CAMPAIGNING

JOINT ADVANCED WARFIGHTING SCHOOL (JAWS)

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Mission

The Joint Advanced Warfighting School produces graduates that can create campaign-quality concepts, plan for the employment of all elements of national power, accelerate transformation, succeed as joint force operational / strategic planners and be creative, conceptual, adaptive and innovative.

1 April 2006

We are very pleased with the reception *CAMPAIGNING* has received throughout the joint and multi-national planning arenas. Our electronic distribution system has added new subscribers from the Philippines, Austria, Iraq, Romania, Canada, Norway, the United Kingdom, the Services, and all of the Combatant Commands. Our readership is instrumental to the continued success of *CAMPAIGNING* and we hope that you forward your copy to planning practitioners within your community. The web site associated with *CAMPAIGNING* has been operational for just a few months and already has well over one thousand hits. All of this good news demonstrates the necessity of a journal dedicated exclusively to joint campaign planners and the issues with which they deal. *CAMPAIGNING* is dedicated to continued fulfillment of that role and to provide a premier forum for the world-wide joint and combined planning community.

The quality of OUR journal depends on our readership and the willingness of planning practitioners to provide relevant contributions focusing on joint campaign planning. First and foremost, we are dedicated to providing planners with a source of insight into current planning issues. It is our expressed desire that the interest in *CAMPAIGNING* will continue to grow due to the unique audience we serve and the contributions to our journal from its readers.

This volume of *CAMPAIGNING* contains some very timely articles. LTG Russel L. Honoré and COL (Ret) Barney Barnhill have provided a relevant piece on the complexity of dealing with the largest humanitarian assistance operation the United States has ever seen, the response to Hurricanes Rita and Katrina. Former Assistant Secretary of State for Political-Military Affairs during Operation Enduring Freedom and Iraqi Freedom Mr. Lincoln P. Bloomfield Jr. has provided the first of two essays which provide an extremely valuable and provocative interagency perspective necessary for military planners. And our dear friend Dr. Milan Vego has provided another powerful contribution discussing the concept of Center of Gravity. We are also pleased to announce our first international contribution from LtCol Philipp Eder and Capt Johann Fischer from the National Defense Academy in Vienna, Austria who provide an extraordinary interpretation on the application of the lines of operation. Additionally, Lt Col Jim Sears provides an analysis of the importance of the recently instituted six-phase planning construct. We hope you find each of these articles informative and enlightening.

Most importantly, for this journal to succeed we need your input. *CAMPAIGNING* clearly serves a unique population, joint campaign planners. There is not another journal that focuses exclusively on topics required by joint campaign planners. *CAMPAIGNING* will continue to focus on issues that serve as a resource for planners responsible for ensuring success in the Global War on Terrorism. If you would like to be placed on the electronic distribution list for *CAMPAIGNING* or would like to submit an article or comment on an article contained in this edition, please email your submission or comments to bollenbergc@jfsc.ndu.edu.

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Joint Task Force Katrina: "See First – Understand First – Act First."

By
LTG Russel L. Honoré
And
COL (Ret) Barney Barnhill

The aftermath of Hurricanes Katrina and Rita required a massive federal response that included the Department of Defense (DoD) and Joint Task Force-Katrina. The following pages will provide insight into the DoD response and offer observations for future Defense Support of Civil Authorities (DSCA) operations.

Hurricane Katrina struck the east coast of Louisiana and the Gulf Coast of Mississippi on the morning of 29 August 2005 as a strong Category III storm. Less than 30 days later, on 24 September 2005, Mother Nature delivered a second blow as Hurricane Rita struck the west coast of Louisiana and southeast Texas at Category III strength. The combined effects of these two storms resulted in what has now been determined to be one of the most destructive and costly natural disasters in American history, severely testing the concepts of the National Response Plan (NRP) and requiring the largest commitment of U.S. military forces on home soil in recent history. Storm effects quickly exceeded the response capabilities of state and local agencies across large areas as high winds and flooding caused extensive damage to critical infrastructure. When the New Orleans levee system was breached, millions of gallons of water quickly engulfed the city, stranding thousands of residents who had not evacuated in their attics or on rooftops. With lines of communication severely damaged or destroyed and thousands of residents stranded, it became a "worst case scenario" impacting the entire region, as well as the nation's economy.

Pursuant to Presidential approval and in accordance with the National Response Plan (NRP), the Secretary of Defense (SECDEF) authorized the deployment of Title 10 forces (Title 10 active duty is a federal duty status and the President has command and control over the service member) in support of the Department of Homeland Security (DHS) and the Federal Emergency Management Agency (FEMA). The Commander, U.S. Northern Command (USNORTHCOM) established the states of Mississippi, Florida, Alabama, Kentucky, Tennessee, Georgia and Louisiana as the Joint Operations Area (JOA), and in coordination with the Commander U.S. Forces Command (USFORSCOM), ordered First U.S. Army to establish Joint Task Force-Katrina (JTF-Katrina) effective 300853RAUG05, to assume Operational Control (OPCON) or Tactical Control (TACON) of Title 10 forces deployed to the JOA.

Command relationships as defined within the framework of the NRP are not the same as those within DoD. The principle of unity of command exercised within DoD is not directed within the guidelines of the NRP. Instead, the NRP strives to achieve unity of effort. The concept of

Unified Command within the NRP, as derived from the Incident Command System (ICS), is used when there is more than one agency with incident jurisdiction or when incidents cross political jurisdictions in order to establish a common set of objectives and strategies, as was the case in the response to Hurricanes Katrina and Rita.

VADM Thad Allen, LTG Russel L. Honoré, New Orleans Mayor Ray Nagan, and President George W. Bush survey damage caused by Hurricane Katrina

The DHS and FEMA, along with many other federal agencies, responded in accordance with the NRP and the activation of the corresponding Emergency Support Functions (ESF). Joint Field Offices (JFO) were established in Louisiana and Mississippi, with FEMA as the Federal Primary Agency (PA) and organized in accordance with the principles of the National Incident Management System (NIMS). The purpose of a JFO, as stated in the NRP, is to "provide a central location for the coordination of federal, state, local, tribal, non-governmental and private sector organizations with responsibility for threat response and incident support." See Figure 1.

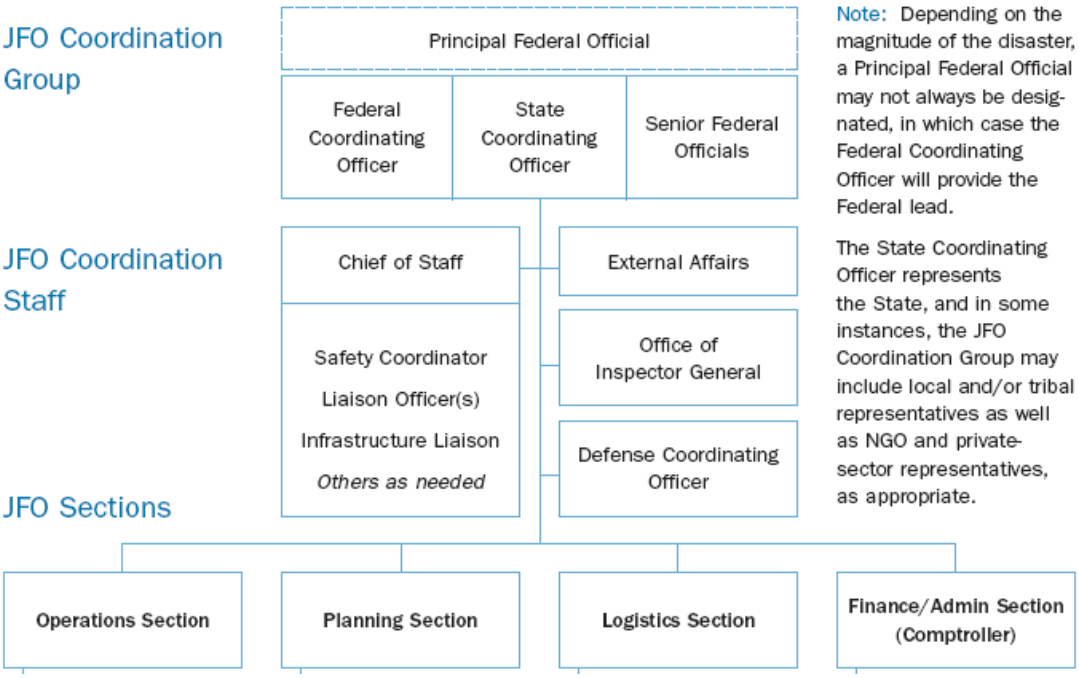

Figure 1: Joint Field Office Organization

A Principle Federal Official (PFO) was appointed to coordinate the activities of the Senior Federal Law Enforcement Official (SFLEO), the Federal Coordinating Officer (FCO), and other Federal officials involved with the response. Although the Federal Coordinating Officer (FCO) and State Coordinating Officer (SCO) are the senior officials within the JFO, activities and priorities are determined by a JFO Coordinating Group. As written in the NRP, "The PFO does not direct or replace the incident command structure established at the incident, nor does the PFO have directive authority over the SFLEO, FCO, or other Federal and State officials. Other federal incident management officials retain their authorities as defined in existing statutes and directives." DoD is represented in the JFO by a Defense Coordinating Officer (DCO) who is OPCON to USNORTHCOM with responsibility for advising civil authorities on DoD capabilities and validating requests for DoD assistance.

Although First U.S. Army is not a Standing Joint Headquarters, it has historically conducted joint Defense Support of Civil Authorities (DSCA) operations and maintains Functional Plans (FUNCPLAN) to support crisis action planning. The on-order mission to provide consequence management includes establishing a Joint Task Force – Consequence Management (JTF-CM) and providing DCOs.

Before Katrina reached hurricane status, the First U.S. Army Operations Center was tracking the storm and updating staff estimates…***See First***. We reviewed the First U.S. Army FUNCPLAN 2501 (DSCA) and updated our mission analysis and staff estimates using our effects based analysis of the NRP-ESFs as our core tool for war gaming various scenarios and Request For Capabilities (RFC). Figure 2 is an example of our effects based analysis of ESFs 7, 8 and 9. The RFC identified forces and resource capabilities needed to support the potential tasks as determined during the mission analysis and included joint staff augmentations.

FUNCTION / EFFECTS	1ST ORDER MAGNITUDE (-) 12 HOURS	2ND ORDER MAGNITUDE 1-24 HOURS	3RD ORDER MAGNITUDE 24-96 (+) HOURS
ESF #7 RESOURCE SUPPORT PA = GSA	· Pre-positioning of supplies by air and land disrupted due to increasing winds, rain and evacuations ·Stockpiling will empty stores of food, bottled water, batteries, sanitary supplies, plywood, plastic and portable generators	· No incoming resources until the storm has cleared the area. · Damage Assessment & Humanitarian Aid Assessments restricted until LOCs are restored	· Distribution of resources severely impacted due to impassible road networks and citizen's ability to get to the distribution points · Distribution may be restricted to the most affected areas until additional resources become available.
ESF #8 PUBLIC HEALTH & MEDICAL SERVICES PA = DHHS	· Local hospitals, Nursing Homes and Rest Homes evacuated/ patients transferred to treatment facilities outside predicted landfall area · Emergency treatment capability degraded	· Local hospitals sustain severe damage · Hospitals that are open are overwhelmed with patients requiring emergency care · Medical capability severely degraded ·Local Clinics and Nursing/Rest Homes will be without power.	· Thousands are homeless · Public health threatened by shortage of drinking water, food that is in short supply and spoiling due to lack of refrigeration, damaged and flooded sewage treatment plants, dead animals, and other hazardous chemicals and material ·Public Health threatened due to Sanitary conditions in rural areas, small communities and Emergency Shelters.
ESF #9 URBAN SEARCH & RESCUE (US&R) PA = FEMA	· Search & rescue teams respond to initial calls for assistance in coastal areas. · Ariel Search & Rescue will be restricted once winds exceed 45 knots.	· Search and rescue operations severely degraded by impassible roads due to flooding, downed power lines and trees, and debris fields · Request for Swift Water Rescue will increase due to flooding and especially flash flooding	· Search and rescue only possible by helicopter and boat until roads are cleared and/or flood waters recede · Officials overwhelmed with requests for assistance ·Aerial Search and Rescue will not be available until winds drop below 45 knots in the in the affected area

Figure 2: Effects Based Analysis of Emergency Support Functions

The JTF-Katrina staff developed the following assumptions with the understanding that situational awareness would be difficult to initially ascertain due to the effects of the storm:

1. Recovery operations would exceed state and federal capabilities in the JOA.

2. A Presidential Disaster Declaration (PDD) would be issued for LA, MS, AL and TX.

3. Large numbers of people would be stranded in shelters throughout the JOA and surrounding states and would require basic life support for 30 plus days.

4. New Orleans would be flooded if Katrina made landfall as a strong Category III or IV storm due to the levee system only being designed to withstand a Category III hurricane.

5. Not all residents would evacuate and many would require emergency rescue and evacuation.

Once JTF-Katrina was established, we issued an Execution Order (EXORD) to all joint subordinate commands. Our mission statement read; "First US Army establishes Joint Task Force Katrina (JTF-K), effective 300853RAUG05, and assumes Operational Control (OPCON)

of Title 10 DoD Forces within the JOA to provide DSCA, as approved by the SECDEF, for disaster relief efforts associated with Hurricane Katrina; in order to save lives, mitigate human suffering and restore critical services. On order, transfers DoD relief operations to civil authorities." Our command and control (C2) structure was organized to provide continuous collaboration and coordination with federal, state and local authorities. See Figure 3.

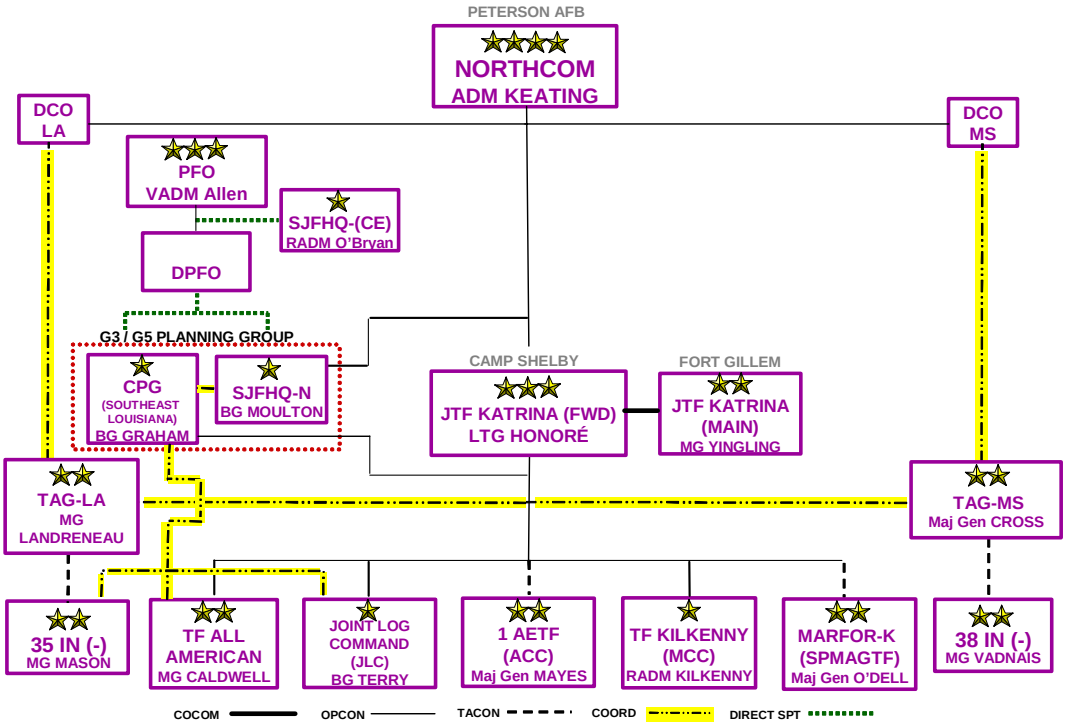

Figure 3: JTF-Katrina Command and Control Relationships

Unity of effort was achieved through the continuous face to face and satellite phone collaboration with the JFO, governors, National Guard commanders, local authorities, DCOs and USNORTHCOM. The success of the DoD effort ultimately fell back on the capability of JTF-Katrina to collaborate and coordinate with these various agencies.

Our C2 structure was organized as follows:

- The JTF-Katrina (Forward) Command Post, led by the JTF commander, deployed to Camp Shelby, MS, on 30 August 2005, to gain immediate situational awareness, control current operations, and coordinate the efforts of DoD with FEMA and state and local civil authorities…***Understand First***.

- The JTF-Katrina (Main) Command Post at Fort Gillem, GA, was established at full operational capability on 28 August 2005. Under the direction of the Deputy Commanding General, First US Army, the Main was responsible for maintaining situational awareness, managing requests for assistance and requests for forces and managing the battle rhythm and branch planning for future operations. The Main also

managed transition and redeployment planning, and provided the "Reach-Back" capability for JTF-Katrina (Forward).

- The JTF-Katrina Command Planning Group (CPG), led by a brigadier general was established in Louisiana on 31 August 2005 to assist the Federal and State Coordinating Officers and State Adjutants General in planning and coordinating DoD assistance. The CPG provided JTF-Katrina with a flexible Operational Command Post (OCP) with the capability to respond to current operations and planning within the JOA. The CPG was instrumental in coordinating the evacuation of approximately 47,000 displaced citizens from the New Orleans Superdome and Convention Center on 1-2 September 2005. Later into the operation, the CPG was placed in direct support of the PFO.

- The U.S. Army 13th Corps Support Command (13 COSCOM), led by a brigadier general was established vicinity of the New Orleans International Airport on 8 September 2005. The 13th COSCOM was the senior joint logistics agency with responsibility for commodity and distribution management of support to JTF-Katrina Title 10 forces and assisting other relief agencies and was later re-designated the Joint Logistics Command (JLC).

- The USS Iwo Jima was docked in New Orleans and provided a C2 platform with communications capabilities and secure facilities for senior-level conferencing. The Iwo Jima also provided the capability for launching search and rescue and re-supply aircraft. Prior to the arrival of Hurricane Rita, the Iwo Jima was repositioned at sea with the mission to follow the storm and support relief operations based on Rita's point of landfall and damage. As Title 10 forces from all branches and services began to flow to the JOA, our joint task organization was comprised of the Maritime Component Command (MCC), the Air Component Command (ACC), Marine Forces Command – Katrina (MARFOR-K) and the Army Forces Command (ARFOR) as indicated in Figure 3.

The First Army FUNCPLAN 2501 outlines a four-phased concept of operation for DSCA operations. Knowing that Katrina would be a crisis response operation, we chose to retain these same phases for JTF-Katrina as a guide for future operations and planning. Phase I was Preparation, Phase II was the Deployment of Forces to the JOA, Phase III was the Execution of DSCA Operations in support of the Federal Primary Agency (PA), as authorized by the SECDEF and Phase IV was the Transfer of Remaining DSCA Missions and Recovery Operations to Civil Authorities and the National Guard and the Redeployment of Title 10 Forces.

DCOs were deployed to Louisiana, Mississippi and Alabama on 27 August 2005 to establish initial coordination with federal and state authorities and develop situational awareness. The USS Bataan, already operating in the Gulf of Mexico, was alerted on 28 August 2005 to support relief operations. Within hours after Katrina landfall, on 29 August 2005, rotary winged aircraft and small boats from the USCG commenced search and rescue operations. Rotary winged aircraft from the Army, USAF, USN, USMC and National Guard participated in search and rescue operations and began moving medical patients, evacuating personnel and performing

cargo transport missions under "Immediate Response Authority." U.S. Transportation Command (USTRANSCOM) assets along with the USNS Comfort, a hospital ship, were placed on alert and ordered to prepare for deployment. National Guard aircraft were made available to support operations under the pre-existing Emergency Management Assistance Compacts (EMAC)…***Act First***.

On 30 August 2005, the USS Iwo Jima along with the USS Harry S. Truman, USS Shreveport and the USS Tortuga were alerted to provide humanitarian assistance. The Air Mobility Command's C-5, C-17 and C-130 aircraft were used to deliver logistics stocks and evacuate displaced citizens. Fort Polk and the Naval Air Station New Orleans were activated as shelters for displaced citizens and medical assets were activated for 24/7 operations at Camp Beauregard, LA; Jackson, MS; and Maxwell Air Force Base, AL. During the period 2-4 September 2005, advanced elements of the Special Purpose Marine Air Ground Task Force (SPMAGTF), 82nd Airborne Division, 1st Cavalry Division, and numerous other joint service units began arriving in the JOA to execute land DSCA operations.

