hope was a campaign carried out in a complex environment characterized by enormous ambiguity, risk, and hostility. This case study highlights five elements of operational art that the operational commander and his staff utilized to mitigate risk to his joint task forces. He outlined a clear mission statement and commander's intent, created an end state with quantifiable and achievable goals, and he published a concise and understandable concept of operations. The joint task force commander's future operations cell created and constantly updated branches and sequels to the campaign plan in anticipation of future changes.⁶⁶ The Corps Support Command under Joint Task Force Somalia and service component staffs provided the operational commander with an expeditionary sustainment system that possessed adequate flexibility and responsiveness to react to any operational uncertainty and risk that arose.⁶⁷

⁶⁵United States Joint Forces Command, Joint Publication 5-0, GL-15.

⁶⁶Oakley, "An Envoy's Perspective," 45.

⁶⁷McTague, "Operation Restore Hope," 18.

Haiti-Sustainment during Operation Uphold Democracy

The operational art and sustainment points explained in this case study are explored against the operational environment of Operation Uphold Democracy in Haiti in 1994. This humanitarian aid effort was also categorized as a “military operation other than war.” Another important point is this operation exposed a different set of challenges faced by operational level commanders and sustainers in Somalia.

On July 31, 1994, the United Nations adopted Resolution 940 and authorized member states to use all required means to assist in the exit of Haiti's military leadership and restore legitimate rule and Aristide's presidency. President Aristide had been overthrown by Haiti's elite and military in a 1991 coup because they felt they were losing power and status under policies established to increase the average Haitian citizen's living standards. The involvement of the United Nations would return Aristide to lead the country of Haiti.⁶⁸

On 19 September 1994, after positive last minute discussions headed by former President Jimmy Carter, U.S. Army forces performed a permissive air movement operation into the Haitian capital city of Port-au-Prince to commence Operation Uphold Democracy. The preliminary objectives of the operation were confirming that the Haitian police and military forces complied with the Carter-Cedras accords, safeguarding American citizens and interests, selected Haitians, and third country nationals, reestablishing civil order, supporting the reorganization of the Haitian armed forces and police, and aiding in the changeover to a democratic government.⁶⁹ These goals were accomplished roughly a month later with the triumphant arrival of President Jean Bertrand Aristide. After three long years of military rule following a 1991 coup, democracy returned to Haiti.

⁶⁸John M. McDuffie, “Force XXI Corps Support,” *Army Logistician* (July-August 1995): 26.

⁶⁹Robert F. Baumann, “Operation Uphold Democracy: Power Under Control,” *Military Review* (July-August 1997): 14.

Planning was a huge success in Operation Uphold Democracy. The planning featured flexibility for this operation, a well-defined end state, and incorporation of all of the forces. The plan maintained flexibility since the entry situation was not specified. Due to the on-going peace discussions options existed for the joint task force to execute either a permissive or in a non-permissive entry. Planners created two important operational plans in August 1994 for contingency operations in Haiti. The first plan, operational plan 2370, was a forced-entry into a non-permissive environment. The second plan, operational plan 2380, was a permissive-entry option.⁷⁰ Operational plan 2380 was selected and executed by the by 10th Mountain Division as Joint Task Force 190. This plan retained the offensive capabilities inherent in operational plan 2370.

The Joint Force Support Commander identified the sustainment capabilities in the initial planning for Operation Uphold Democracy. Sustainment was a high priority consideration in the development of the timed-phased force and deployment data list. The sustainment plan also provided the operational commander with the flexibility to support the necessary branches and sequels and to refocus joint force efforts as required. The Joint Support Command model returned once again to support Joint Task Force-Haiti. The 1st Corps Support Command received orders to establish a joint logistics support command (JLSC).⁷¹ The use of using lessons learned from Somalia led to minimal sustainment problems during this operation. In spite of this, the staff did not have the necessary training in joint and multinational operations, were unfamiliar with most joint procedures, and relied on Department of Defense personnel from the Defense Logistics Agency (DLA) for assistance. Unlike the joint task force support command mission in Somalia, the Haiti joint logistics support command actually utilized a joint staff. Eventually, the joint

⁷⁰10th Mountain Division, After Action Report, *Operation Uphold Democracy, 10th Mountain Division (Light Infantry)* (Headquarters, 10th Mountain Division, Fort Drum: NY), 4.