JTF-Katrina was supported by more than 22,000 Title 10 Soldiers, Sailors, Airmen and Marines as well as the Coast Guard and the U.S. Army Corps of Engineers (USACE). National Guard forces deployed to the JOA in Title 32 (Title 32 active duty is a state duty status and the service member remains under the command and control of his or her governor) or State Active Duty status and totaled over 50,000 personnel from all 50 states, 3 territories and the District of Columbia. The resulting synergy between Title 10 forces under JTF-Katrina and National Guard forces under the respective governors proved critical to the success of the overall relief effort. There were two major National Guard commands operating in the JOA; the 35th Infantry Division, OPCON to The Adjutant General, State of Louisiana, and the 38th Infantry Division, OPCON to the Adjutant General, State of Mississippi.

Throughout the operation, JTF-Katrina used several enablers to facilitate collaboration and coordination with federal, state and local authorities in order to achieve mission accomplishment. Title 10 forces were used in non-doctrinal and non-traditional roles to save lives and restore critical services.

Military communication packages with satellite voice and data capabilities made it possible to coordinate with USNORTHCOM, subordinate commanders and civil authorities at a time when commercial communications were not operational. DoD assets were used to deliver bulk and retail fuel to first responders when commercial fuel delivery capabilities were not operational. Military generators (30KW and larger) were used to provide auxiliary power generation to county and city Emergency Operation Centers (EOC), medical facilities, first responders and distribution centers until FEMA could employ other federal or contracted generators. Navy Construction Battalions (SEABEES) were employed to clear debris and open lines of communication to facilitate ground medical evacuation and governmental access to populated areas. We employed DoD assets to clear fire and police stations and hospitals to facilitate the restoration of critical services.

A responsive "Reach Back" capability within JTF-Katrina gave us access to the forces and resources that could be deployed within 24 to 36 hours after notification. Liaison Officers

(LNO) from higher and adjacent commands and all subordinate commands were located in the JTF-Katrina (Main) and proved invaluable to facilitating this capability. This "Reach Back" capability was critical during the initial phase when civilian assets were still in the process of mobilizing and moving to the affected areas. The mere presence of U.S. Military forces represented hope to displaced Americans and assured them that help was on the way.

Military public affairs teams were employed to facilitate an unprecedented access to civilian media covering the response, and to synchronize the message among all members of the federal team. This proved critical in telling our story and informing the general public of the massive DoD response. Loudspeaker teams were instrumental in notifying displaced citizens of evacuation sites, distribution sites and other critical information for sustaining life.

Standing Joint Force Headquarters-North (SJFHQ-N) and Joint Task Force-Civil Support (JTF-CS) augmented the JTF-Katrina (Forward) and (Main) with joint planning and communications capabilities. They provided critical knowledge and expertise in planning joint operations, logistics, medical, mortuary affairs and communications.

The USACE provided our JTF-Katrina Staff Engineer Cell. They were critical to maintaining and understanding situational awareness pertaining to sewer, water and electrical services, the pumping of flood waters and levee repair.

As our JTF staff capabilities increased, we implemented the SWEAT-M system for tracking and reporting damage assessments and Commander's Critical Information Requirements (CCIR). The acronym SWEAT-M represents Sewer, Water, Energy, Accessibility, Telecommunications and Medical Emergency Services. The advantage of using this format was that it was easily adjusted to answer the CCIRs without major changes in the process or presentation. See Figure 4.

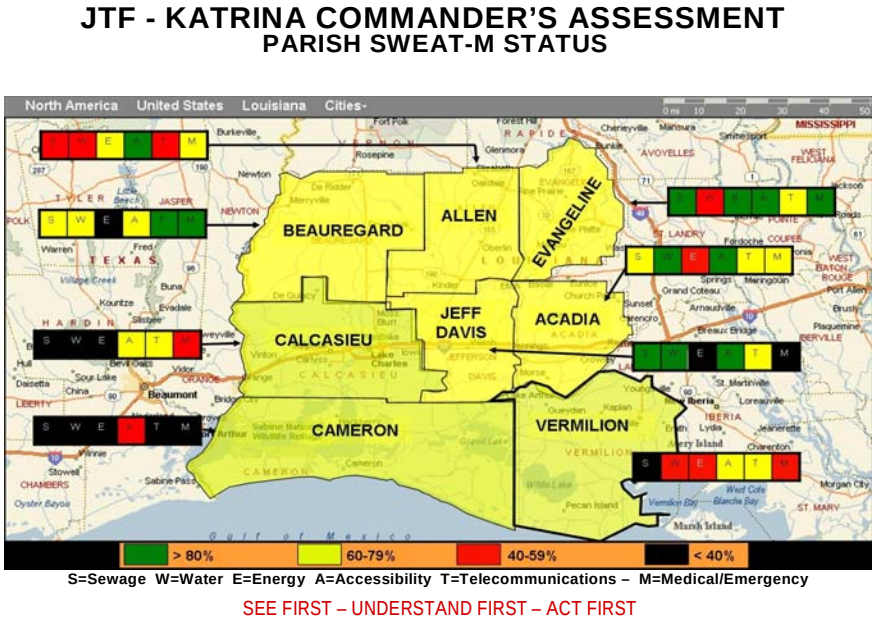

Figure 4: Sewer, Water, Energy, Accessibility, Telecommunications and Medical Emergency Services Assessment

Although legal constraints guided both planning and execution, they had little affect on our ability to accomplish the mission. The Posse Comitatus Act (18 USC 1385) applied to all Title 10 forces throughout the operation. At no time did Title 10 personnel support law enforcement or enter private residences or businesses without proper authority. Law enforcement tasks were performed by Law Enforcement Officers and National Guard personnel in Title 32 or State Active Duty status. Rules for the Use of Force (RUF) as specified in CJCSI 3121.01B remained in effect and commanders retained the inherent right and obligation to exercise unit self-defense. The constraints in the Posse Comitatus Act, the Military Support to Civilian Law Enforcement statutes (10 USC 371-382) and DoD Directive 5525.5, did not restrict a commander's "Immediate Response" authority, as authorized by DoD Directive 3025.1, to respond to requests from civil authorities to save lives, prevent human suffering or mitigate great property damage.

As recovery operations for Hurricane Katrina were expanding and progressing, Hurricane Rita struck on 24 September 2005. Rita brought a similar level of devastation and flooding to western Louisiana and southeast Texas, however our method of response changed as we were able to maneuver land forces along the flanks and naval forces from the rear of the storm. The fact that we already had the authority to respond and sufficient capabilities positioned within the JOA, allowed us to quickly assess the needs of civil authorities and assists them in re-establishing critical infrastructure and delivering humanitarian relief supplies.

As the situation began to stabilize in Louisiana and especially New Orleans, subordinate Task Force commanders began coordinating the transfer of JTF-Katrina tasks to FEMA and the National Guard, while back at the JTF-Katrina (Main), joint planners were coordinating with USNORTHCOM for transition and force adjustments. The force adjustment of Title 10 forces was a phased operation that was linked to the measures of effectiveness and required SECDEF approval for units to depart the JOA. On 12 October 2005, after 44 days of DSCA operations, the SECDEF authorized JTF-Katrina to stand down. On 15 January 2006, we submitted the official JTF-Katrina After Action Review (AAR) to USNORTHCOM.

In coordination with Vice Adm Allen (US Coast Guard and PFO for Hurricane Katrina) and MG Landreneau (Adjutant General – Louisiana) and in collaboration with USNORTHCOM, we recommended to the President, the Senate Committee on Homeland Security and Government Affairs, the SECDEF and the Department of Homeland Security eleven quick fixes for improving a unified federal and state response for hurricane disaster relief. These recommendations are applicable, however, for consequence management during most natural or manmade disasters and terrorist attacks:

1. Establish a pre-event Unified Command and Control (C2) organizational structure to conduct collaboration and coordination of plans and operations and to develop an understanding of federal, state, local, non-governmental and private sector capabilities.

2. Pre-position a Unified Mobile Disaster Assessment Cell to develop an initial situational awareness, identify requirements and recommend priorities of effort.

3. Designate a single DoD point of contact for the Federal Coordinating Officer

(FCO) in order to establish a clearly defined line of support and facilitate the DoD response.

4. Implement a state and local employee disaster clause to dual-hat/train employees to fill key disaster support manning shortfalls. Many of these public servants have critical administrative and logistical skills that can be utilized during recovery efforts.

5. Pre-position interoperable communications assets that will assist first responders and emergency management agencies in gaining situation awareness and coordinating response and recovery operations.

6. Establish external support (push packages/funding) to fill common resource shortfalls in order to facilitate the delivery of basic humanitarian relief supplies.

7. Pre-allocate space in State Emergency Operation Centers to integrate federal and other external agencies, to facilitate collaboration and coordination, and synchronize all relief and recovery operations. This will assist federal and state authorities in establishing priorities of effort and will assist in eliminating the duplication of efforts.

8. Develop a Continuity of Government Plan to sustain government functions during the critical period immediately following a disaster. This will enhance initial response and recovery efforts and facilitate the restoration of critical infrastructure.

9. Pre-arrange support contracts for required resources in order to quickly backfill shortfalls in basic humanitarian relief supplies and services in order to facilitate the delivery of supplies to local authorities and citizens.

10. Acquire and integrate assured power supply capabilities (gas stations, pharmacies and local emergency operations centers) in order to sustain command and control facilities, sustain the evacuation of a large population, assist first responders and sustain basic services.

11. Gain industry commitments to sustain and maintain critical services in order to facilitate response and recovery operations and reduce the need for external support.

In summary, our ability to "See First and Understand First" allowed us to "Act First." Furthermore, the ability of our Armed Forces to react to such a devastating disaster while simultaneously fighting the War on Terror speaks volumes to the readiness, professionalism and training of our Active Duty, Reserve and National Guard. They performed efficiently and effectively in coordination and collaboration with federal, state and local agencies under austere conditions.

Other disasters will surely follow, some with warning (hurricanes) and others without. Therefore, crisis action planning for DSCA must be developed using our proven Military Decision Making Process (MDMP) and based on worst case scenarios yet remaining flexible enough to support "Immediate Response" operations with limited situational awareness during

the initial phases. Future DSCA planning and execution must consider the non-doctrinal use of military forces, yet remain within the constraints of federal law and regulations. Our future plans must be joint efforts that support the NRP and are fully vetted with DHS, FEMA and other federal and state agencies. To accomplish this, joint planners must be familiar with the National Response Plan, and they must establish and maintain relationships with FEMA and state emergency management agencies in order to build trust and cooperation, and ensure a quick response. And remember! The "bad guy" (i.e. The Storm) always gets a "vote." HOOAH!

LTG Russel L. Honoré is the Commanding General, First United States Army. In addition to his experience as Commander, JTF-Katrina, General Honoré has served as Commander, Standing Joint Force Headquarters-Homeland Security, United States Northern Command. His previous assignments include Commanding General, 2d Infantry Division, Korea; Vice Director for Operations, J-3, The Joint Staff, Washington, D.C.; Deputy Commanding General/Assistant Commandant, United States Army Infantry Center and School, Fort Benning

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Brave New World War
Part I - Why Leavenworth's finest know they're not in Kansas anymore

By
Lincoln P. Bloomfield, Jr.

What can a wooly-headed civilian teach a combatant commander about conducting a military operation? After four years of working with the commanders of all nine geographic and functional commands, as well as USFK, NATO, and various JTFs, my answer is: not a whole lot. These leaders have deep experience, tested judgment, and other natural gifts that commend them to positions of high responsibility. If given the latitude to develop courses of action and apply the resources at their disposal, they will reliably accomplish important objectives, with or without the counsel of civilians.

This humbling realization keeps me from attempting a little levity by venturing a clumsy wordplay about "Commandments" in the title – a decision all the more prudent since I will offer, as it happens, 10 'suggestions' in Part II of this essay. Yet for all the deference owed to our combatant commanders, the reality is that official Washington is not shy about looking over a combatant commander's shoulder and offering generous helpings of advice.

My 'suggestions' will not end this fact of life in the contemporary American way of war. Nor should we necessarily wish to dial down the frequency or fidelity of communications between the nation's capital and the distant field of battle. War has always been understood to be hard to manage in the best of circumstances. In the 21st century, it features some new management challenges: it is less likely to be confined to a single AOR; it is less likely to be an exclusively or even predominantly military contest; and contact with the enemy is more likely to occur in areas populated by civilians.

These and other inconvenient conditions create a drag on a combatant commander's presumed monopoly of control over the action. Moreover, regardless of the fog of war, more information on our military activities than ever before finds its way back home to be graphically arrayed and circulated to a wide audience of official and public spectators in the U.S. and abroad. Media commentary from the grandstand, some quite well informed and some quite critical, is by now a thriving cottage industry. Such is the freedom of speech that our military forces fight to preserve.

Paradigms Lost

America's military engagements for most of the 20th century dealt with conventional, nationally-directed military aggressors, mercifully distant from our homeland, whose purposes we analyzed at length and whose will and capacity to keep fighting we were ultimately aiming to break. From these experiences emerged a political code of conduct in Washington: the commander's assessment from the battlefield enjoys a special status, and the civilian leaders and policymakers

as well as the nation's senior military leadership view their roles as supporting the commander on the scene in his (or her) warfight.

The code generally endures, but 21st century conditions do not lend themselves as neatly to this functional concept for channeling all assets and resources to a supported commander – meaning a geographic combatant commander (or Commander USSOCOM) – or the related notion from past wars that civilians have little relevance to prosecution of the "kinetic" phase of an operation.

What is new today is not just the emergence of non-state actor adversaries, their asymmetric methods, or their penetration of our homeland – important though all of these trends are. The strategic shift we have perhaps not grasped is that success in conducting the nation's wars is no longer a function solely of mastering the other side's center of gravity.

Increasingly over the past decade or two, our own military engagements have departed from the WWII, Korea, Vietnam model where the enemy was perceived to be on the march in pursuit of political and territorial ambitions and the judgment was made that he had to be stopped, and soon, to avert a strategically unacceptable outcome.

More recent operations in Panama, Kuwait, Kosovo, Afghanistan and Iraq have all been less reactive and more pre-meditated: each was launched by our decision, on our timetable, and according to our plans. In most of these more recent cases, America's adversaries have had occasion during the run-up to hostilities to ponder America's intentions. How would we react if challenged? How large an effort would we risk? How ambitious would our political "war aims" be? We also had time to think hard about how they might exert leverage on our own national willpower.

Domestic political debates, media second-guessing and public opinion swings have become a fixture of the American landscape when our forces are committed to a foreign engagement of any duration. That free exercise of our liberties is a good thing, but we need to recognize that it has become a prime focus of our adversaries' strategies. Never mind that informed Americans believe this nation to be highly resilient when challenged, even indomitable when threatened; our adversaries are less informed, and appear to believe, or at least hope, otherwise. We focus on their rhetoric, apparent goals and decision calculus; but more than ever they are now focusing on ours. This factor alone expands the conflict both geographically and bureaucratically. It is not the only such factor.

A Force of a Different Color

The Iraq and Afghanistan operations both illustrate how the U.S. and its adversaries appear to be measuring their own respective progress by different yardsticks. In Iraq, U.S. authorities cite with justification the achievement of historic political milestones – three elections held, and a constitution adopted – as evidence that the extremists are not succeeding. We tally Iraqi security forces trained as a metric of the new Iraqi government's readiness to stand on its own and we aggregate national levels of electrical power, potable water, oil production and other such civil amenities as indicators of the population's welfare.

These are all meaningful metrics, and we are not wrong to cite them. But does the adversary read the same scoreboard, the same way? And what are we doing to ensure that his own scoreboard marks him as a failure at his own game, a loser in the eyes of his own target audience?

Consider the secretive network of Sunni rejectionists and foreign Jihadists in Iraq. Since most of the foreign Jihadists have already consigned themselves to become casualties via suicide, their death at Coalition hands is not, in and of itself, a loss from their perspective. For some it is a destiny fulfilled, a mission accomplished. The only variable that matters to them is how many U.S., Iraqi and third country casualties they can take with them and how much the resulting public distress shakes the confidence of public opinion in coalition countries and erodes Iraqi popular support for our presence, role and program.

Would it be surprising if we were to learn that some among the Iraqi resistance think they have succeeded since 2003 in framing the conflict on their terms rather than ours, i.e., maneuvering the mighty Americans into a grinding war of attrition that has cost the U.S. a division equivalent of ground forces killed or wounded?

In Afghanistan and neighboring Pakistan, our side cites the steady progress in capturing or killing senior al Qaeda figures, clearly a top U.S. priority. At the same time, the videotaped missives from Osama bin Ladin and Ayman Zawahiri openly taunt the U.S. as though Arab and Islamic audiences will readily understand their survival to be their victory and our failure. Granted that there are vast cultural differences at play, it is still worth asking whether it matters that we and our adversaries seem to be talking past each other.

President Bush, throughout 2005 and 2006, has given a series of speeches to explain to American citizens and international public opinion the stakes, the goals and the costs of waging this war on terrorism. In so doing, he has often cited Osama bin Ladin's aspiration to create an all-powerful Caliphate, toppling moderate governments throughout the Middle East and ruling over the entire Islamic world. The specter of a total strategic collapse of Westphalian governance across a large and economically sensitive swath of the world at the hands of militant Islamists may well succeed in galvanizing domestic American support to continue backing the Administration's efforts in Iraq and Afghanistan.

But might not the popular perception among millions of youth in the Arab and Islamic "street" – the enemy's center of gravity – accord bin Ladin a substantial measure of status, borne of fear if not respect, for a remarkable achievement? After all, this reclusive fugitive not only carried off the most spectacular act of terrorism in history on 9/11, but he now has the leader of the world's sole superpower regularly advertising his political/religious program of action.

The fact is that Al Qaeda has achieved not one iota of tangible progress toward this radical utopian vision of supplanting existing Arab governments with its fabled Salafist Caliphate. Why isn't bin Ladin's utter failure to steer the direction of political events a central theme of America's wartime public narrative? Why not the cynicism of his using impressionable young Arabs as explosive mules, the moral corruption of promising sexual rewards for their fulfillment of this purported religious "duty," the telltale opportunism and unseriousness in his

pronouncements on regional political causes, and the growing scar Al Qaeda's bombings of unsuspecting innocents are inflicting on Islam?

Osama bin Ladin may be six-foot-five, but the only way he can become ten feet tall is by the status we grant him. Perhaps our side has not fully grasped the extent to which our public demeanor and that of the enemy constitute a central front in this war.

Dueling Banquos

In recent months Americans proudly watched Iraqis and Afghans waving their ink-stained fingers to the cameras, and we were justified in savoring the legacy of democratic reform our soldiers' exertions and sacrifices are yielding. Our adversaries, meanwhile, plastered images of the U.S. abuses at Abu Ghraib on walls, buses, and television, reveling in the derogatory message that sent about American principles and purpose.

One would have thought that dispelling those toxic images as quickly and definitively as possible would be priority one. Indeed, was it not obvious that the U.S. forces, for all their incredibly selfless endeavors in Iraq, stood to suffer a terrible (and terribly unfair) reversal in their standing among many Iraqi citizens, to say nothing of Arab and international opinion generally, if the image of harsh American mistreatment of Iraqi prisoners inside Saddam's most notorious prison was not quickly countered?

Washington understood that the alleged abuse of prisoners was a body blow in the campaign for Iraqi hearts and minds. And yet, some in positions of responsibility seemed slow to find their voices in distancing the United States – and by extension, the United States Armed Forces – from the accusations. While Arab media savaged the U.S. over Abu Ghraib (harping as well on apparent deficiencies in accountability throughout the chain of command), the President's advisors reserved their energies for a protracted effort to keep a venerated combat veteran in his own party from committing the U.S. by legislation to observe international legal prohibitions against torture.

Their apparently overriding concern was to avoid a fettering of Presidential wartime prerogatives. But whether or not powers given under the Constitution could truly have been eroded by executive or legislative actions, the result of this baroque intramural debate at home was a diminished effort to stanch the bleeding of America's reputation and influence abroad caused by the Abu Ghraib abuse scandal.