⁷¹Center for Army Lessons Learned, *Haiti: The US Army and UN Peacekeeping, Initial Impressions*, Volume III (Fort Leavenworth, KS: US Army Training and Doctrine Command, July 1995), 174.

logistics support command handed over operations from the 1st COSCOM to the U.S. Army Material Command (AMC).⁷²

The Carter-Cedras accords outlined the creation of a safe and secure environment in Haiti, the return of President Aristide, and a handover of the operation to the United Nations as the end state for Operation Uphold Democracy.⁷³ This end state was distinct and published down to the tactical commanders. Describing a safe and secure environment became a contentious point. “Security is expressed as the physical environment, the component with which the operational commander was primarily concerned. Stability is described as the general stability of a government and the country, not just from a security perspective, but a political and fiscal position.”⁷⁴ This explanation showed that the military would not work alone, but collectively with all of the elements of national power: diplomacy, information, and economic means in achieving the strategic end state. Consequently, United States Department of Commerce and Justice officials contributed to the development of Haitian financial, law enforcement, and court systems.⁷⁵ As a result, the joint task force commander was able to establish the secure environment required to accomplish the end state.

The joint task force commander’s plan combined joint forces for Operation Uphold Democracy, and applied the services’ capabilities in exclusive ways. A few examples of effective integration were the employment of naval, Special Operations, and sustainment forces. The earliest illustration was the employment of naval aircraft carriers as a power projection capability. The aircraft carriers *USS America* and *USS Eisenhower* were command and control platforms and

⁷²Julian A. Sullivan, Jr. and Stephen D. Abney, “New Logistics Concepts Tested in Haiti,” *Army Logistician* (May-June 1995): 7-9.

⁷³John J. Fishel, “Operation Uphold Democracy: Old Principles, New Realities,” *Military Review* (July-August 1997): 22.

⁷⁴10th Mountain Division, Operation Uphold Democracy, 10th Mountain Division (Light Infantry), 10.

⁷⁵Donald E. Schulz, *Haiti Update* (Carlisle Barracks, PA: United States Army War College, 1997), 13.

pickup zones for directing air assault missions.⁷⁶ This afforded the Army a reliable and secure command and control capability that was operating before the deployment began. Integrating sustainment was key in incorporating strategic, operational, and tactical support efforts within the theater, while also scheduling the mobilization and movement of forces and material to support the joint task force commander's operational concept.

The use of the *Eisenhower* as an Army helicopter and troop carrier was the first operational test of adaptive joint force packaging model, which the Chairman of the Joint Chiefs of Staff, General Colin Powell, had directed Atlantic Command to develop. Rather uncomplicated in its conceptual design, this procedure brought about a number of practical problems, starting with Army helicopters that were oversized and require larger storage space than their Navy counterparts.⁷⁷ Not only did adaptive joint force packaging incorporate using the carrier to move Army helicopters and soldiers, but it also required the Navy to support the Army in new ways, with such services as intelligence. Achieving simultaneity, depth, and tempo was essential to a successful entrance into Haiti. Accomplishing these operational art concepts would have a synergistic effect that would allow the joint force to stay ahead of impending adversaries and the humanitarian crisis.

Special operation forces and military police were included in the plan. Intelligence, reconnaissance and surveillance assets identified that the countryside region had a great concentration of likely aggressors. The joint force commander tasked the special operation forces to relocate into those regions to perform stability and security missions.⁷⁸ The employment of special operation forces with their exclusive expertise permitted the joint task force commander to mass conventional ground forces into vastly inhabited regions. The military police conducted

⁷⁶Center for Army Lessons Learned, *Haiti*, 11.

⁷⁷*Ibid.*, 2.

⁷⁸Robert C. Shaw, Major, U.S. Army, "Integrating Conventional and Special Forces," *Military Review* (July-August 1997): 38.

an array of tasks in the operation. In addition to their core functions, they served as liaison officers between the joint task force and the Port-au-Prince police.⁷⁹ The 1st Corps Support Command was included early in the planning development process. A subordinate unit, the 46th Corps Support Group contributed in two important planning sessions in preparation for Operation Uphold Democracy.⁸⁰ Early inclusion in the process permitted the Joint Logistics Support Command to build the sustainment structure for synchronizing the sustainment plan with the concept of the operation.

The elements of operational art used in the planning were operational approach, decisive points, operational risk, and center of gravity. The success of operational approach was directly attributed to the clear and concise end state, distinct objectives, and termination criteria. Operational approach is the method in which an operational commander deals with a center of gravity. There are two types of operational approach: direct and indirect.⁸¹ The joint task force commander developed the operational approach by analyzing the center of gravity. In the permissive operational environment, the principal operational risk to stability and security were corruption and civil unrest, which occurred in regions with the highest population densities. The joint task force assessed the highly inhabited areas within the cities of Port-au-Prince and Cap Haiten as the centers of gravity.⁸² Analysis of these two cities as the centers of gravity enabled the joint task force commander to create a plan and arrange subordinate forces. Thorough and detailed analysis helped the joint task force commander understand the operational environment of Somalia's complex nature.

⁷⁹Schulz, 13.

⁸⁰Gerald A. Dolinish, "Logistics in Haiti," *Army Logistician* (January-February 1996): 24.

⁸¹United States Army, Field Manual 3-0, 6-9.

⁸²Fishel, 23.

Using the operational art element of decisive points allowed the commander to discover the regions inside the center of gravity in which security forces would have the most effect. Decisive points that allow the operational commander to seize, retain, or exploit the initiative are crucial. Controlling them is essential to mission accomplishment.⁸³ This entailed patrolling the regions where corruption was widespread. It also included controlling significant locations such as the Port-au-Prince marketplaces.

Arranging operations and timing and tempo, both elements of operational design, occurred when forces began deploying into Port-au-Prince, Cap Haitien, and the countryside, at the same time. The heavy concentration of these forces maintained the operational tempo for Operation Uphold Democracy. Controlling tempo helps commanders keep the initiative during combat operations or rapidly establish a sense of normalcy during humanitarian crises.⁸⁴ The joint logistics support command rapidly transported the operational sustainment assets ashore at the ports, enabling the joint task force commander to continue operations after initial landings in order to extend operational reach and avoid culmination. Often, arranging operations is a combination of simultaneous and sequential operations to reach the end state conditions with the least cost in personnel and other resources. Commanders consider a variety of factors when determining this arrangement, including geography of the operational environment, available strategic lift, command structure, force protection, and sustainment capabilities.⁸⁵

Another area of vital success was the deployment of the remainder of the task force into the theater of operations. The two OPLANs were very different in their entry methods but the overall intent of the deployment was the same, to create a secure and stable environment and to permit the return of President Aristide. This placed a high priority on controlling the centers of

⁸³United States Army, Field Manual 3-0, 6-12.

⁸⁴United States Joint Forces Command, Joint Publication 5-0, III-36.

⁸⁵Ibid., III-35.

gravity. Either the 82nd Airborne Division or 10th Mountain Division would deploy to Port-au-Prince, the Marine Air Ground Task Force (MAGTF) would deploy to Cap Haiten, and the special operations forces would deploy into the countryside.⁸⁶ This swift arraying and integration of forces would quickly secure the decisive points and prevent adversaries from interrupting operations.

During Operation Uphold Democracy, CONUS-based forces deployed directly into the theater, and were employed immediately upon arrival. This is particularly remarkable as the envisioned TPFDD for the operation was modified at the last minute to support a “melded” employment of forces from both JTFs 180 and 190. This resulted in a significant flow of combat and combat support personnel early on, with many of the personnel necessary for operational sustainment not arriving until the bulk of forces within the Joint Operating Area.⁸⁷

The deployment was challenging to accomplish because of the last minute change to the permissive operation plan course of action. It worked because of the planning effort and detailed deployment preparation. In order to sustain the requirement for strategic power projection of forces, the Army developed prepositioned stocks containing unit sets of equipment, emergency supplies, and sustainment stocks. Army prepositioned stocks exemplified a means, not just for an equipment and supply capability, but because it was strategically located on land and at sea, sustained for high priority issue, and organized to support Army brigade combat team and sustainment brigade deployments.

Mass and maneuver were illustrated in the deployment phase. The planners developed all of the operational plans to position substantial combat power on the ground swiftly to control the centers of gravity. Both of the initial operation plans and later modifications called for placing a division-sized element of combat troops into Port-au-Prince, Cap Haiten, and the rural areas. This amount of troops was more than capable of blocking any opposition that tried to impede the landings. Operational maneuver was the key to the success of the deployment phase. At the

⁸⁶Fishel, 24.