In a mature democracy such as the U.S., leaders are expected to explain their actions and set public expectations when sacrifice is required. This tradition continues. However, the 21st century question posed by the current war effort is whether, if all our leaders seek to do in their public pronouncements is to solidify domestic support – are they not merely playing defense, and ceding much of the psychological battlespace to the adversary?

It is fair to ask whether our political aims and declaratory policy are calibrated to the most efficacious political, cultural, and religious frequencies from which to undercut and diminish al Qaeda's prestige, reputation and corresponding potency even as we continue physical measures

to capture or kill its operatives and disrupt its freedom of action. It is hard to shake the impression that we and our adversaries, while clearly fighting each other with lethal force, are not tugging on the same psychological line of rope.

Through the Looking Glass, Darkly

The larger point here is that this new kind of war is being fought on many levels, and American steadfastness, valor, generosity and goodwill in rebuilding the new democracies of Afghanistan and Iraq, even when accomplishing the defined tasks set for them, are pointing up gaps in the national effort. We have measurably reduced our adversaries' physical capacity to harm our interests; it is less clear that we are breaking their will to fight on, or their hope of outlasting us and reconstituting their positions, in Iraq, or Afghanistan, or any place where these radicals operate.

Granted that we know our adversaries cannot inflict enough pain on the U.S. to shake our commitment to wage war against them, they can and do use our democratic dialogue as fodder for self-aggrandizing, and perhaps self-deluding, propaganda. They may not know they are losing.

The policy telescope we have long used to watch events in the AOR can no longer point only one way. It needs to be turned around so that we are more conscious of how the enemy is thinking about us, and what he is taking to be his own measures of effectiveness. The home team no longer has the luxury of acting as though "What's mine is mine and what's yours is negotiable." Not only should we be alert to the potential for a terror attack on U.S. soil; we should be aware that our political system, amplified by a media megaphone that echoes around the world, is part of the other guy's AOR. This has implications for the way we fight in the future.

The foregoing, admittedly, is more in the vein of broad analytical observation than something that points to specific changes in operational tradecraft at the combatant command level. But the new reality of an expanded battlefield is significant. To us, the going-in mission is military and political – destroying and degrading the other side's capacity to control territory, exercise political power, and threaten civil populations as well as American interests. To the adversary, psychological effects appear to loom large as tactical objectives. The metrics by which we and our new enemy respectively measure our success and appeal to our supporters, as compared to past conflicts with traditional military adversaries, have become wildly divergent.

The Agony of Victory

The good news is that our military forces have achieved the goal the nation set for them, namely superiority at every level of the spectrum of military operations. No standing military force in the world could possibly wish to confront the Armed Forces of the United States in a hot war. That is why we find our forces today in Iraq and Afghanistan dealing with threats from persons whose identity, purposes and methods place them outside of the spectrum of military operations, including the laws of war, as these have been commonly understood for at least half a century.

The bad news is that our country is now trying to apply the most advanced and capable tools we currently have for addressing security threats – military capabilities – to what arguably are non-

military exigencies. A reasonable conclusion from the above discussion of the extremist adversary is that defeating him is not a military mission, not a DoD mission, but rather a national mission, albeit one with important military components. Nearly five years after 9/11, we still have precious little operational capability outside of DoD that could effect meaningful change in a tense post-conflict environment such as Iraq.

In Washington, the need to adapt old tools to new conditions is increasingly recognized. DoD introduced the concept of transformation even before 9/11; the President created the Department of Homeland Security soon after; the 9/11 Commission led to establishment of the Directorate of National Intelligence; and Secretary of State Rice in January 2006 announced transformational measures in the nation's diplomatic corps serving around the world.

As laudable as these efforts may be, the U.S. Government continues to operate under the basic framework of The National Security Act of 1947. In other words, there is no concept of a national civilian "supported commander" equipped and empowered to synchronize the employment of disparate tools against extremism in a real-time, tactical manner worldwide. Thus, soldiers will still detain and interview the insurgents, intelligence agencies will liaise with foreign counterparts, diplomats and politicians will make the statements that constitute our public diplomacy effort, aid agencies will manage programs abroad, treasury officials will chase terrorist financing leads, and the NSC Staff will keep all these strands of programmatic activity generally coordinated.

All the while, Washington think tanks are examining new concepts for interagency coordination, better plans for post-conflict reconstruction, and the daunting issue of more coherent ways to budget for national security activities of all kinds, among other reforms. While surprisingly little has been heard to date from Congress itself about ways that it might 'transform' so as to improve its vital oversight role, it is clear the U.S. national security community is sufficiently conscious of its institutional inadequacies to be exploring sensible changes, and this will affect the future planning and conduct of military operations. Will it be enough?

All Quiet, Please, on the Western Front

A Combatant Commander might be forgiven for thinking that much of the preceding deals with matters outside his purview. By traditional measures of a command's purview, he would not be wrong. The purpose of this discussion is to connect the command's operations with actions outside the AOR, including back home, as part of the same struggle, hence part of the same 'national' mission. What in the past may have been perceived as exogenous factors to the operation could more properly be seen as geographically distant but centrally relevant aspects of the warfight.

We can already begin to glimpse the nature of the expanded battlefield and the real-time interplay of military and non-military issues in 21st century conflict. There are non-military issues that belong on the military planner's radar screen and oblige the commander on the scene to keep one ear cocked to civilian policymakers in Washington. The task of leading such an effort has become more complex.

After delivering for America a world in which no rival conventional force could credibly threaten its sovereignty or liberty, our military's reward has been the task of protecting us in a world where practically unrecognizable enemies can inflict nearly intolerable pain on the nation. As different as this adversary is from military foes of the past, so is the shape of the U.S. effort that will decisively defeat it. Much of the work in crafting that effort still lies ahead.

Part II of this essay will offer ten takeaways from Operations Enduring Freedom and Iraqi Freedom. Each is intended to illustrate further how the supported Commander of the future will need to be cognizant of operations well outside the lanes implied by the Unified Command Plan, his mission statement and even the execute orders that direct him to conduct an operation.

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On Center of Gravity

By
Dr. Milan Vego

The soundness of a plan for a campaign or major operation essentially hinges on the proper determination of a center of gravity for both the enemy and friendly sides. Yet despite its importance, many commanders and their staffs pay inadequate attention to the theoretical underpinnings of the concept of center of gravity. Mistranslation of the uniquely German term *Schwerpunkt* as "center of gravity" instead of "weight (or focus) of effort"[i] in the English version of Clausewitz's seminal work *On War* is perhaps the main reason for the widespread misconception that a physical location—such as the capital city—represents a center of gravity. Some doctrinal documents also include the enemy's weaknesses or vulnerabilities, such as logistics, as the enemy's center of gravity. In other cases, objectives are confused with the center of gravity. More recently, the proponents of the so-called "five-ring" theory and similar systems approaches consider various nodes not as decisive points but as centers of gravity. Common to all these approaches is that center of gravity is disconnected from its larger purpose—the military objective to be accomplished. Also, all too often, the need to determine the friendly center of gravity is neglected or simply ignored. Worse yet, despite all the facts to the contrary, some leading proponents of network-centric warfare state—openly or by implication—that the entire concept of center of gravity is irrelevant in the information age.

What Is Center of Gravity?

In generic terms, center of gravity[ii] can be defined as a source of massed strength—physical or moral—or a source of leverage whose serious degradation, dislocation, neutralization, or destruction would have the *most decisive impact* on the enemy's or one's own ability to accomplish a given military objective. In military terms, "mass" should not be understood literally. What matters most is the "massed effect," not whether available combat potential (prior to combat) or combat power (generated in combat) is physically concentrated in a certain area. Because of modern weapons' long range, lethality, and accuracy, centers of gravity in air warfare or, to a lesser extent, naval warfare do not necessarily have to be physically massed in a specific area; they may be dispersed throughout a large part of a theater. In contrast, ground forces are usually massed in a relatively small physical space. However, even in land warfare, modern

[i] "Schwerpunkt," H. Dv 100/900 VS-NfD, *Fuehrungsbegriffe (TF/B)* (Bonn: Ministry of Defense, February 1990), p. Sch-SEA; other related terms include "area of the weight of effort" [*Schwerpunktraum*], "weight of effort in an attack" [*Schwerpunkt des Angriffs*], etc. Huerth, *US-NfD. Militaerisches Studienglossary Englisch*, vol. 2/3 (Bonn: Bundessprachenamt, January 1993), p. 1060; "Schwerpunkt," Hermann Franke, editor, *Handbuch der neuzeitlichen Wehrwisenschaften, vol. 1: Wehrpolitik und Kriegfuehrung* (Berlin/Leipzig: Verlag von Walter de Grunter, 1936), p. 649.

[ii] In the strict definition of the term, a center of gravity is defined as "that point of an object around which its weight is evenly distributed or balanced; center of mass; point of equilibrium"; *Webster's New World Dictionary of the American Language*, College Edition (New York, NY: The World Publishing Company, 1960), p. 237.

armies are smaller and are deployed in a smaller part of the theater than was the case in World War II. At the national level and in a democracy, a center of gravity is usually the top civilian leadership and its will to fight. In a non-democratic state, such a center of gravity is the authoritarian or dictatorial leader and his inner circle and its will to fight. A nonmilitary center of gravity can also be a totalitarian ideology of the communist or fascist/Nazi variety. In other cases, the justness of the cause or the government's legitimacy might be a center of gravity. In a hostage-taking situation, the hostages themselves, not the terrorists or the state holding them, can be considered the enemy's center of gravity. In such a case, the hostages are used as leverage by the enemy to accomplish his objective.

Importance of Center of Gravity

The principal utility of the concept of center of gravity is in significantly enhancing the chance that one's sources of power are used in the quickest and most effective way for accomplishing a given military objective. The proper application of the concept of center of gravity in its essence means the proper application of the principles of objective, mass, and economy of effort. The key to success is to identify the friendly center of gravity and protect it, and to identify the enemy's center of gravity and then attack it with the requisite determination.[iii]

The enemy is not completely defeated unless his center of gravity—his relevant mass of power—is destroyed or neutralized. One may seize the enemy's capital, attack his logistics, and convince the majority of his population that further resistance is useless, but victory is not ensured unless the enemy's forces are defeated in the field.[iv] Without destroying the enemy's strategic or operational center of gravity, one's strategic or operational success cannot be consolidated quickly, if at all.

The courses of action focused on the enemy's proper center of gravity normally will have the best chances of accomplishing one's mission. An envelopment maneuver is less likely to achieve its very purpose unless it is aimed at obtaining a favorable position in regard to the enemy's operational or tactical center of gravity. In contrast, a turning maneuver is aimed at cutting lines of supplies that sustain the enemy's operational or tactical center of gravity; it represents, in fact, an indirect attack on the enemy center of gravity. Deception and counter deception efforts cannot be successful if the focus of one's efforts is directed against the wrong enemy center of gravity. A properly identified center of gravity also creates prerequisites for selecting a sound method of applying one's military and nonmilitary sources of power. An attack on enemy vulnerabilities will not cause the deteriorating effect desired unless it directly or indirectly affects the center of gravity.[v]

[iii] Thomas M. Kriwanek, *The Operational Center of Gravity* (Ft. Leavenworth, KS: School of Advanced Military Studies, U.S. Army Command and General Staff College, May 1986), p. 7.

[iv] Gordon M. Wells, *The Center of Gravity Fad: Consequence of the Absence of an Overarching American Theory of War* (Arlington, VA: AUSA's Institute of Land Warfare, March 2001), p. 4.

[v]. Phillip Kevin Giles and Thomas P. Galvin, *Center of Gravity: Determination, Analysis, and Application* (Carlisle Barracks, PA: Center for Strategic Leadership, U.S. Army War College, 31 January 1996), p. 19.

An attacker possessing superior combat potential or combat power should normally focus all his efforts on the destruction or neutralization of the enemy's center of gravity. However, if the attacker is inferior in some critical aspect of military power, he might need to focus his initial efforts on seizing physical objectives before he can attack the enemy's center of gravity, directly or indirectly. For example, the Germans, in planning their invasion of Norway (Operation *Weseruebung Nord*), focused their efforts on seizing selected ports and airfields before attacking the enemy's center of gravity—the troops defending the capital of Oslo and forces defending the central and northern part of Norway. The reason for such an operational idea (scheme) was the Germans' appreciation that their Kriegsmarine's inferiority robbed them of any chance to defeat the Allied operational center of gravity—the Royal Navy—prior to the landing.

The true value of center of gravity may be the framework the concept provides for thinking about war. In other words, the process of determining centers of gravity may be as important as the product.[vi]

Analytical Construct

An analytical construct should be used to determine the enemy and friendly centers of gravity; otherwise, the risk is too high that many critically important elements in the military situation may be partially omitted or even completely ignored. Obviously, the analytical process by itself cannot ensure that a center of gravity will be properly determined. The knowledge and understanding and, even more important, the judgment and wisdom of the commanders and their staffs are the keys to determining the proper center of gravity and selecting the method and procedures for attacking or protecting it.

The principal factors in determining a solution for any military problem are the *objective* to be accomplished and the corresponding *military situation*. The size and complexity of the objective determine the scope of the situation in terms of the factors of space and time. Hence, the tactical, operational, and strategic situations are differentiated (see Figure 1). Any situation encompasses a large number of both physical and so-called "abstract" military and nonmilitary elements. Physical elements are tangible and are usually easy to quantify. The abstract or intangible elements are hard or even impossible to quantify with any degree of certainty.

Commanders and theirs staffs are naturally interested in obtaining as much information as possible on all aspects of the situation. The larger the size of the military objective, the more diverse its components and hence the more complex and difficult it is to properly evaluate a given military situation. Therefore, despite all the enormous advances in information technologies, there is a limit to what can be technically transmitted and, even more important, to what the human element can possibly digest and use in making a sound decision. Regardless of how much information one possesses, the key is to focus on evaluating those aspects of the situation—arbitrarily called *critical factors*—considered essential for the accomplishment of the specific military objective.

[vi] John B. Saxman, *The Concept of Center of Gravity: Does It Have Utility in Joint Doctrine and Campaign Planning?* (Fort Leavenworth, KS: School of Advanced Military Studies, U.S. Army Command and General Staff College, 28 May 1992), p. 31.

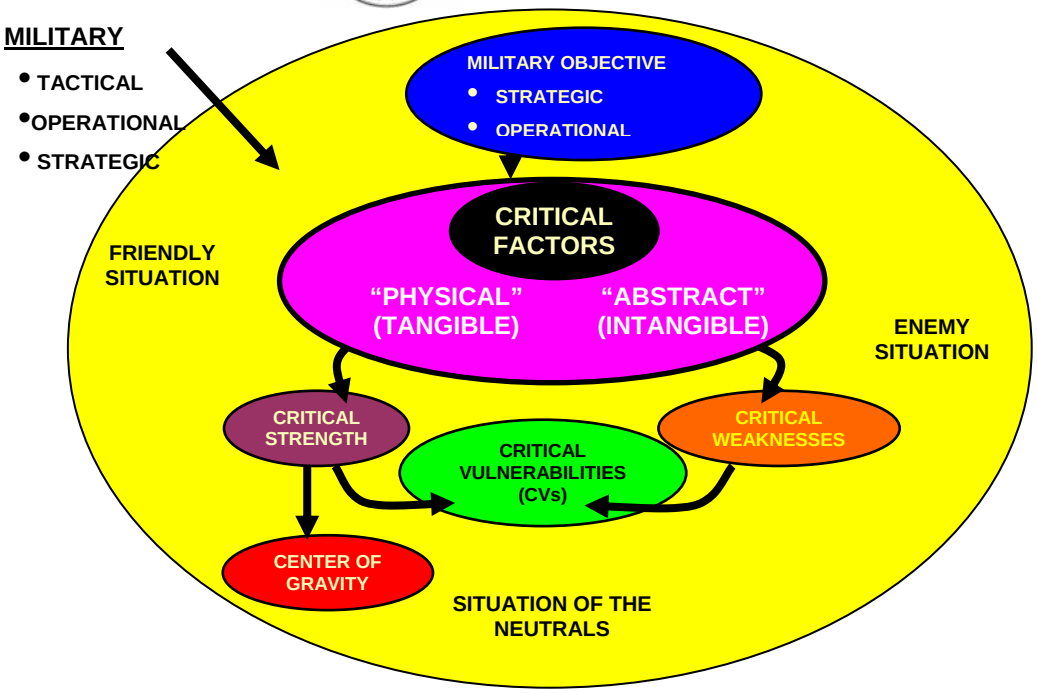

Figure 1: Concept of Critical Factors and Center of Gravity

Tangible critical factors vary from the geographical in nature (positions, mountain passes, valleys, plains, straits, bays/gulfs; lines of operations or lines of communications, etc.) to the military forces (armed forces as a whole, individual services, theater/numbered armies and naval/air fleets, divisions, brigades, wings, squadrons, etc.) to the nonmilitary (state organization, diplomacy, economy, finances, agriculture, mineral resources, technology, culture, etc.). Intangible critical factors encompass such difficult- or impossible-to-quantify factors as alliance/coalition's cohesion, quality of one's leadership, soundness of doctrine, morale and discipline, unit cohesion, government legitimacy, public support, and will to fight.

Critical Strengths vs. Critical Weaknesses/Vulnerabilities

In the process of analyzing the military situation, it is highly useful to divide critical factors into two major groups: critical strengths and critical weaknesses. What is critical or less critical is often difficult to determine with any degree of precision. It is all essentially a matter of good judgment and experience.

Critical strengths are friendly or enemy capabilities considered *essential* for accomplishing a given or assumed military objective. In military terms, critical strengths are primarily sources of physical or moral potential/power or elements that integrate, protect, and sustain specific sources of combat potential/power.

At the highest level, the leadership of a nation, an alliance/coalition, insurgents, or an extremist group/movement normally comprises the most critical source of power. In the case of totalitarian regimes, the ideology—whether of the communist or fascist variety—is such a source of power;

it is one of the critical strengths for al-Qa'ida's pan-Islamic fascism. The inner strength of an alliance or coalition is based on the permanence of the interests of the member states and their conviction of the righteousness of their cause. Likewise, one of the critical strengths for the government fighting an insurgency is its legitimacy.

For a military force, critical strength is normally concentrated in one's available combat potential/combat power. The latter has traditionally been composed of firepower, maneuver, leadership, and manpower. This is now changing, due to the steadily increasing importance of information for warfighting. Hence, information should be considered an integral part of the source of one's combat potential/power.

Critical weaknesses are those sources of power that are considered essential for the accomplishment of the objectives but are at the same time grossly inadequate to perform their intended function or task. At the national or alliance/coalition level, critical weaknesses could be a defeatist attitude on the part of most of the leadership, low morale of the population, weak public support for war or some other military action, and fragility of the coalition or serious disagreement on some fundamental issue among the alliance members. For insurgents, critical weaknesses could be the population's growing disenchantment with their cause or a refusal of the populace living in the territory under their control to pay taxes or ransom money. For al-Qa'ida, critical weaknesses include its perversion of Islamic teachings, reliance on Western banks for financial transactions, and heavy reliance on the Internet to communicate with its members and spread its message.
For a military force, examples of critical weaknesses are inadequate mobility or firepower, incompetent leadership, rigid doctrine, low morale and discipline, weak unit cohesion, inadequate air defense or force protection, and insufficient protection of information systems. For example, in the North African Campaign, 1940–1943, the critical strengths of the German forces were their greater combat experience, better tactical doctrine and execution, better leadership, and superior equipment.[vii] British critical strengths included the superiority of their defense, a larger quantity of equipment, better support of their allies, and a better logistical supply system.[viii] The German critical weaknesses were weak and inefficient Italian allies and logistical support and sustainment difficulties; for the British, critical weaknesses included combat inexperience, weak leadership, and doctrinal inflexibility.[ix]

Any critical strength can become a critical weakness due to enemy actions in the course of a conflict or war. For instance, one's population's support for a war might be high at the beginning of hostilities, but the destruction of the country's infrastructure, a drastic drop in standard of living, large defeats in the field, and increasing losses among the civilian population due to the enemy's action could erode that support so that it becomes a critical weakness. Or the high degree of cohesion in a coalition could be significantly reduced because one or more members leave the coalition or suffer a catastrophic defeat. A high degree of combat readiness or morale can be diminished so that it becomes a critical weakness. Likewise, the unit cohesion of one's combat

[vii] Kriwanek, *The Operational Center of Gravity*, p. 11.

[viii] Ibid.

[ix] Ibid., pp. 11–12.

forces can be high at the beginning of a major operation or campaign but become a critical weakness due to higher-than-expected losses and poor leadership.

Critical vulnerabilities are those elements of one's military or nonmilitary sources of power open to enemy attack, control, leverage, or exploitation. For example, a resourceful opponent can exploit one's aversion to high casualties to progressively weaken the country's will to prosecute war, as happened in the United States during the Vietnam War. In 1993, the United States allowed itself to be in a situation where its vital interests were not at stake but the very survival of the Somalian clan leader Mohamed Farah Aideed was. This dangerously asymmetrical situation allowed Aideed to indirectly attack the U.S. strategic center of gravity—will to fight—by exploiting the well-known U.S. critical vulnerability, an aversion to suffering high casualties. With no survival at stake, the United States could not protect and sustain popular and political support, while Aideed's desire for independent power could be sustained indefinitely.[x] The enemy can also seriously degrade the cohesion of one's coalition by attacking and defeating the weakest member. Public support for a war can be greatly weakened if the enemy is successful in feeding one's press false stories or using other means of active disinformation.

In most cases, the enemy's or friendly critical vulnerabilities are related to critical weaknesses. However, this is not always the case; in some situations a critical strength can become a critical vulnerability if structurally or organizationally it lacks sufficient protection or support. This situation might exist in the case of some critical elements of logistical support and sustainment, C4 nodes, or information systems.

Critical factors are subject to small or significant changes resulting from the actions of enemy and friendly forces. The enemy's critical strengths and weaknesses cannot be properly determined if one does not fully understand the enemy's society or military culture, political traditions, and social customs, or has exaggerated sense of superiority. Thus, the key is to avoid mirror-imaging—an extremely difficult thing to do—in the process of analysis. Hence, one's intelligence has a critical role in monitoring these changes on the enemy side and in providing planners with timely information. On the other hand, one's lack of realism and overconfidence could prevent a sound evaluation of the true capabilities of friendly forces.

Critical strengths and weaknesses differ considerably depending on the scope of the military objective to be accomplished and the corresponding levels of war. The higher the level of war, the more critical for ultimate success the critical factors are. In the case of military sources of power, what constitutes a critical strength at the tactical level can become a critical weakness if the required forces and assets are inadequate for the successful outcome of a campaign or major operation. For instance, one's logistical support and sustainment can be a critical strength at the tactical level, but it can become a critical weakness at the operational level because of one's inability to properly protect elements of logistical infrastructure or because of insufficient logistical resources to support and sustain much larger forces engaged in a campaign or major

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[x]. Timothy J. Keppler, *The Center of Gravity Concept: A Knowledge Engineering Approach to Improved Understanding and Application* (Fort Leavenworth, KS: School of Advanced Military Studies, U.S. Army Command and General Staff College, June 1995), pp. 6–7.

operation. Alternatively, morale and the will to fight at the tactical level might be high or very high, but the highest politico-military leadership's will to fight or the strength of public support might be weak or sorely lacking.

Center of Gravity's Composition

Any critical strength is composed of the main source of power (military or nonmilitary) and those elements used to integrate, protect, and support or sustain it. In regard to a center of gravity, the main source of power can be arbitrarily called the "inner core," while all other elements can be grouped in the "outer core." The critical weaknesses and vulnerabilities are usually found in the outer core of a center of gravity. In practical terms, the outer and inner cores of a center of gravity represent a whole (see Figure 2).

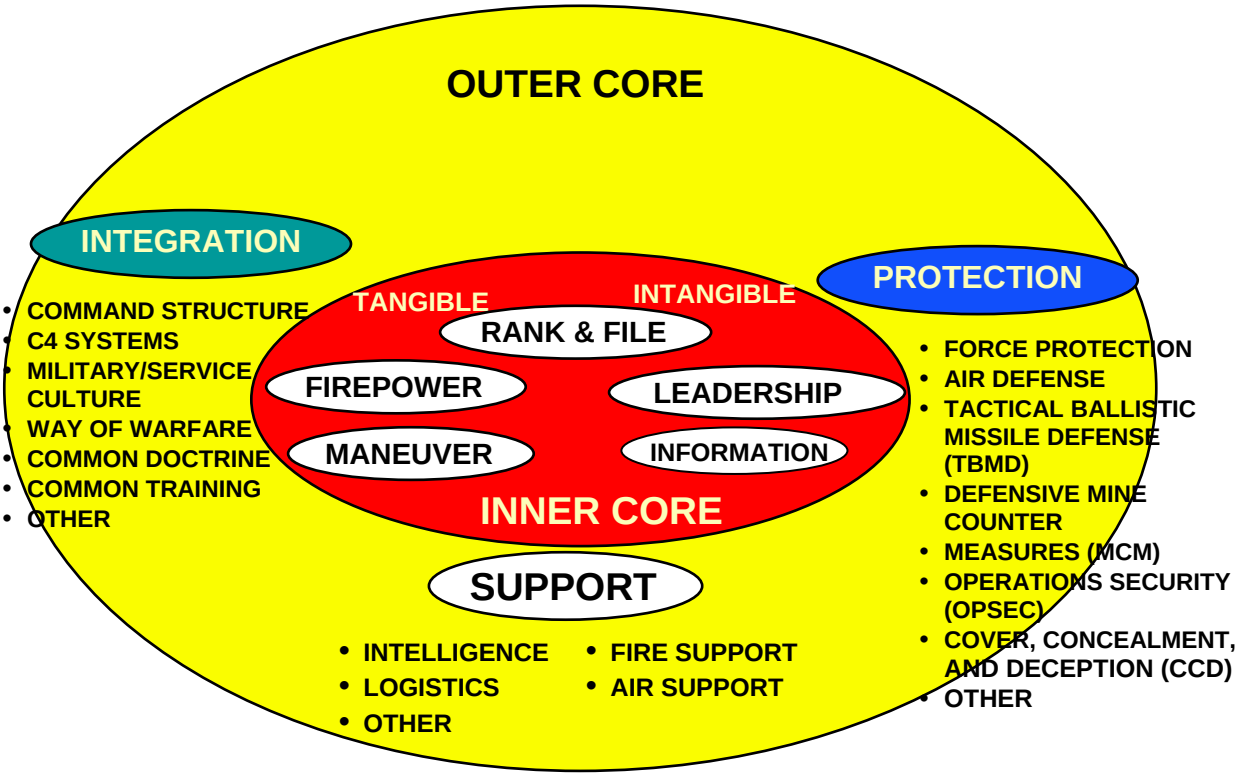

Figure 2: Military Related Center of Gravity

The problem of what constitutes a center of gravity can be complicated because of the relationship between the inner core and those elements of the outer core having attributes of firepower and maneuver. For example, air defense or antisubmarine defense can be an element of protection for the inner core at the operational level, but it can become part of the inner core at the tactical level. A similar situation can exist in the case of some elements of support, as, for example, ground or naval fire support and air support.

Neither military nor nonmilitary sources of power can function properly without their respective outer core. The integration elements, such as command structure, associated communications,

and other technical systems, link the leadership with all the other elements of sources of power. At the national level, the political system, government structure, and other unifying elements—such as homogenous population, common political traditions, religion, and culture—can be integrating elements. Also, various media outlets controlled by the government can act as integrators. However, in a multinational state, religious or ethnic divisions, significant differences in culture, and fragmentation of the society into numerous tribes and clans are not integrators but often sources of great weaknesses and vulnerabilities. For a military force, the key integrators are the command structure and command relationships, communications, and automated data systems for command and control, military or service culture, national way of warfare, and common doctrine and training. For insurgents or an extremist organization, the media and especially the Internet play considerable roles in linking the respective leaders and active or passive supporters.

Protection elements at the national level encompass the armed forces as a whole, paramilitary organizations, law enforcement institutions, regular and secret police, and other organizations intended to protect the government and the society. In turn, each of these contains certain elements of protection as well. Protection elements for operational or tactical center of gravity include air (space) defense; force protection; protection of information systems; cover, concealment, and deception (CCD); and operational security (OPSEC). For example, in the Axis offensive in North Africa in the spring of 1942, the operational center of gravity (the German panzer divisions) would have been ineffective if not for the Luftwaffe's support in neutralizing the British air and naval strength based on Malta, allowing supplies to reach Rommel's forces in March and April. The German success during the British offensive in May–June 1942 (Operation *Cauldron*) would not have been possible without the flank protection of the panzer divisions provided by the Italian XXI and X Corps at the battle of the Gazala–Bir Hacheim line.[xi]

Support and sustainment elements are critical for the performance of any element within the inner core of a given center of gravity. At the national level, the key elements of support in a conflict or war are the country's or alliance/coalition's military-economic system, diplomacy, finances, energy resources, electricity grid, and transportation systems. In a democratic state, public opinion is such a critical element of support, while in an authoritarian or totalitarian regime, the population's morale is a much more important source of support and sustainment of the leadership's will to fight. Sources of support and sustainment for al-Qa'ida are financial contributions and the use of Western banks for financial transactions. For a military force, the main elements of support are intelligence and logistics.[xii]

Tangible vs. Intangible Elements

Normally, a center of gravity is composed of a combination of tangible and intangible sources of power. Whether tangible or intangible elements predominate is directly related to the nature of the objective to be accomplished. The more the objective is nonmilitary in its nature, the more

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[xi]. Kriwanek, *The Operational Center of Gravity*, p. 13.

[xii]. Collin A. Agee, *Peeling the Onion: The Iraqi Center of Gravity in Desert Storm* (Fort Leavenworth, KS: School of Advanced Military Studies, U.S. Army Command and General Staff College, May 1992), p. 35.

intangibles comprise the center of gravity. Also, the higher the level of war, the more intangibles fall within the scope of a given center of gravity. In a high-intensity conflict or war, intangible elements of a center of gravity are primarily present at the national- and theater-strategic levels. Because the nature of the strategic objective in operations other than war is primarily nonmilitary (political, diplomatic, psychological, economic, etc.) the intangible elements of the center of gravity are fairly represented even at the tactical and operational levels.

In land warfare, tangible elements of a center of gravity can range from an armored or mechanized battalion or regiment to numbered and theater armies. In naval warfare, a center of gravity can be a direct screen of a convoy, a surface strike group, a carrier strike group, an expeditionary strike group, or a major part of surface forces in the numbered and theater fleets. Likewise, in air warfare, a center of gravity can be the element of a force of combat aircraft that has the highest combat potential/power, such as a fighter or bomber squadron in a fighter/bomber wing, or the entire force of fighters and ground-based air defenses or bombers and numbered and theater air fleets.

In the battle for Kursk (Operation *Zitadelle* to the Germans) in July 1943, the operational center of gravity on both sides was the armored and mechanized forces. The Germans had a technological edge in weapons and equipment, as well as greater experience and superior military efficiency. The Soviet strength was tactical combined arms defense, numerical superiority in men and materiel, excellent intelligence, and thorough planning. One of the Germans' weaknesses was their inability to replace losses in armor, while a Soviet weakness was the inability to match German armored combined arms forces in a maneuver.[xiii]

In the netted forces at the tactical and operational levels, computer networks might also comprise a major part of the enemy or friendly center of gravity. As operational centers of gravity, computer networks are fundamentally different from conventional centers of gravity, in part because they lack attributes of firepower and maneuver. In contrast to traditional centers of gravity, the key components of a computer network are potentially highly vulnerable to an enemy's disabling attack.

Depending on the level of war, the intangible elements of a center of gravity include such unquantifiable or hard-to-measure elements as political leadership, the skill and efficiency of military commanders and their staffs, soundness of doctrine, combat motivation, unit cohesion, jointness/combinedness, and morale and discipline. In an alliance or coalition, the center of gravity might consist of the community of interests or common desires that hold the members together.[xiv]

[xiii] Kriwanek, *The Operational Center of Gravity*, p. 17.

[xiv]. Carl von Clausewitz, *On War*, edited and translated by Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1984), p. 596.

In the Gulf War of 1990–1991, the U.S.-led coalition's cohesion was (from the Iraqi perspective) an intangible element of the strategic center of gravity, while Saddam Hussein and his inner circle had the same role from the coalition's point of view. Iraqi leadership was convinced that the Arab states were a particularly weak link in the coalition because of their fragile governments and cultural affinity with Iraq.[xv] It also believed that Israeli involvement in any manner would trigger popular Arab indignation and compel the Arab governments to scale back or end their support for the coalition.[xvi]

There are instances when the strategic center of gravity can be composed almost entirely of a military source of power. This situation may occur in an immature theater, one that lacks nonmilitary sources of power. For example, in 1942–1943, during the Solomons Campaign, the Japanese ground, and striking elements of naval and air forces deployed in the Solomons were collectively the enemy's theater-strategic centers of gravity for the Allies.

The nature of center of gravity in an insurgency or counterinsurgency significantly differs from that in a high-intensity conventional war because the nature of the strategic objective is predominantly nonmilitary (political, psychological, informational, etc.). In an insurgency, rarely do the antigovernment forces mass enough forces to constitute a tangible operational center of gravity. Then, for the government, the rebels' top leadership or the guerrilla force as a whole might comprise a strategic center of gravity. In the case of Marxist (-Leninist) or fascist (whether secular or religious) movements, ideology should be considered an important part of the strategic center of gravity. The individual rebel commanders and their forces in the countryside would constitute usually tactical and, in some exceptional cases, operational centers of gravity. For the insurgents, the government's legitimacy and its armed forces would normally represent a strategic center of gravity that needs to be severely degraded, weakened, and ultimately destroyed. Therefore, the government's task is to preserve and, optimally, enhance its legitimacy in the eyes of the majority of the country's population.

Legitimacy is a fundamental strength.[xvii] It is a condition based on the perception of the justness of the actions of the government. It is bestowed by the population. Without being widely accepted as legitimate, the government is unlikely to survive a determined insurgency. It is the governments' lack of legitimacy in many of the current and future trouble spots that provides the various hostile factions with the power to operate in the manner they do. For an insurgency to succeed, it must concentrate a major part of its efforts toward the drastic reduction or elimination of the legitimacy of the government. This usually takes allot of time. At the same time, a counterinsurgency effort cannot be successful unless the government's legitimacy is not only maintained but also increased in the eyes of the majority of the population. Legitimacy must be

[xv] Norman Cigar, "Iraq's Strategic Mindset and the Gulf War: Blueprint for Defeat," *Journal of Strategic Studies* 15, no. 1 (March 1992), p. 10.

[xvi] Ibid., p. 11.

[xvii] J. M. Petryk, *Legitimacy—A Center of Gravity for the Information Age* (Toronto: Canadian Forces College, ASMC 3/CSEM 3, 2000), p. 12.

seen in the context of conflicts resulting from an increasing reliance on violence by a minority attempting to impose its will on the majority. This is where efforts must be focused to bolster the legitimacy of legal authority.[xviii]

During the insurgency in El Salvador in the 1980s, the strategic center of gravity for the Farabundo Marti National Liberation Front (FMLN) rebel coalition was the legitimacy of the El Salvadorian government itself.[xix] A similar situation exists in Colombia, where the government forces are engaged in a protracted counterinsurgency effort against Marxist-led guerrillas (FARC/ELN). The eventual success or failure of counterinsurgency efforts in Iraq will ultimately depend not only on the leadership's and security forces' will to fight but, to a much larger degree, on whether the legitimate government is accepted by the majority of the Iraqi population and by the dissatisfied Sunni minority.

Characteristics

A center of gravity at any level of war has certain characteristics that are not found among the military objectives, geographic location, or decisive points. In terms of the factor of space, a center of gravity is often located in the relative proximity of the physical objective. This is often the case in war on land at the tactical and operational levels. In land warfare, the enemy's operational reserves are a potential operational center of gravity for both the attacker and the defender. For example, in the Allied invasion of Sicily in July 1943, the German armored and mechanized forces, composed of the XIV Panzer Korps (29th Panzer Grenadier Division, 15th Panzer Division, and Herman Goering Division), constituted a proper operational center of gravity for the Allied planners.[xx]

In some cases, an operational center of gravity may be located beyond the boundaries of a theater of operations in which a new campaign is to begin. For instance, the Japanese plan for the invasion of the Philippines in December 1941 envisaged the destruction or neutralization of the major part of the U.S. Pacific Fleet—the operational center of gravity for the Japanese Combined Fleet—based in Pearl Harbor, Hawaii, prior to the attack on the Philippines itself. The Japanese aim was to cripple a major part of the U.S. Pacific battle fleet and thereby prevent it from interfering with the landings in the Philippines. The Japanese attacked Pearl Harbor in the early hours of 7 December, and the Philippines' U.S. air and naval bases shortly thereafter.

An important characteristic of the operational or tactical enemy center of gravity is its ability to put the friendly center of gravity in physical danger (see Figure 3). This is not a characteristic of a military objective, a decisive point, or a critical weakness or vulnerability. In addition, any

[xviii] Ibid., p. 13.

[xix]. Max G. Manwaring and Court Prisk, *A Strategic View of Insurgencies: Insights from El Salvador*, McNair Papers 4 (Washington, DC: The Institute for National Strategic Studies, 1995), p. 18.

[xx] Walter Fries, *Der Kampf um Sizilien 1943–1944*, 11.12.1947 ZA/1 2311 T-2 Studien der Historical Division Headquarters, United States Army Europe, Foreign Military Studies Branch, Bundesarchiv/Militaerarchiv (BA-MA), Freiburg, i.Br., p. 37.

tangible element of an enemy strategic center of gravity represents a potential threat to one's strategic center of gravity.

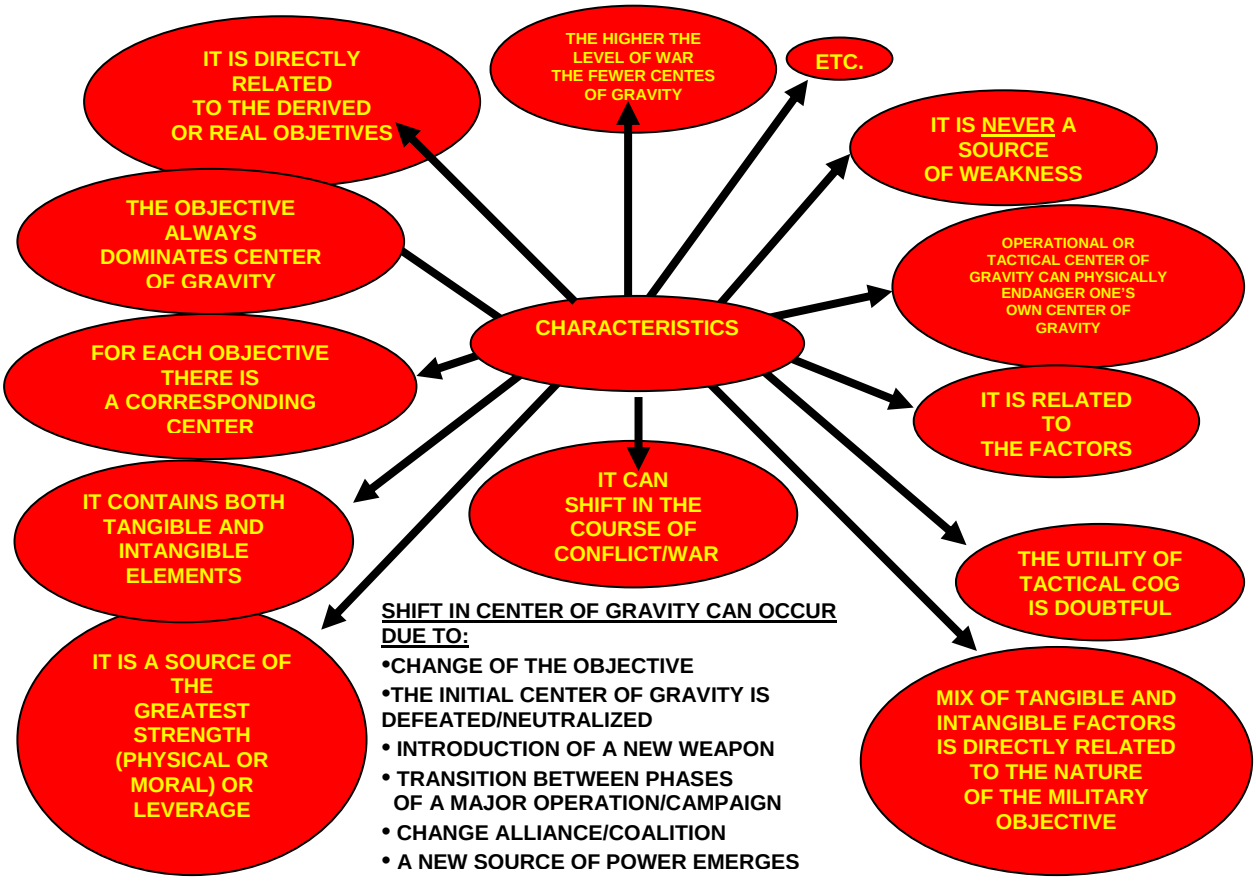

Figure 3: Characteristics of Center of Gravity

The higher the level of war, the more fixed a given center of gravity is. Thus, a strategic center of gravity is a relatively fixed entity throughout the duration of the conflict; it shifts only if the leadership is changed or removed from authority or if a major part of the military or nonmilitary source of power drastically changes so the force reemerges as a completely different entity.[xxi] If an authoritarian or dictatorial ruler is assassinated or overthrown in a coup, the new ruler or group of rulers will emerge as part of the new strategic center of gravity. The enemy might continue the fight, or he might sue for a compromise peace or surrender. Likewise, the strategic center of gravity shifts or changes its character if one or more members of an alliance or coalition leave the war or change sides.