⁸⁷10th Mountain Division, Operation Uphold Democracy, 10th Mountain Division (Light Infantry), 60.

operational level, maneuver is a means by which joint force commanders set the terms of battle by time and location and exploit existing situations. Operational maneuver usually takes large forces from a base of operations to an area where they are in position to achieve operational objectives. The objective for operational maneuver is usually a center of gravity or a decisive point.⁸⁸

Operational maneuver was in itself the essence of the deployment phase and was executed like clockwork by both sea and air. The force was well developed in the Joint Operational Planning and Execution System (JOPES) and had been well practiced by U.S. military forces. Thus, while there were innovative refinements such as the use of the carriers as a base for the adaptive joint force packages, this was merely an incremental stressing of the strategic maneuver system.⁸⁹

The Army elements of operational concept and lines of operation were also used throughout the deployment and demonstrated their importance. The operational concept addresses more than combat between armed opponents. It requires Army forces to defeat the enemy and simultaneously shape civil conditions. Shaping civil conditions in concert with civilian organizations, civil authorities, and multinational forces is just as important to campaign success. In many joint operations, stability or civil support are often more important than offensive and defensive operations.⁹⁰ The joint task force commander recognized the center of gravity and arrayed his subordinate units at decisive points.

The fact that the joint task force planners created all of the operation plans to validate the operational concept shows how significant it was to the overall operation. Every tactical commander was familiar with the operational concept and nested their tactical plans to the higher operational commander's vision. The lines of operation were essential in forming the operational concept. The joint task force commander recognized the significance of linking his subordinate commands with the bases of operation. A line of operations is a line that identifies the directional

⁸⁸United States Joint Forces Command, Joint Publication 3-0, III-28.

⁸⁹Fishel, 25.

⁹⁰United States Army, Field Manual 3-0, 3-2.

orientation of a force in time and space in relation to the enemy and links the force with its base of operations and objectives.⁹¹ This was evident by the widespread use of the Maritime Administration's Ready Reserve Force ships to sustain Operation Uphold Democracy and the massive logistical support base rapidly set up on shore. There was never a time during the operation that any of the joint task force units were at risk of culminating.

The tactical commanders were focused on pursuing the joint task force commander's intent to create a safe and secure environment in order to allow President Aristide's return. They did this by instituting weapons confiscation and buyback initiatives intended to minimize weapons accessibility in Haiti.⁹² The joint task force units conducted assaults against weapon cache sites from 1 October to 20 October; concurrently, the joint task force confiscated arms and detained people plotting aggressive acts opposing President Aristide's return to the island.⁹³ These measures, in addition to the frequent patrols in the countryside and urban areas, finally led to President Aristide's arrival on 15 October 1994.

The Joint Logistics Support Command's operational concept of support concentrated on deploying a robust logistical task force sustained by continental United States based operations at a sanctuary located at Fort Bragg, North Carolina. This sanctuary managed the ordering, purchasing, and distribution of supplies from the national inventory control point into the joint operational area. The support command synchronized the receiving and release of all sustainment classes of supply throughout the operational area. Replenished stocks arrived via aerial resupply from Pope and Charleston Air Force Bases and via sea from Wilmington, North Carolina, and Jacksonville, Florida ports, into the Port-au-Prince International Airport and seaport,

⁹¹Ibid., 6-12

⁹²10th Mountain Division, Operation Uphold Democracy, 10th Mountain Division (Light Infantry), 6.

⁹³Ibid., 6.

respectively.⁹⁴ Noteworthy, in the sustainment concept for the logistical mission was the split-based operation. The sustainment task force in Haiti validated requirements and then tasked the stateside-based sanctuary at Fort Bragg to satisfy the requirements.

The element of operational art and operational design that was used effectively in the execution phase was the lines of operation. The solution to preserving a secure and stable environment was being at the right place at the right time. The joint task force commander achieved this by retaining positional advantage and lines of operation. Expeditionary forces that are within operational reach of an enemy's center of gravity and have the means and opportunity to strike and maneuver on that center of gravity can attain positional advantage.⁹⁵ Placing significant number of forces in regions where opposition was expected disrupted any resistance to the mission. The joint task force commander simultaneously deployed special operations forces into the countryside, the Marines in Cap Hatien, and the 10th Mountain Division in Port au Prince.⁹⁶

Lines of operation permitted the joint task force to continue applying pressure to potential adversaries. Lines of operation defined the directional orientation of a force in time and space in relation to the enemy and linked the joint task force with its base of operations and objectives.⁹⁷ The Joint Force Support Command's substantial increase of sustainment units and the continuous distribution operations from ships assured the task force commander that the lines of operation would sustain the operations. The operational commander was then capable of preserving combat power in decisive areas across the entire island in addition to carrying out raids for the purpose of security and stability.

⁹⁴McDuffie, "Force XXI Corps Support," 27.

⁹⁵United States Joint Forces Command, Joint Publication 3-0, III-29.