[xxi] Giles and Galvin, *Center of Gravity: Determination, Analysis, and Application*, pp. 17–18.

In the initial phase of Operation Iraqi Freedom (OIF), the operational center of gravity for land- and carrier-based air operations was Iraqi fighter aircraft and ground-based air defenses. In southern Iraq, the operational center of gravity in the initial major air-land operation was the two most capable divisions (6th Armored and 51st Mechanized) of the Iraqi regular army III Corps in the Basra-Nasiriyah area. The three IRG divisions defending the outer defenses south of Baghdad were the proper operational center of gravity for the coalition forces prior to the attack on the city.[xxii] In the course of the campaign, three IRG divisions deployed north of Baghdad became potentially another operational center of gravity. The city of Baghdad was, in military terms, an operational objective to be captured or controlled, not a strategic center of gravity, as some high-ranking military officials publicly stated. The 15,000-strong Special Republican Guards (SRG) and the 1,000- to-1,500-man Special Security Organization (SSO) defending the city from within were *successive* operational centers of gravity. This is a rare example of multiple centers of gravities existing for the same military objective, at the same level of war, and in the same physical medium.

In a campaign, for each operational objective to be accomplished there is potentially a corresponding center of gravity. These centers of gravity are separated in terms of space and time. They should be attacked, simultaneously and/or sequentially, to defeat or neutralize a given military or theater-strategic center of gravity. In a campaign conducted in two or three physical mediums, not all operational objectives are equally important; hence, there exists a significant difference in the importance of the corresponding centers of gravity. The objectives at sea and in the air invariably support operational objectives on land. They have to be accomplished in order to create prerequisites for accomplishing the principal operational objective. Obviously, in the ultimate outcome of a land campaign that hinges on the fate of the ground forces, the most important operational center of gravity is the one that encompasses the most mobile and powerful enemy force on the ground. That center of gravity must be neutralized or destroyed by the efforts of two or more services. The Iraqi Republican Guards (IRG) represented the most important operational center of gravity for all U.S. and coalition forces in the offensive phase of the Gulf War of 1990–1991, as they did also in OIF.

Normally, before the start of a ground offensive in a land campaign, air or naval forces are tasked to accomplish a number of operational objectives in their own medium. For example, the primary initial task of air forces is to obtain and then maintain air superiority, which, in turn, requires the neutralization or destruction of the enemy's fighter aircraft strength—usually his operational center of gravity in the initial phase of war in the air. Naval forces, for their part, are tasked to obtain at least local and temporary sea control in a part of the maritime theater. For them the enemy's operational center of gravity is the enemy fleet's striking force.

In the planned German campaign to invade Britain (Operation *Seeloewe* [Sea Lion]), the Luftwaffe's opposing operational center of gravity was the Royal Air Force's Fighter Command. Had the amphibious landing taken place, the Luftwaffe's focus would have shifted to the enemy armored and mechanized forces defending the beaches or held in operational reserve. In the Gulf

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[xxii]. David A. Fulgham, "Not So Fast," *Aviation Week & Space Technology* (March 31, 2003), p. 22.

War of 1990–1991, the operational objectives for the U.S.-led coalition forces were to obtain air superiority in the theater of operations, obtain sea control in the northern part of the Arabian Gulf, and destroy the Iraqi ground forces in the southern part of Iraq and in Kuwait. Hence, the corresponding operational centers of gravity were the Iraqi fighters and ground-based air defenses—Iraqi missile-armed surface combatants (see Figure 4).

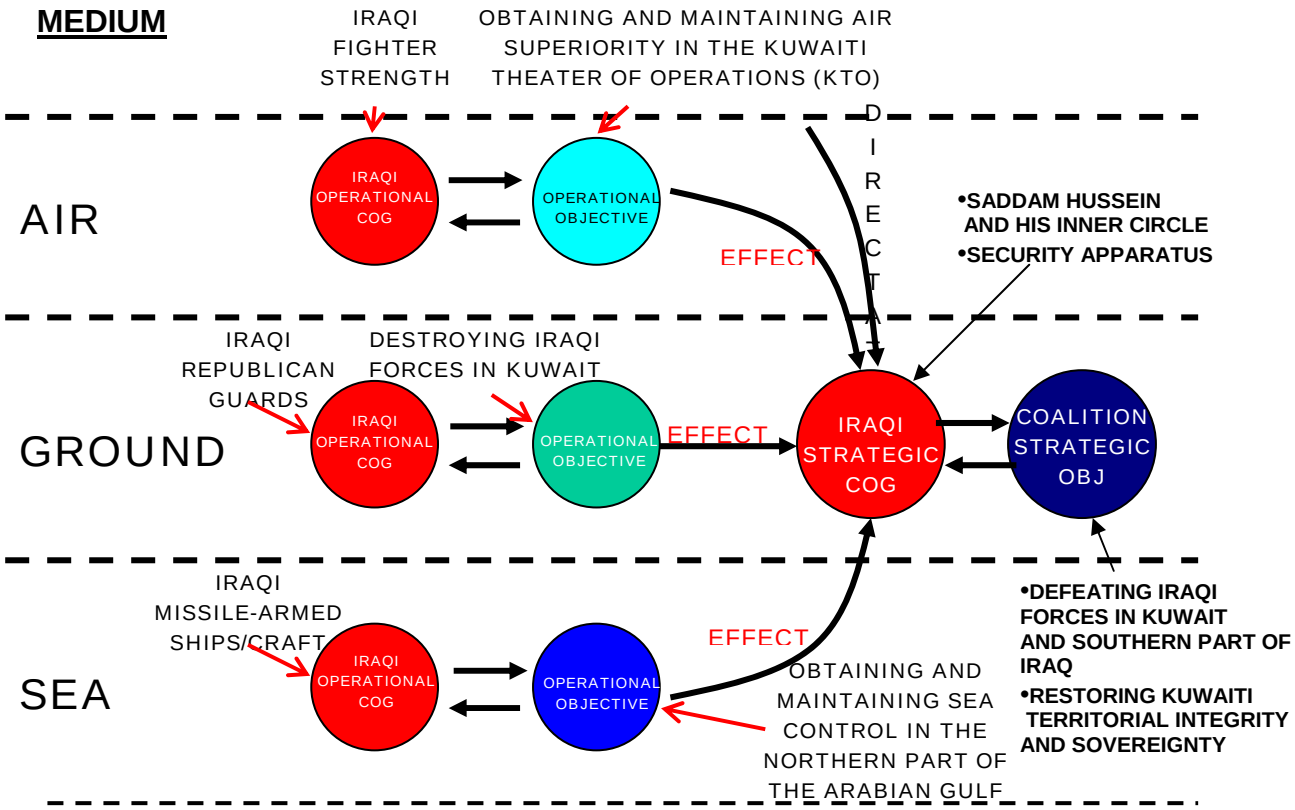

Figure 4: Desert Storm Campaign 17 Jan-28 Feb 1991: Coalition Objectives and Corresponding Enemy Centers of Gravity (COGs)

If the enemy's strongest source of military power in a given part of the theater is physically concentrated, as were the IRG divisions in the Gulf War of 1990–1991, it is relatively easy to identify the enemy's center of gravity. However, in some warfare areas, one's forces are either widely dispersed throughout the theater or are employed to predominantly accomplish tactical objectives. In such a case, an operational center of gravity would rarely exist—most of one's combat forces' actions will be tactical in nature. Then, multiple tactical centers of gravity must be defeated or neutralized over time to ultimately defeat the enemy's strategic center of gravity. This situation usually exists in insurgency and counterinsurgency. In an insurgency, antigovernment forces usually operate in small groups and use hit-and-run tactics. Therefore, they seldom offer the government forces the opportunity to completely destroy or neutralize them, unless they make the mistake of prematurely operating in larger formations, as the Yugoslav Partisans (guerrillas) did in late 1942. Communist leader Josip Broz-Tito gave the order to change tactics from small-scale attacks to large-scale operations conducted by eight newly established, so-called proletarian shock divisions. The Germans took advantage of Tito's

error, and trapped and decimated four of Tito's "divisions" and two brigades in the Battle of Sutjeska in the southeastern part of Herzegovina in May 1943 (Operation *Schwarz* [Black]). This operation was also aimed at destroying a large force of the Royalist Chetniks in northwestern Montenegro.[xxiii]

The protracted nature of trade warfare at sea is largely a consequence of the fact that each side in a conflict avoids massing forces at the operational level. Hence, in an attack on the enemy's maritime trade or defense and in protection of friendly maritime trade, the principal methods of combat employment of naval forces are major and minor tactical actions. The operational and ultimately strategic objectives are then accomplished over time. A similar situation exists in conducting theater wide air defenses. In each case, there are generally only a few opportunities to conduct major naval or air operations.

Operational commanders should be fully aware of the ever-changing nature of the relative strengths and weaknesses of the opposing forces. The intermediate objective can change from phase to phase of a major operation or campaign. There might be a significant shift in the capabilities of friendly or enemy forces due to the introduction of some highly advanced weapons or some new major force into the theater.[xxiv] A force different from the one that had been the enemy center of gravity at the beginning of the hostilities or military action can emerge as the center of gravity due to one's own successes. In the Leyte operation, the commander of the U.S. Third Fleet, Admiral William F. Halsey, apparently believed that the most serious threat—in modern terms, the operational center of gravity—to his Task Force 38 (fast carrier forces) was posed by Vice Admiral Jisaburo Ozawa's Mobile Force, Main Body (fast carrier force), not Vice Admiral Takeo Kurita's battleships and heavy cruisers of the First Diversionary Attack Force. One can contend that Halsey's judgment was clouded by his obsession with fighting a decisive naval battle against enemy aircraft carriers, coupled with purposely vague orders from his superior, Admiral Chester W. Nimitz, Commander-in-Chief Pacific Ocean Area (CINCPOA)/Commander-in-Chief Pacific Fleet (CINCPAC). Nevertheless, it seems clear that Halsey did not sufficiently account for the declining performance of Japanese pilots after the Battle of Midway. By October 1944, the Japanese carriers did not represent as large a threat to U.S. forces at Leyte as did Kurita's heavy surface force.

Higher-than-expected attrition, a poor state of morale and training, and a general inability to regenerate combat power might also lead to a shift of the enemy's center of gravity to another type of force. Thus, once the plan is executed, the situation should be closely monitored and reassessed to detect potential changes or shifts in the enemy center of gravity.[xxv]

[xxiii] Stephen Clissold, *Djilas: The Progress of a Revolutionary* (New York: Universe Books, 1983), pp. 95–96; Center for Military History, *German Antiguerrilla Operations in the Balkans (1941–1944)* (Washington, DC: Government Printing Office, 1st printed August 1954, facsimile edition 1989), pp. 36–7.

[xxiv] Giles and Galvin, *Center of Gravity: Determination, Analysis, and Application*, p. 17.

[xxv] Ibid., p. 15.

A center of gravity can change in the course of a major operation or campaign because of changes in the factors of space, time, and forces. For example, during the major British air-land operation in North Africa in November 1941 (Operation *Crusader*), General (later Field Marshal) Erwin Rommel, commander of the Afrika Korps, tried, by maneuvering into the British Eighth Army's rear, to indirectly destroy the enemy's operational center of gravity. However, after the apparent destruction of the British 7th Armoured Division, the new operational center of gravity was formed by combining the remnants of that division plus the 32nd Tank Brigade from the Tobruk garrison and the 2nd New Zealand Division. This force had over 150 tanks. This happened because the Afrika Korps had withdrawn from the critically important Sidi Rezegh-Tobruk area and Rommel did not interfere with the British efforts to regenerate their combat power.[xxvi]

The enemy's center of gravity can also shift from one type of force to another concurrently with a change in the phase of a major operation or campaign, even though its ultimate objective remains unchanged. This situation usually exists when a phase changes because of a change in the medium in which a force moves or in which combat would take place—for example, from the sea to the shore or from the air to the ground. In an amphibious landing operation the operational center of gravity shifts from one type of force to another because of the shift of the main tasks. During the transit phase, the initial main task is defense and protection of the amphibious task force. Once the amphibious force starts landing, the main task shifts to securing the initial lodgment ashore. Hence, the operational center of gravity for one's forces in the transit phase is the force that is assigned the task of distance cover and support. In most cases, such a force is a carrier group or heavy surface ship task force and, in some cases, land-based aircraft (see Figure 5).

If the attacker lacks sufficient strength at sea, then the operational center of gravity might be represented by the land-based fighter aircraft providing cover to the amphibious forces at sea. For example, in the German invasion of Norway and Denmark in April 1940, the Luftwaffe's fighters, not the German heavy surface forces, were the proper operational center of gravity for the Allies. However, in the amphibious phase, the attacker's center of gravity shifts to that part of the landing force that has the highest combat power.

Very often it is contended that the amphibious task force is the proper center of gravity for the defender—if that force is destroyed, then the attacker cannot conduct the planned amphibious assault. Yet the attacker would not plan an amphibious landing unless he believes he has sufficient combat potential to overcome the defender's resistance. He would also deploy his amphibious task force (ATF) and the force for distant cover and support to be within mutually supporting distances at all times. Moreover, the amphibious task force at sea cannot threaten an enemy's operational center of gravity on land, but the operational cover force can.

[xxvi] Myron J. Griswold, *Considerations in Identifying and Attacking the Enemy's Center of Gravity* (Fort Leavenworth, KS: School of Advanced Military Studies, U.S. Army Command and General Staff, 14 May 1986), p. 17.

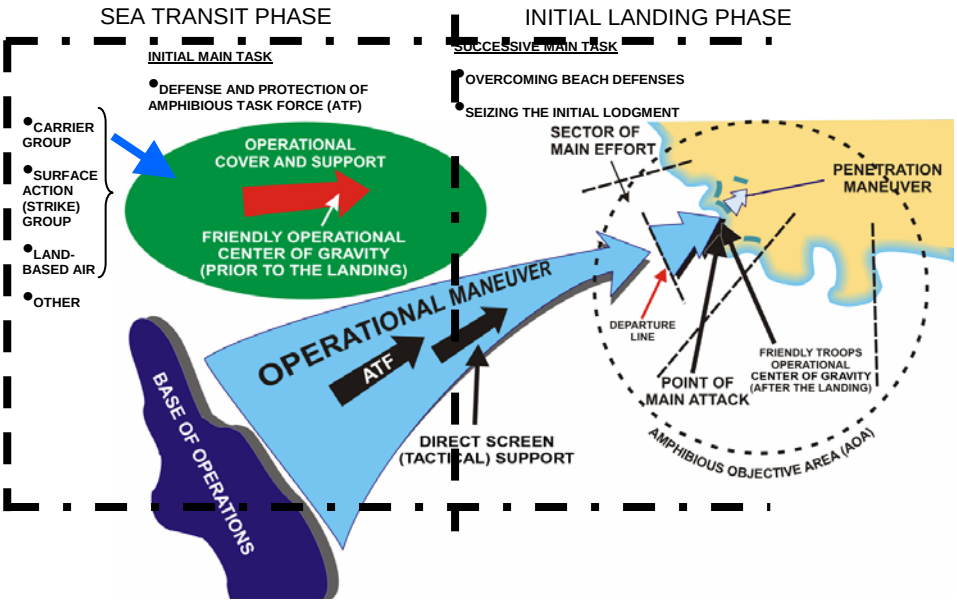

Figure 5: Shift in a Center of Gravity in a Major Amphibious Landing Operation

Thus, for the defender, the primary objective initially is to destroy or neutralize the attacker's distant cover and support, as the U.S. Navy did in the Battle of the Coral Sea and the Battle of Midway in May and June 1942, respectively. In both cases, the respective Japanese commanders intuitively knew that the planned amphibious landing could not proceed, because even if the amphibious force landed, no friendly force would be available to successfully defend and sustain it ashore.

In the Falklands/Malvinas conflict of 1982, the proper operational center of gravity for the Argentines, prior to the British landing on the Falklands, was the two British carrier forces. Without these carriers and accompanying escorts, the British could not have landed. While the loss of the 15,000-gross-register-ton (GRT) transport *Atlantic Conveyor*, with its embarked equipment, on 25 May was a serious blow to the British effort, that ship was not a center of gravity for the Argentines, but one of the British critical vulnerabilities. The troops and equipment could be replaced relatively quickly, but not the aircraft carriers. After the landing, the British 3 Commando Brigade (despite its relatively small size) was the proper operational center of gravity for the Argentine defenders. For the British, the enemy's operational center of gravity was not the Argentine carrier group, but the land-based fighter-bombers armed with Exocet missiles. After the landing, the operational center of gravity for the British forces shifted to the Argentine troops defending Port Stanley.

In a major airborne operation, such as the German invasion of Crete (Operation *Merkur*) in May 1944 or the Allied airborne landing at Arnhem (Operation *Market Garden*) in September 1944, a similar shift of center of gravity occurs. The only difference is that the escorting fighters represent the operational center of gravity before the arrival at the landing zone; after the

paratroops drop or the helicopters land, the airborne troops on the ground become the operational center of gravity.

The Objective and Center of Gravity

For each military objective to be accomplished, there is a corresponding center of gravity; hence, the terms tactical, operational, and strategic (national and military or theater strategic). A center of gravity cannot be considered in isolation from the corresponding military objective to be accomplished. In a war, one's actions should invariably be related to some larger whole. It is the military objective that provides the larger framework within which the respective center of gravity is determined. The objective and the center of gravity must be in harmony with each other. One should always bear in mind that it is the objective and the situation that determine a center of gravity, not the other way around. A change in the military objective would result in a change in the situation. This, in turn, would require a partial or complete reevaluation of friendly and enemy critical strengths and weaknesses

The greatest advantage of linking the objective and the corresponding center of gravity is that it ensures that one's efforts are firmly focused on the objective to be accomplished. This should also enhance the possibility that one's ends, means, and ways are not mismatched or disconnected. Without that linkage, it is quite possible that a major part of one's efforts would be misdirected. Therefore, it is a serious mistake to consider or, even worse, apply the concept of center of gravity with little or no regard for the objective to be accomplished, as the proponents of the systems approach can do.

In some cases, one's military objective can be accomplished without destroying or neutralizing the enemy's center of gravity. Ultimate success is achieved, but with a disproportionate loss of manpower and time. In other cases, failure to defeat the enemy's center of gravity might considerably delay or even preclude one's consolidation of operational or strategic success. If the enemy is allowed to recover from his losses, he may turn the initial defeat or setback into a victory. For example, Napoleon I in his ill-fated invasion of Russia in 1812 eventually captured the enemy capital of Moscow. Although he won the bloody battle of Borodino on 7 September (26 August, Old Style), he failed to destroy Field Marshal Mikhail I. Kutuzov's army—the Russian operational center of gravity—and thus the victory did not lead the tsar to ask for peace. In the end, Napoleon I was forced to leave Moscow and start a long, arduous withdrawal from Russia that ended in the gradual destruction of his Grande Armée. In a more recent example, the United States and its coalition partners have a continuing problem consolidating strategic success in Afghanistan because of the failure to decapitate or capture the Taliban's top leadership and Osama bin Laden and his inner circle in the fighting around Tora Bora in December 2001.

Levels of War and Center of Gravity

The number of potential or real centers of gravity is directly related to the number of military objectives to be accomplished. Obviously, at the national-strategic and alliance/coalition levels there exist a single national-strategic objective and a single national-strategic center of gravity. In the war against Nazi Germany and Imperial Japan, a single national/coalition strategic objective had to be accomplished, and in each theater of war a single strategic center of gravity had to be determined.

In the Vietnam War, for the North Vietnamese the proper strategic center of gravity was the will to fight and the alliance between the United States and South Vietnam (including their armed forces). After the U.S. will to fight was weakened to the point that it could no longer support South Vietnam, the South Vietnamese top leadership and the country's armed forces as a whole became the new strategic center of gravity for the North Vietnamese leadership.[xxvii] For its part, the United States wrongly identified the Vietcong as the strategic center of gravity, rather than the North Vietnamese leadership, its will to fight, the North Vietnamese army as a whole, and North Vietnam's community of interests with the Soviet Union and China. The proof that this was an error is that the Vietcong were virtually destroyed in the Tet Offensive in 1969 but the war continued until 1975.[xxviii] In the war against Afghanistan in 2001–2002 (Operation *Enduring Freedom*-OEF) and in OIF, the respective enemy's leadership and its will to fight, combined with the security forces and regular armed forces as a whole, were proper strategic centers of gravity.

The number of operational centers of gravity at the operational level of war is directly related to the number of operational objectives to be accomplished simultaneously or sequentially in a campaign. Depending on the enemy or friendly military strength, these centers of gravity can exist in each medium, that is, on the ground, in the air, and at sea. The sequencing of the accomplishment of the operational objectives determines the order in which corresponding operational centers of gravity have to be attacked or protected.

At the tactical level of war, there are many major and minor tactical objectives to be accomplished. In theory, each of them requires a determination of the respective tactical center of gravity. However, the smaller the military objective, the smaller the force required to accomplish it and, therefore, the smaller the practical utility of the corresponding center of gravity. At the same time, the process of determination becomes much simpler, because smaller and less diverse forces are involved. At the lowest tactical level, because one's force is reduced to a single-type force facing the same or a similar enemy force, the utility of the center of gravity is greatly reduced. It is only when dealing with major tactical forces and higher that the commanders and their staffs have to apply the analytical process leading to the determination of the proper center of gravity.

The neutralization, serious degradation, or defeat of a center of gravity at a lower level of war necessarily results in a general weakening of the center of gravity at the next higher level. Generally, the loss of personnel and materiel reduces the enemy's ability to create or strengthen his emerging operational center of gravity. Defeats in the field usually adversely affect the enemy's will to fight. The destruction or neutralization of the IRG both in the Gulf War of 1990–1991 and, more recently, in OIF generated a severe weakening of both tangible and intangible elements of the Iraqi strategic center of gravity. Likewise, successive defeats of an enemy's

[xxvii] Harry G. Summers, *On Strategy: A Critical Analysis of the Vietnam War* (New York: The Bantam Doubleday Dell Publishing Group, 1984), pp. 181–82, 184.

[xxviii] Ibid., p. 178.

tactical centers of gravity degrade his operational center of gravity, and by neutralizing or destroying the latter one defeats his strategic center of gravity.

Determining a Center of Gravity

The concept of a center of gravity is, along with the determination of the ultimate and intermediate objectives, the most critical part of any military planning process. After determining the ultimate strategic or operational objective, the operational commander and his planners should determine a corresponding center of gravity. Whenever the objective is modified or changed, all the critical factors should be reevaluated and then a new center of gravity should be determined. Determination of the enemy's center of gravity is a vital element in establishing clarity of purpose, focusing effort, and, ultimately, generating synergistic effects in the employment of one's sources of military and nonmilitary power. The higher the level of war, the more important it is to properly identify both the enemy and friendly centers of gravity. A plan for a campaign or major operation should be clearly focused on destroying or neutralizing the enemy's center of gravity while adequately protecting one's own; otherwise, the ultimate operational or strategic objectives will require far more time and resources than envisaged—or the entire expedition may even be doomed to failure. Therefore, a great deal of thinking and discussion should take place before the operational commander and his staff can determine proper centers of gravity with any degree of confidence.

The process of determining an enemy or friendly center of gravity starts with a real or assumed objective to be accomplished. Directly related to the objective is a corresponding situation (tactical, operational, or strategic) (see Figure 6).

Once the specific objective has been determined, the first step is to assess the corresponding situation in terms of the factors of space, time, and force. The larger the scope of the objective, the larger the space in which friendly and enemy forces will be employed. Also, the larger the space, the more complex the situation is. First, based on the analysis of the military situation, a list of enemy and friendly critical strengths and critical weaknesses should be compiled. In the next step of the process, only those critical strengths that can prevent the accomplishment of the enemy's and friendly objective should be listed. Those elements of a given critical strength that serve as integrators, protectors, and supporters/sustainers should not be considered the potential strategic center of gravity. Likewise, the military critical strengths related to the factor of space, such as theater geometry and the elements of the outer core of the enemy and friendly combat potential/power that cannot endanger the respective centers of gravity should not be considered potential centers of gravity. The list of critical strengths that are not considered candidates for a center of gravity should be retained for further analysis aimed at determining methods of indirectly attacking the enemy's or protecting the friendly center of gravity. Finally, a determination should be made concerning which among the critical strengths retained for further analysis are the most essential for the accomplishment of one's real or assumed objective in terms of the factors of space and time.

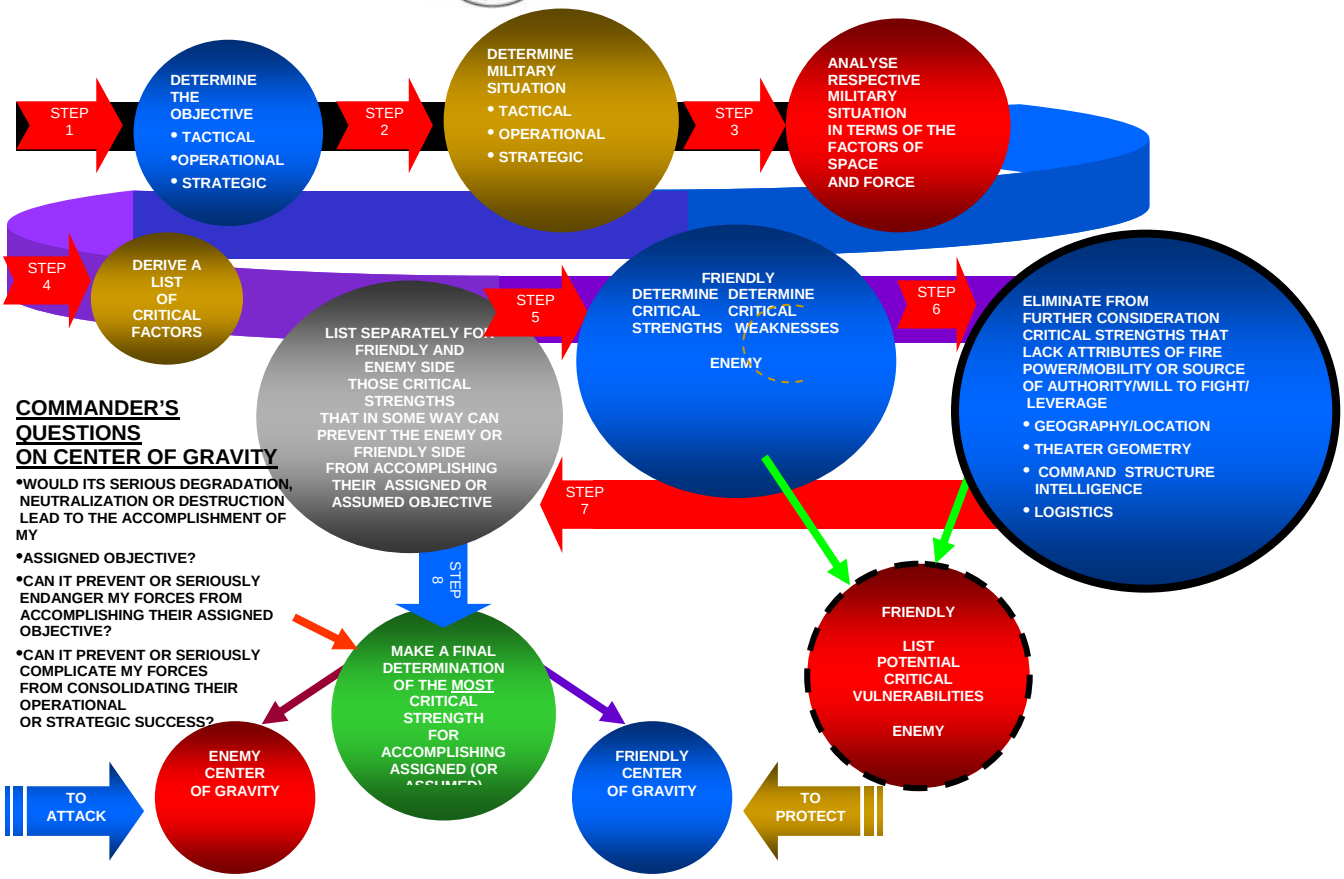

Figure 6: Process for Determining Center of Gravity

Before final determination of the enemy's center of gravity as the focus of planning, tests for validity should be conducted. The first question to ask is whether destroying, neutralizing, or substantially weakening or degrading the enemy's potential center of gravity would create a ripple or cascading effect resulting in the progressive deterioration of the enemy's morale, cohesion, and will to fight and thereby prevent the enemy from accomplishing his objectives. The second question is whether one's forces are adequate to destroy or neutralize the enemy's center of gravity, given existing political and other limitations on the use of one's forces. The answers to both questions should be affirmative; otherwise, previously identified critical factors should be reassessed and a different strategic and subordinate operational center of gravity determined.[xxix] Another question to be asked is which of the enemy's critical strengths will considerably hinder or even prevent one's side from consolidating its strategic or operational success.

Identifying the enemy's proper center of gravity is a difficult task indeed, largely because a number of unquantifiable or hard-to-measure elements are involved. For instance, the enemy's

[xxix] William W. Mendel and Lamar Tooke, "Operation Logic: Selecting the Center of Gravity," *Military Review* 6 (June 1993), pp. 5–6.

will to fight as a strategic center of gravity is too broad and imprecise, while the leader's or the ruling elite's will to fight is more specific. Another perennial problem is a strong tendency to mirror-image the enemy. What might be a critical strength for friendly forces might be less so, or not important at all, for the enemy. Another danger is of being misled by one's ethnocentric views in assessing other cultures and societies. One should never assume that the enemy thinks and acts as one does.[xxx] In identifying the enemy's center of gravity, one should always take his perceptions of reality as fully into account as his value system. This means that what might influence the enemy to abandon or change his assumed objective should be fully understood.

The consequences of determining a wrong center of gravity at the strategic level are usually severe and often fatal to one's entire war effort. Failure, for any reason, to determine a proper center of gravity in a major operation not only can lead to setbacks but also can be fatal to the operation's outcome. In planning the German reoccupation of the Kerch peninsula in the Crimea between 8 and 15 May 1942 (Operation *Trappenjagd* [*Bustard Hunt*]), General (later Field Marshal) Erich von Manstein identified the enemy's operational center of gravity as the Soviet forces defending the Kerch peninsula rather than those defending the major naval base at Sevastopol. Sevastopol was then defended by the Soviet Coastal Army, composed of eight divisions. The front line on the Kerch peninsula (stalemated along the Parpach Isthmus since 11 April 1942) was defended by the Soviet Crimean Front, composed of three armies (the 44th, the 47th, and the 51st) totaling 18 divisions and eight other combat formations, mostly brigade or regimental size. The Soviet forces could be quickly reinforced from the Caucasus area across the Kerch peninsula. If these forces were destroyed, then the fate of the Soviet garrison at Sevastopol would be sealed.[xxxi] Manstein determined the 41st and 47th Armies as the Soviet operational center of gravity, because two-thirds of the divisions of the Crimean Front were in these two armies.[xxxii] These divisions were deployed inside a salient along the narrow Parpach Isthmus, which extended westward well beyond the southern portion of the Parpach line held by the 44th Army. The geography made it impossible for the Soviet commander to simultaneously employ the bulk of his forces.[xxxiii] Hence, Manstein decided that to secure his operational objective, these two armies must be destroyed first.[xxxiv] His opponent, Lieutenant General D. T. Kozlov, in contrast, never recovered from selecting a wrong operational center of gravity—the XXXII and VII Romanian Corps.

[xxx] John A. Warden III, *The Air Campaign: Planning for Combat* (Washington, DC: National Defense University Press, 1988), pp. 58–59.

[xxxi] Griswold, *Considerations in Identifying and Attacking the Enemy's Center of Gravity*, p. 20.

[xxxii] Ibid., p. 21.

[xxxiii] Ibid.

[xxxiv] Ibid.

While an operational or strategic objective can be accomplished without destroying or neutralizing the enemy's center of gravity, such an objective can be consolidated, if at all, only by exerting great efforts over time. This is especially true when the attacker has a small margin of superiority. In the Allied invasion of Sicily in July 1943 (Operation *Husky*), the British Eighth Army and the U.S. Seventh Army landed at two different sectors at the southeastern part of the island. Their initial objectives after landing were to seize certain airfields and the ports of Syracuse and Licate, and then to capture the ports of Augusta and Catania and the airfield complex at Gerbini.[xxxv] However, the real objective for both armies should have been the destruction of the Axis ground forces on Sicily, and the German panzer and mechanized forces in particular, not the capture of ports and airfields. Yet the failure to focus on the destruction of the enemy operational center of gravity (the German panzer and mechanized forces) in Sicily after their landing on 10 July 1943 did not prevent the Allies from accomplishing their ultimate operational objective - the capture of Sicily and obtaining sea and air superiority in the central Mediterranean. However, the Germans evacuated to Italy's mainland between 1 and 17 August (Operation *Lehrgang*) about 40,000 of their battle-hardened troops (including the Hermann Goering Division, the 15th and the 29th Panzer Grenadier Divisions, and 1st Parachute Division), 51 tanks, 163 guns, 1,875 tons of ammunition, 9,800 vehicles, and 16,800 tons of equipment across the Strait of Messina.[xxxvi] These forces later faced the Allies in their landing at Salerno (Operation *Avalanche*) in September 1943. In addition, the Italians evacuated 70,000 to 75,000 of their troops, 100 guns, and 500 vehicles from the island. [xxxvii] The Allied failure to destroy the enemy operational center of gravity required 38 days of hard fighting to secure Sicily.

In general, the more capable the enemy force, the harder it is to identify the enemy's operational center of gravity. The problem is more manageable if the enemy possesses smaller and less sophisticated forces, or if one part of his forces is much better equipped and trained than the others are, as was the case in the Gulf War of 1991 and OIF. In both cases the IRG was the most important operational center of gravity for the U.S. and coalition planners. By mid-January 1991, the Iraqis had deployed 42 to 43 divisions of about 336,000 poorly trained men in the Kuwaiti Theater of Operations (KTO). In addition, seven highly mobile, much better trained, and well-equipped IRG divisions, kept as operational reserve, were deployed in the Shaibah area.[xxxviii]

[xxxv]. C.J.C. Molony, et al., *History of Second World War,* Vol. V., *The Mediterranean and Middle East,* (London: Her Majesty's Stationery Office, 1973), pp. 28–29.

[xxxvi] Carlo D'Este, *Bitter Victory. The Battle for Sicily, 1943* (New York, NY: E.P. Dutton, 1988), pp. 513-14; Albert N. Garland and Howard McGaw Smyth, assisted by Martin Blumenson, *United States Army in World War II. The Mediterranean Theater of Operations. Sicily and Surrender of Italy* (Washington, DC: Office of the Chief of Military History, Department of the Army, 1965, p. 413.

[xxxvii] Martin Blumenson, *Sicily: whose victory*? (New York, NY: Ballantine Books, 1969), p. 147.

[xxxviii] . Thomas A. Keaney and Eliot A. Cohen, *Gulf War: Air Power Survey Summary Report* (Washington, DC: Government Printing Office, 1993), pp. 9–10; Rainer Brinkman, "Die Beispiel fuer Krisenmanagement," in Hartmut Zehrer, editor, "*Der Golfkonflikt. Dokumentation, Analyse und Bewertung aus militaerischer Sicht* (Herford/Bonn: E.S. Mittler & Sohn, 1992), p. 89.

U.S. planners correctly identified these seven divisions as the Iraqi operational center of gravity for the coalition ground forces.

In the Kosovo conflict of 1999, the NATO planners correctly identified Serbian strongman Slobodan Milosevic, his inner circle and armed forces, and Serbia's military-economic potential as a whole as a strategic center of gravity. They also properly chose the Yugoslav fighter aircraft and associated air defenses as the operational center of gravity for accomplishing the first operational objective in the operation—obtaining air superiority. NATO's planners wrongly assumed that the 52nd (Pristina) Corps was the operational center of gravity on the ground in the (undeclared) Kosovo area of operations. That would have been true if NATO had planned to mount a ground invasion of Kosovo. However, one of NATO's stated objectives was to prevent Serbian actions against ethnic Albanians in Kosovo. Therefore, the proper center of gravity on the ground was the Serbian security and paramilitary forces involved in the ethnic cleansing. To complicate the situation for the planners, these forces were deployed in small, mobile, and widely dispersed groups, making them very hard to destroy from the air.

In coalition warfare, the operational center of gravity is usually found among the critical strengths of the partner that has the strongest will to fight and the best-trained and best-equipped forces. In World War II, whenever German and Italian forces were employed in the same area, it was invariably German panzer and panzer-grenadier divisions that comprised a real operational center of gravity for the Allied planners. For instance, in the Allied counteroffensive in North Africa in mid-November 1941 (Operation *Crusader*), determining the Axis operational center of gravity was relatively easy because of the vast disparity in the quality of leadership and weapons between the German and Italian forces. The Panzergruppe Afrika consisted of the German Afrika Korps, the Italian XXI Corps, and the Italian Armored Corps. General Ludwig Cruewell commanded Afrika Korps, composed of the 15th and 21st panzer divisions and the Afrika Division (later designated as the 90th Light Division). The Italian XXI Corps consisted of five infantry divisions, while the Italian Armored Corps was composed of the Ariete AD and the Trieste motorized division.[xxxix] The Afrika Korps had two-thirds of all the tanks in the entire Panzergruppe Afrika. The Italians had only 154 tanks, which were inferior in quality to the German tanks. The Italian leadership was poor. The Italian forces lacked antitank weapons, while the Germans used their excellent 88-mm FLaK 18 guns.[xl]

In planning a campaign or major operation, a common mistake is to confuse the physical objective with the enemy's center of gravity. Focusing on the objective instead of on the enemy's center of gravity invariably results in unnecessary losses in personnel, materiel, and time. Therefore, the attacker who possesses superior combat potential should focus all his efforts on directly or indirectly destroying, neutralizing, or significantly damaging the enemy's operational center of gravity. The Allied planners in the European theater in World War II repeatedly confused physical objectives, specifically ports or large cities, with the enemy's operational

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[xxxix] Griswold, *Considerations in Identifying and Attacking the Enemy's Center of Gravity*, pp. 10–11.

[xl] Ibid., p. 13.

center of gravity. The results were inconclusive victories and unnecessary losses of personnel and time. The Allies won in the end largely because of their overwhelming superiority in the air and on land and their materiel superiority.

In the Allied Operation Husky, the most important operational objective on the ground was the destruction of the Axis forces' operational reserve: the 15th Panzer Grenadier Division with its three regimental teams—*Group Enns* in the southwest, *Group Fullriede* in the southeast, and *Group Koerner* in the Enna area as an unassigned reserve). In addition, the newly arrived Hermann Goering Division was also concentrated in the area of operational reserve of the Italian Sixth Army. However, this division was, with the permission of General Alfredo Guzzoni (commander of the Axis forces on the island), also available for employment by the Italian XVI Corps (defending the eastern part of the island). The Italian part of the operational reserve included a self-propelled artillery regiment, Livorno Division, plus reinforcing units arriving in Sicily from the mainland and organized into the fourth reserve force, Group Napoli (Naples). The German forces were the only mobile part of the Axis operational reserve. Hence, the Axis operational center of gravity was clearly the two German panzer divisions. However, the Allied planners failed to focus on defeating or neutralizing the Axis operational center of gravity; they chose instead to seize various major ports and provide close air support to their own troops on the ground. The ports, naval bases, and air bases on Sicily were either major or minor tactical objectives.