⁹⁶Fishel, 23.

⁹⁷United States Army, Field Manual 3-0, 6-12.

The final elements of operational design are synergy and forces and function. Forces and functions assisted the commander and staff in computing requirements, allocating means, and integrating efforts.⁹⁸ Throughout the execution phase, synchronizing and integrating actions of the joint task force effectively stopped antagonists from disrupting stability operations. A combination of the arms buyback initiative, weapons confiscations, and raids forced the adversaries to culminate. This created peace that permitted the government to begin functioning on 28 September 1994.⁹⁹ The joint task force commander also employed forces and functions efficiently by achieving unity of effort among infantry, civil affairs, military police, and psychological operation teams. “Infantry, military police, and tactical PSYOP teams (TPTs) successfully induced elements of the Revolutionary Front for the Advancement and Progress of Haiti (FRAPH) to capitulate and hand over their weapons without resorting to violence.”¹⁰⁰

Another advantage that emerged is that the split-based sanctuary sustainment operations method allowed the operational commander to concentrate efforts on security and stability operations while the Joint Logistics Support Command controlled the sustainment flow into the theater.¹⁰¹ The flow of sustainment linked the operational commander’s desired tempo or phasing was both feasible and in the realm of possible. Power projection, or the reception, staging, and onward movement of cargo, had a key connection to the operational commander’s desired tempo. The difficulty of operating within Haiti’s limited infrastructure could have led to a number of interruptions in tempo. In summary, the Operation Uphold Democracy was an instance in which the Joint Logistics Support Command offered a full scale of sustainment support to the task force in the operational area.

⁹⁸United States Joint Forces Command, Joint Publication 3-0, III-5.

⁹⁹10th Mountain Division, Operation Uphold Democracy, 10th Mountain Division (Light Infantry), 6.

¹⁰⁰Baumann, 16.

¹⁰¹McDuffie, “Force XXI Corps Support,” 31.

The support command was able to accomplish this through split-based sanctuary operations, split operations requisition flow, and total asset visibility.¹⁰² These components shape the concept for how the strategic, operational, and tactical levels interact through information systems to communicate the requisition to the source, wherever it is, and get it shipped to the user. In expressing operational design, the ability to operate jointly at the operational level from the port back to sustainment nodes in the United States led to continuous success in achieving simultaneity. Army doctrine states that simultaneity “requires the ability to conduct operations in depth and to orchestrate them so that their timing multiplies their effectiveness.”¹⁰³ This also reveals the possible disaster that can occur when a commander does not have the chance to achieve his preferred level of simultaneity. These various task forces organized together to overpower any opposition against the overall objective of securing the operational environment. The operational commander was successful because of applying the elements of operational design and operational art. He achieved the military end state of the Operation Uphold Democracy with minor troop losses. It is clear that the application of operational sustainment to the elements of operational art and operational design models in this humanitarian aid operation is what contributed to mission accomplishment.

¹⁰²Ibid., 27. Sanctuary is the term used to describe the split operations sustainment base located at Fort Bragg. The sanctuary consisted of an operations center, a material management center, a movement control center, and liaison officers from 1st Corps Support Command units. The sanctuary forecasted requirements and made certain that supplies required in Haiti were ordered and transported in accordance with the support priorities in the area of operations

¹⁰³United States Army, Field Manual 3-0, 3-16.

Conclusion

Both the Joint Task Force Haiti and the Joint Task Force Somalia commanders had to make operational decisions centered upon sustainment considerations in order to accomplish tactical and operational objectives. They arranged their major subordinate commands, phased all of their actions, and selected their objectives based upon available forces and sustainment for their initial actions. They took into account future conditions through branches and sequels that were based on sustainment requirements. Balancing the relationships between all three features is one of the main tenets of operational art.

If the joint task force commanders in Haiti and Somalia had to work with the modular expeditionary sustainment commands of today they would have seen a completely different operational sustainment picture. The Corps Support Commands that led the sustainment during operations of the 1990s featured organic subordinate organizations that were assigned directly to its headquarters. These included division support commands, corps support groups, functional transportation, water, and petroleum battalions, aviation support battalions, and forward support battalions that supported their maneuver brigades. Who was supporting whom was clear-cut, and the division support command adjudicated any sustainment issues above the battalion level.