In planning the amphibious landing at Anzio (Operation *Shingle*) carried out on 22 January 1944, the Allied commanders also confused the operational objective—the Italian capital of Rome—with the real operational center of gravity, the German XIV Army with headquarters in Rome. This army served as an operational reserve of Field Marshal Albert Kesselring, the German CINC of the South. The German X Army was deployed along the front with the U.S. Fifth Army and the British Eighth Army. [xli]

In July 1944, in preparing their plans for the breakout from the Caen area (Operation *Cobra*), Allied planners focused all their attention on Brittany's ports, as mandated by the *Overlord* plan, rather than taking advantage of superior mobility and mastery in the air to encircle and destroy the German forces.[xlii] The breakout started on 25 July. Some six days later, General Patton's Third Army received the mission to seize Brittany's ports. As the Third Army sent seven of its divisions down through the Avranches gap, the possibility of a deep penetration eastward to envelop and destroy the Germans west of the Seine River opened the prospects of a decisive victory. However, that opportunity was not seized, and the Third Army continued its drive

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[xli] Carlo D'Este, *Fatal Decision: Anzio and the Battle for Rome* (New York, NY: Harper Perennial, 1st edition, 1992), p. 77.

[xlii] Martin Blumenson, *Breakout and Pursuit, The European Theater of Operations, United States Army in World War II* (Washington, DC: Center of Military History, United States Army, 1st printed 196 1 -CMH Pub 7-5, reprinted 1989), p. 197; Carlo D'Este, *Decision in Normandy* (New York, NY: E.P. Dutton, Inc., 1983), p. 347.

toward Brittany's ports.[xliii] The operation was ultimately successful and the Cotentin peninsula was cleared of the mobile German forces. Yet a rather large number of Germans escaped the Allied trap and withdrew north of the Seine River. Ironically, even if Brittany's ports had been captured and developed as originally planned, they would not have alleviated the Allies' later logistic crisis. To meet the estimated requirements of 45,000 tons landed daily by D+90 (6 September), the Brittany ports had to be captured and developed by D+60 (6 August). This became obvious on 3 August, the crucial day the armor might have been ordered east for an envelopment rather than toward the west, as Major General J. S. Wood of the 4th Armored Division had realized.[xliv]

Conclusion

The theory behind center of gravity is relatively new. For the most part it emerged because of renewed emphasis on the study of Carl von Clausewitz's *On War*. The subsequent development and application of the term center of gravity was essentially based on a misunderstanding, because the English translation of Clausewitz's work equated *Schwerpunkt* with center of gravity. Despite this misunderstanding, the concept of center of gravity is fully viable as a tool for planners at all command echelons. It can be applied across the spectrum of warfare. The prerequisite, however, is that the respective center of gravity be directly related to the objective to be accomplished; otherwise, the entire concept has little, if any, utility. In the past, the great captains and many lesser but successful commanders did not use the term center of gravity but intuitively knew that the quickest and most decisive way to defeat the enemy was to attack the strongest part of his army. This was the way Alexander the Great, Hannibal, Gustavus Adolphus, Frederick the Great, Napoleon I, Moltke, Sr., and many other commanders fought their campaigns. Attacking the enemy center of gravity and protecting the friendly center of gravity are a proven and viable concept despite the somewhat convoluted theoretical underpinnings. This concept needs to be further refined. It is here to stay; no changes in technology are likely to invalidate it.

A full understanding of the theoretical underpinnings of the concept of center of gravity is crucial if commanders and their staffs intend to employ all available sources of power to achieve success in the shortest time and with the least losses for friendly forces. It stands to reason that, to accomplish the assigned military objective, one must focus the major part (though not necessarily all) of one's efforts against the strongest source of the enemy's power—his center of gravity. That will also ensure observance of the principle of objective, mass, and economy of effort.

Operational commanders and their staffs should know and fully understand the concept of critical factors and the analytical construct used to identify a proper center of gravity for both the

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[xliii] A. Harding Ganz, "Questionable Objective: The Brittany Ports, 1944," *Journal of Military History* 59 (January 1995), p. 83.

[xliv] Ibid., p. 93.

enemy and friendly forces. One of the first steps in that process is to properly determine the objective to be accomplished, which dictates the scope and complexity of the military situation. The objective also determines the method of combat employment of one's forces and the levels of war. It is hard to see how the process of determining critical factors and center of gravity can be successful without a proper understanding of the distinctions and interrelationships among the levels of war.

In the future, analysis of the enemy's and friendly critical factors will be more complex than today because of the expected increased diffusion of critical strengths and critical weaknesses among military and nonmilitary sources of power. In contrast to today, ground forces will be geographically dispersed. In addition to traditional centers of gravity, computer networks will probably emerge as the most important part of operational and tactical centers of gravity.

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A Solution for the Confusing Application of Lines of Operation

By
LtCol Philipp Eder
Capt Johann Fischer

"During the hectic twenty-six days we'd just spent planning Afghanistan, I had developed a planning technique that focused on "Lines of Operation" – the tasks any given mission would call for – and "slices," the various aspects of the country that would be affected by the lines of operation."[xlv]

Lines of operation are used for planning and conducting operations at the strategic and operational level of war. In comparison to other planning tools like centers of gravity, very little literature can be found nowadays about lines of operation. Today lines of operation are used in various ways because in recent years two different concepts of their application have been used. Lines of operation are still valid in their traditional sense, like operating on interior or exterior lines, but they are also used in the campaign planning process as a vital tool to develop an operational design and courses of action.

This essay tries to contribute to solving this dilemma by examining the roots of the theory of lines of operation and how the operational environment has changed since that time. Additionally, the way lines of operation are defined and applied today will be analyzed. This leads to new definitions and the authors' explanation of why this is necessary. Finally, the applicability of the concept of lines of operation will be confirmed by taking a look at two prominent modern operations.

Jomini and the Roots of Lines of Operation

Contrary to the popular belief it was not Carl von Clausewitz who developed the theory of lines of operation although his influence in most aspects of operational art is undisputed.
Antoine-Henri Jomini was the first military theoretician to discuss this concept in more detail and introduced the term into military theory.[xlvi] Jomini was born in Switzerland in 1779 and served in the French and Russian armies. After studying well known military historians of his time he published the "Traktat über die Große Taktik" and the "Prècis de l'art de la guerre." The "Art of War" is his key work reflecting his considerations about the operational level of war and in this book he devoted himself specifically to lines of operation. Jomini writes: "*They* (authors' comment: lines of operation) *are divided into different classes, accordingly to their relations to the different positions of the enemy, to the communications upon the strategic field,*

[xlv] Tommy Franks, American Soldier, 2004, p. 335.

[xlvi] Further information about the historical roots can be found in the upcoming new version of: Milan N. Vego, Operational Warfare, to be published in 2006.

and to the enterprises projected by the commander."[xlvii] *He goes on, "Simple lines of operations are those of an army acting from a frontier when it is not subdivided into large independent bodies."*[xlviii]

When he writes about the practical utilization of lines of operation, Jomini goes into detail. He offers several options on how to utilize them. The concepts of interior versus exterior lines and concentric versus divergent lines are the most applicable: *"Interior lines of operations are those adopted by one or two armies to oppose several hostile bodies, and having such a direction that the general can concentrate the masses and maneuver with his whole force in a shorter period of time than it would require for the enemy to oppose to them a greater force."*[xlix] He continues, *"Exterior lines lead to the opposite result and are those formed by an army which operates at the same time on both flanks of the enemy, or against several of his masses."*[l]

Until today these thoughts can be found in nearly all regulations on the operational level of war in most western nations. It is interesting to note that his following theories are not so commonly known: *"Concentric lines of operation are those which depart from widely-separated points and meet at the same point, either in advance or behind the base."*[li] And, *"Divergent lines are those by which an army would leave a given point to move upon several distinct points. These lines, of course, necessitate a subdivision of the army."*[lii]

Additionally, Jomini states 17 maxims in "The Art of War." In the first maxim he underscores the importance of lines of operation: *"If the art of war consists in bringing into action upon the decisive point of the theatre of operations the greatest possible force, the choice of the line of operation, being the primary means of attaining this end, may be regarded as the fundamental idea in a good plan of a campaign."*[liii]

In the second maxim he describes the importance of geography as well as the force factor and highlights the interrelationship between forces, their main effort (which can be seen in context with the center of gravity) and lines of operation. *"The direction to be given to this line depends upon the geographical situation of the theatre of operations, but still more upon the position of the hostile masses upon this strategic field. In every case, however, it must be directed upon the centre or upon one of the extremities."*[liv]

"The Art of War" refers to the fundamentals of the operational concept and the operational design. This is expressed by the establishment of the interrelation between decisive points,

[xlvii] Antoine-Henri Jomini, The Art of War 1996, p. 101.

[xlviii] Ibd, 1996, p. 101.

[xlix] Ibd, 1996, p. 102.

[l] Ibd, 1996, p. 102.

[li] Ibd, 1996, p. 102.

[lii] Ibd, 1996, p. 103.

[liii] Ibd, 1996, p. 114.

[liv] Ibd, 1996, p. 114.

objectives, center of gravity, lines of operation and the strategic level. This basic elements of the operational design is of timeless value and also applicable in today's operational environment. (Figure 1)

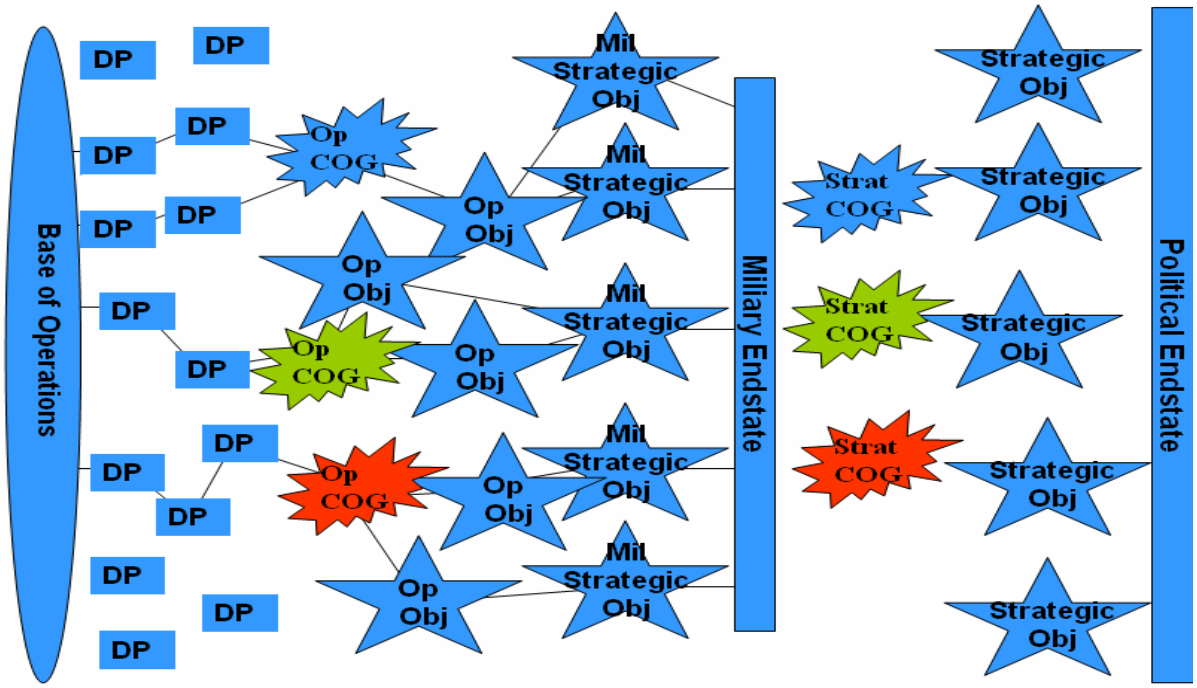

Figure 1: A generic operational design as used for teaching at the National Defense Academy, Vienna, Austria. The lines of operation lead from a base of operations via operational centers of gravity of different actors to the military endstate.

While Clausewitz and Jomini never met in person they corresponded about their ideas. For some time Clausewitz accepted Jomini's concept: "*In strategy the side that is surrounded by the enemy is better off than the side which surrounds its opponent, especially with equal or even weaker forces. Colonel Jomini was right in this.*"[lv] Later on Clausewitz changed his mind. While writing his main work "Vom Kriege" he opposed the concept of lines of operation due to the fact that to him they only made sense in an artificial theory while in a comprehensive analysis the offered rules and suggestions seemed useless to him.

Lines of Operation and the New Operational Environment

Since the development of the theory of lines of operation the military environment has changed. The highest political level has been separated from purely military leadership duties and concentrates on all aspects of national strategy. In consequence the military strategic level was established and with the higher complexity of warfare the necessity for an operational level of war became imminent. Due to this fact, on the strategic level the term "nonmilitary lines of operation" was introduced to compliment military lines of operation. In the western world the

[lv] http://www.clausewitz.com/CWZHOME/Jomini/JOMINIX.htm (30.11.05)

democratic control of armed forces and the primacy of politics over the military have reinforced this aspect.

Another valid aspect is the reappearance and regained importance of asymmetric conflicts after the end of the Cold War. Current threats like terrorism, illegal immigration, proliferation, organized crime, failed states and limited regional conflicts broaden the range of military operations. Asymmetric warfare in particular leads to a deeper unification of nonmilitary and military lines of operation, which has to be reflected when planning at the strategic as well as at the operational level.

Additionally the evolution from the industrial age to the information age puts the factor of information on the same level with the classical operational factors of forces, space and time. This has a direct influence on the assessment of the decisive points and thus has to be reflected in the choice of lines of operation.

Lines of Operation and Contemporary Doctrine

"While lines of operation are important considerations in the design of campaigns and major operations, their importance should not be overdrawn."[lvi]

This sentence can be found in the 1986 version of the U.S. Army's FM 100-5, which is widely considered as one of the cornerstones of the renaissance of operational art. Nevertheless the concept of lines of operation can still be found in doctrine and OPLANS of all major western militaries. To get more clearance on today's application of lines of operation, this article will take a look at a representative selection of relevant and up-to-date doctrine from NATO, the United States, Great Britain and Germany. The authors chose to analyze NATO doctrine because the Alliance is used as a tool to produce interoperability of the Armed Forces of its member states and partners in order to be able to conduct multinational operations. Logically in an ideal world, U.S., British and German doctrine should reflect this interoperability. As the reader will discover, this is not the case.

NATO´s 2002 AJP-3 Allied Joint Operation states: *"Lines of operations link decisive points in time and space on the path to the center of gravity. They connect a force with its base of operations and its objectives. Lines of operations are conceptual planning tools. They do not link physical geographical features, nor do they describe the direction or axes of advance. Lines of operation establish the inter-relationship between decisive points, to establish the critical path along which operations must develop en route to the center of gravity, in order that events and actions are sequenced to achieve the end state."*[lvii]

[lvi] U.S. Army FM 100-5 Operations, 1986, p. 181.

[lvii] NATO Allied Joint Publication 03 Allied Joint Operations, 2002, p. 3-7.

For our purpose, six aspects of this definition have essential importance:

- Lines of operation link decisive points.
- Lines of operation lead through a center of gravity - what kind of center of gravity is left open.
- Lines of operation lead to objectives.
- Lines of operation are a conceptual planning tool.
- Lines of operation do not link physical geographical features, nor do they describe the direction or axes of advance.
- This definition does not mention any character, variety or differences of lines of operation.

The U.S.'s 2001 Joint Publication 3-0 Doctrine for Joint Operations states: *"Lines of operations define the directional orientation of the force in time and space in relation to the adversary. They connect the force with its base of operations and its objectives. … In modern wars, lines of operation attain a three-dimensional aspect. JFCs use them to focus combat power toward a desired end. JFCs apply combat power throughout the three dimensions of space and over time in a logical design that integrates the capabilities of the joint force to converge on and defeat adversary centers of gravity."*[lviii]

Three aspects are worth mentioning:

- Lines of operation are seen in relation to the enemy and are therefore linked to combat power and are only seen in relation to an enemy center of gravity.
- Lines of operation connect the force with its base of operations and its objectives but JFCs use them to focus combat power toward a desired endstate.
- Lines of operation are a tool to create a logical design.

The US Army's 2001 FM 3-0 Operations tells us about interior and exterior lines of operation and helps to clarify that there are different kinds of lines of operation:

> *"When positional reference to an enemy or adversary has little relevance, commanders may visualize the operation along logical lines. This situation is common in stability operations and support operations. Commanders link multiple objectives and actions with the logic of purpose — cause and effect. In a linkage between objectives and forces, only the logical linkage of lines of operation may be evident. Multiple and complementary lines of operation work through a series of objectives. Commanders synchronize activities along multiple lines of operation to achieve the desired end state. Logical lines of operation also help commanders visualize how military means can support nonmilitary instruments of national power."*

[lviii] US Joint Publication 3-0 Doctrine for Joint Operations, 2001,p. III 16 - III-17.

Three important aspects can be derived from FM 3-0:

- The distinction between the positional reference to an enemy or adversary and lines of operation (here introduced as "logical lines of operation").
- These logical lines of operation are linked to Stability Operations and Support Operations.
- The concept of multiple lines of operation and the reference to nonmilitary instruments of national power.

The United Kingdom's 2004 JWP 5-00 Joint Operations Planning states:

> *"Lines of operation are planning tools that establish the inter-relationship, in time and space, between decisive points and the center of gravity and are usually functional or environmental in nature. …Although individual environmental lines of operation, such as an air line of operation can be valid, functional lines such as protection of Lines of Communication will often be more effective. … Lines of operation also may continue beyond the achievement of the operational center of gravity in order to reach the strategic end-state. There may be occasions where some lines of operation will go through the operational center of gravity and continue beyond, as in certain operations, even after defeat of the operational center of gravity, actions need to be continued to achieve the operational end-state."*[lix]

Further important aspects derived from this publication are:

- There exist multiple lines of operation.
- Lines of operation can be "functional" or "environmental".
- Lines of operation end in the center of gravity or continue beyond to achieve the military endstate.

The German draft doctrine on operational art "Leitlinie Operative Führung von Einsätzen der Bundeswehr"[lx] adds the following aspects:

- Single lines of operation are assigned to different Component Commands.
- Military lines of operation have to be coordinated with nonmilitary lines of operation.
- There is a distinction between operating on interior and exterior lines and the term lines of operation.

This very brief look at multinational doctrine shows how different the understanding of the theory of the lines of operation is. In planning for multinational operations this inevitably leads to confusion. The major differences are:

- While some publications focus on traditional warfare and only enemy centers of gravity are mentioned, others leave more freedom by not defining to whose center of gravity they

[lix] UK Joint Warfare Publication 5-00 Joint Operations Planning, 2004, p. 2-17.

[lx] Leitlinie Operative Führung von Einsätzen der Bundeswehr, 2. Mitprüfungsentwurf, 2004, p. 48.

refer. The latter reflects lessons learned in contemporary operations where multiple actors, friendly, neutral and adversary have to be considered, which we can find in major combat operations as well as in stability operations and support operations.

- Confusingly, lines of operation can either lead to a center of gravity, to objectives or to the endstate.
- Another difference is the application of lines of operation to achieve joint effects or to generate tasks for components.
- The division between operating on interior and exterior lines and the term lines of operation itself. Unfortunately introducing "logical lines of operation" "or functional lines of operation" does not help solve the confusion surrounding the term itself and opens the question, if there also exist "illogical"[lxi] or "dysfunctional" lines of operation.

New Definitions

This dilemma demands a new definition for lines of operation, which reflects the new operational environment and their application in formulating an operational design as well as the further evolution of the utilization of the theory of lines of operation. Currently, and this is very confusing, the term lines of operation has a double meaning and is seen differently in the western world's militaries. On one hand we apply lines of operation accordingly to Jomini focused on the factor space, on the other hand we use this term as a part of his basic concept of operational design. This can be separated by introducing the term "operational alignment" to cover the factor space while defining lines of operation as part of an operational design. The authors chose the term operational alignment because it expresses the factor space more accurately and can also be used on the tactical level while the term "lines of operation" should be used as a comprehensive planning tool on the operational level of war.