As part of the Army's transformation to modularity in 2005, the Army converted all of its division and corps level support organizations into sixteen active-duty sustainment brigades, three active-duty expeditionary sustainment commands, and four active-duty theater sustainment commands. These sustainment brigades are only a C2 headquarters and the only organic unit is its special troops battalion. The Army concentrated its energy on the flexible "plug and play" architecture design of modularity in order for operational commanders to have the ability to quickly allocate units for deployment on short notice, permit units to sustain operations with minimal augmentation, improve units' ability to deploy, and offer greater troop readiness.¹⁰⁴

¹⁰⁴Terry E. Juskowiak and John F. Wharton, "Joint and Expeditionary Logistics for a Campaign-Quality Army," *Army Logistician* (September-October 2004): 3.

While a plug and play model is useful for developing combat power, the sustainment commander faces the challenges of incorporating units home-based under different sustainment organizations at various locations. These units arrive in a theater of operations from active duty, reserve, and National Guard components with various levels of sustainment experience. Subsequently, sustainment commanders must continuously dealing with changeovers caused by their units' alternating arrivals and departures. The effect of this change was seen most recently during in 2010. An expeditionary sustainment command deployed in support of Joint Task Force –Haiti after an earthquake struck the city of Port-au-Prince. This unit was still in the reset phase the Army Force Generation cycle since it had returned from a tour in Iraq only a few months earlier, but was the only active duty sustainment command in the United States that was not deployed.

As expected in the reset phase, the unit's available strength was less than 100 percent, so it was only able to fill half of the joint manning document allocations needed to staff the Joint Logistics Command. Luckily, the unit's equipment had completed reset maintenance. The force flow had effects on the operational commander's tempo and synergy. The expeditionary sustainment commander faced challenges with setting priorities for the sustainment units force flow into Haiti. The delay caused by sustainment forces having to fight for strategic air transportation flow into Haiti, the operational requirements for logistics and humanitarian relief surpassed the on ground capabilities. In addition to deploying its own headquarters in a piecemeal fashion, the 3rd Expeditionary Sustainment Command faced challenges in prioritizing which sustainment units would comprise the Joint Logistics Command. In fact, the final sustainment elements did not reach Haiti until nearly a month after the earthquake.¹⁰⁵

If the Army had employed this construct during Operations Uphold Democracy and Restore Hope to provide sustainment to joint forces, the joint task force commanders would not

¹⁰⁵Paul Hayes, "A Series of Firsts: The 3rd ESC in Operation Unified Response," *Army Sustainment* (November-December 2010): 11.

have had port opening, postal, finance, and water purification capabilities. This would have meant they could not get operational sustainment support to the distribution sites and the population in time to have any effect on preventing starvation and distributing humanitarian aid and relief. This would have led to a loss of tempo and operational reach, and culmination before completing the mission.

All of the aspects of operational sustainment portrayed in both case studies are directly related to operational art. The reality is that operations in Haiti and Somalia convincingly support the argument that operational sustainment connects the strategic and the tactical realms and should lead military professionals to research the subject in even greater specificity. While operational sustainment is often looked at as more of a specialty function, in a much broader perspective, it is a key component of multiple elements of operational art and operational design.

Even noted Prussian military theorist, Carl von Clausewitz acknowledged the general influence that questions of sustainment exert on the form and direction of operations, as well as the choice of a theater of war and the lines of communication. What he was alluding to was that sustainment outlines the limitations of the struggle based upon what was physically achievable.¹⁰⁶ Operational commanders should adhere to application of the principles of sustainment doctrine rather than getting bogged down over the science of systematizing logistics. By putting the operational art tenets into use, it is quite apparent that operational sustainment is an essential component of the operational planning and execution process.

Clearly, operational sustainment is a real and applicable model and it influences the way operational artists design, plan, and execute operations. Military leaders and competent operational planners, we should not consider sustainment as a trivial aspect; but rather they approach sustainment as an art in order to better appreciate what is possible, what is practical, and what is feasible from an operational risk opposed to gain viewpoint. This does not mean that

¹⁰⁶Carl von Clausewitz, *On War*, trans. Michael Eliot Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1976), 338-339.

planning operations such as Restore Hope and Uphold Democracy be made from an operational sustainment standpoint, but integrating the ways and means of military actions as a technique during planning will create better plans and improve decisions concerning risk. The military has not seen the end of humanitarian aid efforts and joint, coalition, multinational, and interagency cooperation efforts will continue to be the norm in such operations. Familiarity with and understanding of how to incorporate the various and distinct sustainment concerns of all the players in such operations will be vital and will make certain that diverse organizations can attain a unity of effort through the identification of what is achievable and what is feasible in order to accomplish the desired operational commander's end state.

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