Operational Alignment

Operational alignment describes different arrangements of a campaign with the alignment of forces covering the factor of space. The different variants are to operate on interior lines, to operate on exterior lines, to operate on concentric lines and to operate on divergent lines. There is common understanding in national European, NATO and American doctrines concerning operating on interior and exterior lines. The concentric and divergent approach, also based on Jomini's theories, is not covered at all but is being used in today's operations. (Figure 2)

[lxi] As stated by Milan Vego in a lecture at the National Defense Academy in Vienna, Austria on 20 January 2006.

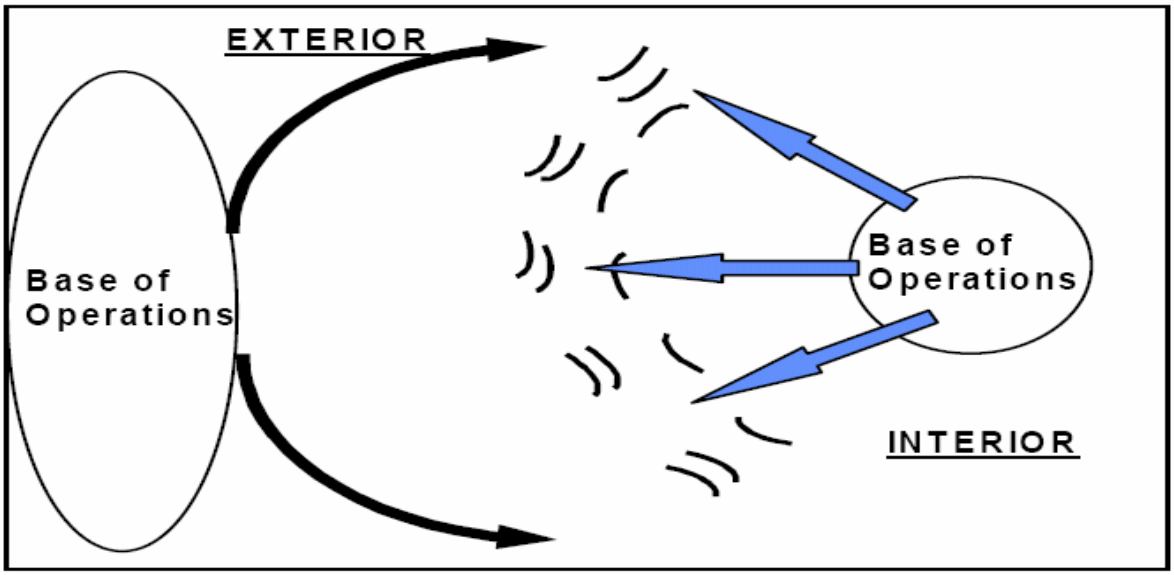

Figure 2: Operational alignment: Interior and exterior lines[lxii]

Concentric lines are those which depart from widely-separated points and meet at the same point, either in advance or behind the base. Forces use at least two bases. (The original plan for Operation Iraqi Freedom using Turkey, Kuwait and other locations as bases can be used as an example for this concept.) (Figure 3)

Divergent lines are those by which an army would leave a given point to move upon several distinct points. These lines, of course, necessitate a subdivision of the army.

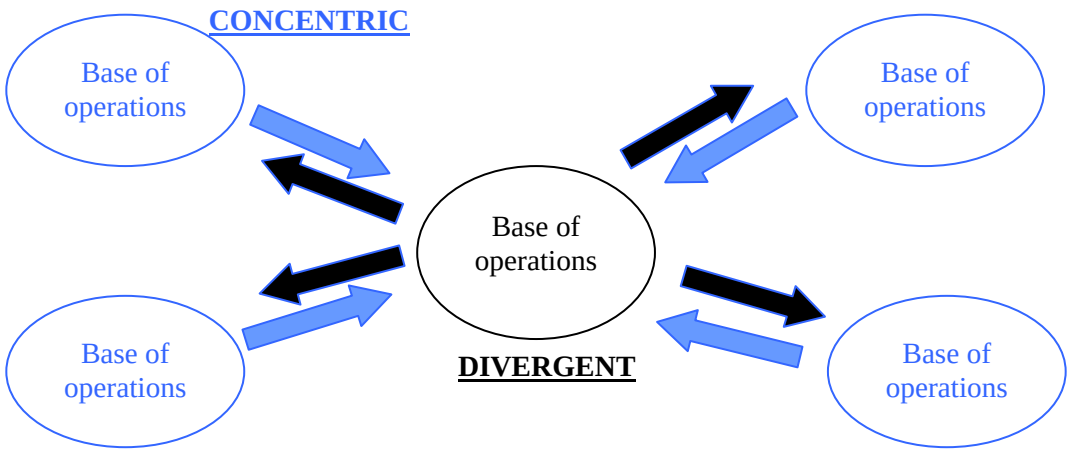

Figure 3: Operational alignment: Concentric and divergent lines, authors

[lxii] NATO Guidelines for operational planning, 2005, p.3-12.

Lines of Operation

Although different in their approach, U.S. and European doctrine offer a good source for a new definition: Lines of operation link decisive points on the critical path to (the) center(s) of gravity and lead through the operational and military-strategic objectives to the military endstate.

This definition reflects the idea that an open approach to the concept of center of gravity allows a broader application across the whole range of military operations, especially asymmetric operations, where multiple actors possess centers of gravity. Lines of operation leading to centers of gravity or objectives can be shortsighted and bears the danger of stopping military forces before they achieve an aim with relevance to the strategic level. The dominant factor on the operational level has to be the military endstate. In modern operations decisive points must be expanded and refined. They can be understood as a geographic location but also as source of military power or nonmilitary power. Their destruction or capture, control or defense, or continuous surveillance and monitoring[lxiii] is necessary to effect the center of gravity to achieve the operational and military strategic objectives and reach the desired military endstate.

Planning for today's operations has to consider the existence of several different **military lines of operation**. In addition, **nonmilitary lines of operation** – where the main effort lies on other assets than military forces – will have an effect. Both have to be coordinated to conduct a comprehensive approach to be successful in the modern operational environment.

Lines of operation are a planning tool to create the operational design, which can cover the following aspects:

1. The application as a conceptual tool for the operation level to arrange decisive points. The joint force, components and other military and non-military forces as well as in certain cases NGOs and IOs can conduct operations on **conceptual lines of operation**. The criteria for a conceptual line of operation are the actions and activities of the involved forces.

2. Actions and activities of armed forces can be coordinated in three different ways: joint with **joint lines of operation**, component oriented with **component oriented lines of operation** and a mixture of both.

3. The operational design visualizes the OPLAN to check and control the progress of the campaign. In this context, lines of operation support the synchronization of available means and their proper utilization ensures that all efforts are shaped and focused to reach the military endstate. Additionally they are a vital tool in the development of courses of action, branches and sequels.

Examples for the Application of Lines of Operation in Modern Operations

Since the end of 2001 two operations have been conducted simultaneously but separately in Afghanistan: Operation Enduring Freedom and a stabilization operation using the International Stabilization and Assistance Force (ISAF). The operational design of the first ISAF OPLAN

[lxiii] Milan N. Vego, Operational Warfare 2000, p. 8.

001/02 (UK Operation FINGAL[lxiv]) offers a good example for the new application of the lines of operation. (Figure 4)

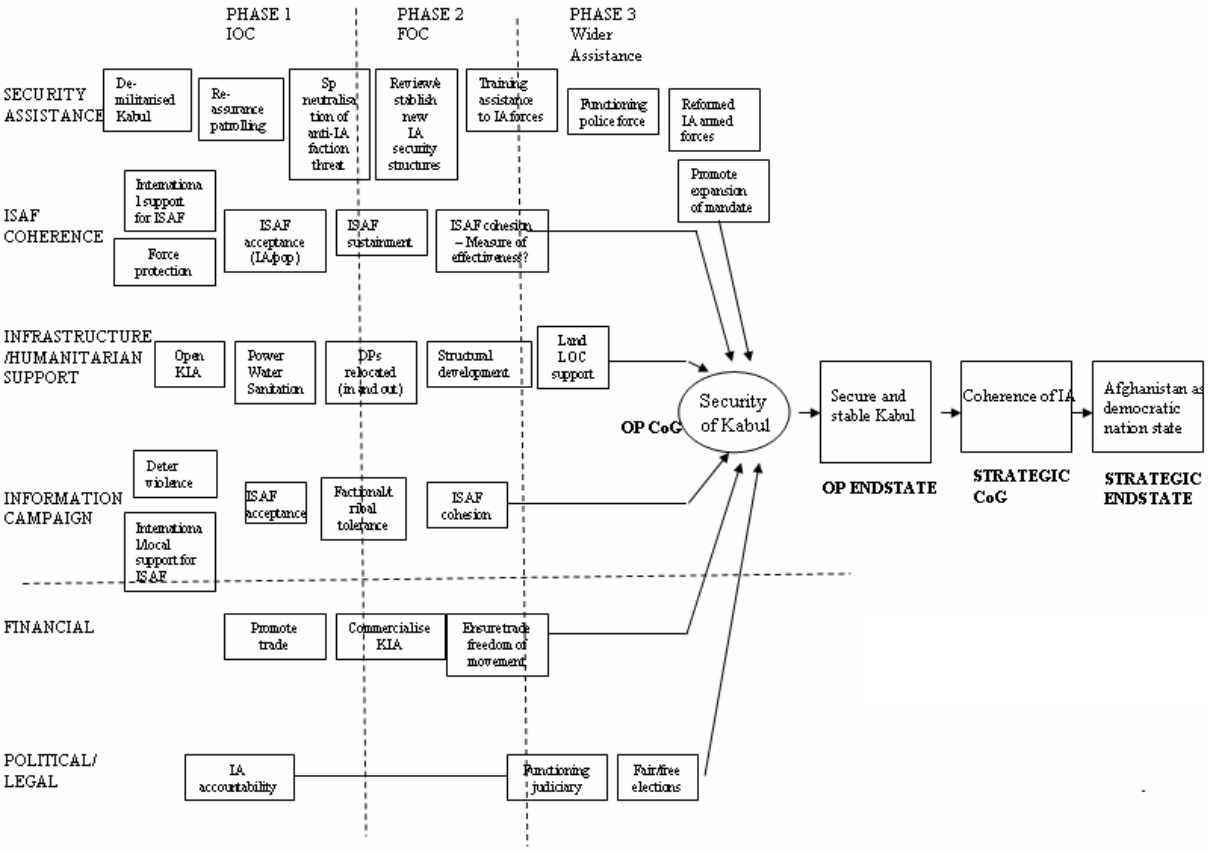

Figure 4: Operation FINGAL: Operational design Phase 1-3: HQ ISAF: Operation FINGAL OPORDER 001/02; Kabul; 2002

Another example is given by General Tommy Franks' explanation of his lines of operation in Operation Iraqi Freedom: Operational Fire, SOF Operations, Operational Maneuver, Information Operations, Unconventional Warfare/Support Opposition Groups, Political-Military, and Civil-Military Operations.[lxv] Operational Fire and Operational Maneuver are joint lines of operation. SOF Operations are component oriented lines of operation. This is an example for the mixture of joint lines of operation and component oriented lines of operation in an operational design. Information Operations and Unconventional Warfare/Support Opposition Groups are conceptual lines of operation. Political-Military and Civil-Military Operations are nonmilitary lines of operation. A comparison of the application of the military lines of operation in those two operations shows their different quality. In a major combat operation the military lines of operation are used in a wider spectrum compared to stability operations. Nevertheless nonmilitary lines of operation have their value also in major combat operations and have to be considered in all phases of a campaign plan.

[lxiv] In accordance with UK doctrine the lines of operation end in the centre of gravity.

[lxv] Tommy Franks, American Soldier 2004, p. 339.

Conclusion

"*Indeed, the lines of operation I listed on my legal pad involved much more than troops, tanks and planes.*"[lxvi]

In today's complex operational environment, where the military is only one of several strategic assets to reach a political endstate, the term lines of operation has to be defined in a new and broader way. To dissolve the confusion concerning the term and double application of lines of operation, the authors suggest the new term "operation alignment" to cover Jomini's historical theory using lines to explain the alignment of forces in the battlespace as well as a new definition and meaning for lines of operation. To successfully plan and conduct modern operations it has become necessary to have a comprehensive utilization of lines of operation in combination with the operational design. Current NATO, national European and U.S. doctrines only partially explain the role of lines of operation in the campaign planning process.

Planning and conducting multinational operations are difficult tasks. A different understanding of the same basic terms and concepts can cause severe damage to our troops and is not acceptable. This article focuses on lines of operation and the authors hope to help dissolve some of the confusion around this concept. It is time to find a common and clearly defined approach to all facets of operational art because in proper campaign planning they provide the source for sound sequencing and synchronizing of all available military and nonmilitary sources of power.

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Capt Johann Fischer is a participant of the 17th General Staff Course at the National Defense Academy in Vienna, Austria. Prior to that he was in command of a tank company. In the third and final year of the course he wrote his master thesis on lines of operation.

The authors would be very happy to receive your comments on this article under philipp.eder@bmlv.gv.at

[lxvi] Tommy Franks, American Soldier 2004, p.339.

The Brilliance of the Six-Phase Construct

By
Lt Col James R. Sears Jr.

The new six-phase campaign planning construct in Draft Joint Publication 5-0 unnecessarily complicates campaign planning, ties the commander's hands regarding transitioning between phases, and prescribes arbitrary phases a commander is forced to use regardless of his need in a campaign. As with all new transformational concepts, one cannot expect to convince naysayers with the first attempt at changing an established method of planning or conducting warfare.

While these concerns cannot be arbitrarily dismissed, those critiques miss the point of the new construct: To change the way military commanders and planners approach campaign planning. The brilliance lies in two concepts regarding how the phases change thinking and draw planners away from their natural fixation on the end state of Phase III. First, the nature of the phases will naturally incorporate more interagency leadership at the end of a campaign as the military enables civil authority. Second, the new phases change the paradigm for success while shaping a theater or deterring conflict.

Begin With the End in Mind

Despite doctrinal guidance to the contrary, military planning has been deficient regarding interagency participation. There are many arguments for this, beginning with military criticism of interagency partners' capacity, desire, and ability to participate in the planning process. The interagency process further complicates planning. It is cumbersome at best, and based on gaining consensus among various departments, each with widely varying cultures and ideas. Finally, none of those departments appreciate the level of planning required to conduct a campaign and may not impart the same level of importance to the planning process as the military. However, when viewed from the interagency perspective, those can be seen as excuses professed by the military to efficiently dismiss interagency participation and move on with military planners writing campaign plans.

The six-phase construct brings renewed emphasis to interagency inputs by limiting phases with the majority of effort coming from the military to just two. Phases II (Seize the Initiative) and III (Dominate) are clearly militarily focused. One problem with that focus is that it still attracts planners to initially focus on them. Despite the best intentions to regressively plan, it is just too easy to focus on the military vision of the end state of the Dominate Phase.

The other four phases, however, are more ambiguous and difficult to define strictly in military terms. Phases I (Deter) and IV (Stabilize) incur military efforts, but their inherent nature forces the commander to plan them with shared interagency responsibility. While a commander must be prepared to militarily seize the initiative, with a total interagency effort it may be possible to deter without much more than the threat of military deployment. Stabilize inherits the fruits of the Dominate phase, however its focus must be on the interagency partners to whom the military will turn over control to in the final phase.

Phases 0 (Shape) and V (Enable Civil Authority) have military participation but are clearly focused on interagency considerations. Conceptually, Shape is much easier to put in non-military terms than many of the other phases. However, no other departments are organized regionally with significant resources similar to the Department of Defense. Therefore, the Combatant Commander will retain a significant role in shaping his theater.

Enabling Civil Authority is a critical component of the six-phase construct for getting interagency partners into planning and executing campaigns. Draft Joint Publication 5-0 leads to the military being the *supporting* agency after transitioning to Enabling Civil Authority. In order for our partners to be ready to assume this authority their presence will be required throughout the process. If one regressively plans (i.e. begin planning with the final end state in mind), this encourages interagency integration throughout the planning process, starting with the final phase.

End at the Beginning

The previous, four-phase construct (Figure 1) approached phases as a means of transitioning from the beginning to the end of a campaign. While this is an over-generalization, the concept

Figure 1: Previous Four-Phase Construct – JP 3-0, 10 September 2001

of a campaign was a linear progression from the first to fourth phase with the purpose of *getting through all phases* with the least cost in blood and treasure. The purpose of Phase I was to prepare to seize the initiative. This is no longer the case with the new construct.

The new Seize, Dominate, and Stabilize phases retain the classic military purpose of succeeding through each phase with the least cost. Moving on to the next phase indicates *success*. This is reflected in Draft doctrine through the weight of military effort in these phases (Figure 2).

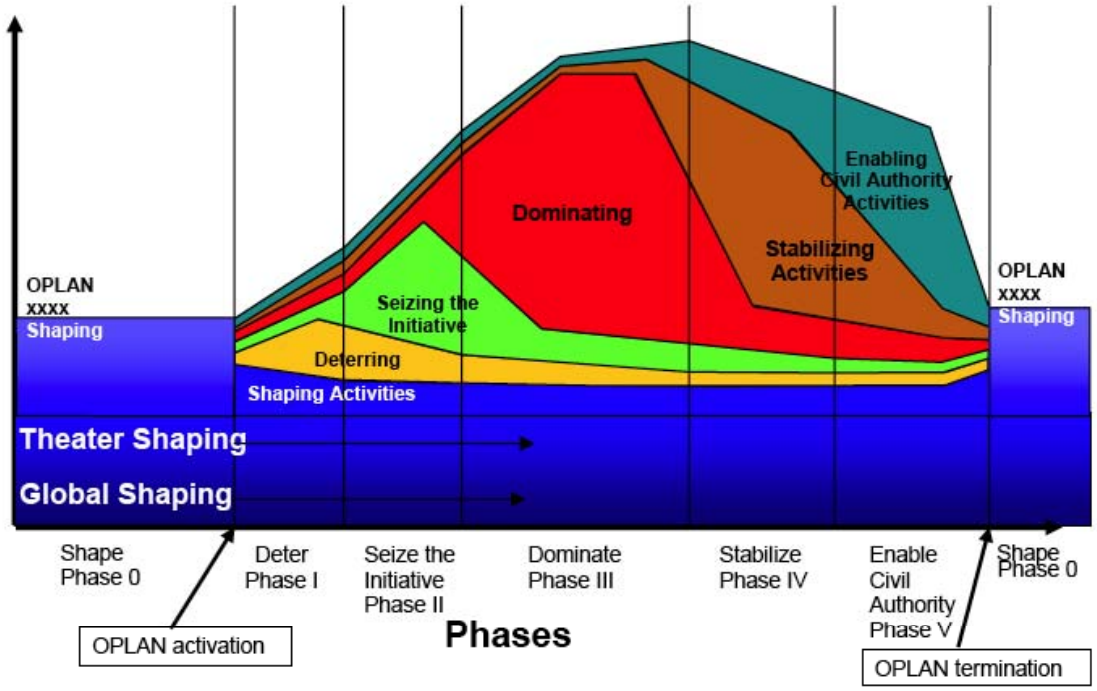

Figure 2: Notional Military Effort by Phase – Draft JP 5-0

The difference in the new construct comes from the purpose of early phases in the campaign. In the case of Shape and Deter, moving to the next phase indicates a *failure* of the current phase. The purpose of Shape should be to either never moving beyond Phase 0 or to shape the situation sufficiently to render contingency planning no longer relevant. For Deter, the joint force does not move to Seize unless Deter has failed. Therefore, the purpose of Deter must be to *return to Shape while preparing to Seize*. Even if the purpose is not to return to Shape, it is illogical to define success by the failure of deterrence. This is commensurate with common State Department thought that when the nation must move to armed conflict, State has failed its mission. The benefit of this reasoning is it brings our interagency partners into the beginning of the plan.

Conclusion: The Brilliance

The brilliance of this new thinking is how it encourages interagency integration into planning, regardless of where the commander begins his planning effort. A more accurate depiction of the six-phase construct shows the cumulative effort of all agencies in a campaign as a straight line above the military weights, with acknowledgement that the white space must be filled by our interagency partners (Figure 3).

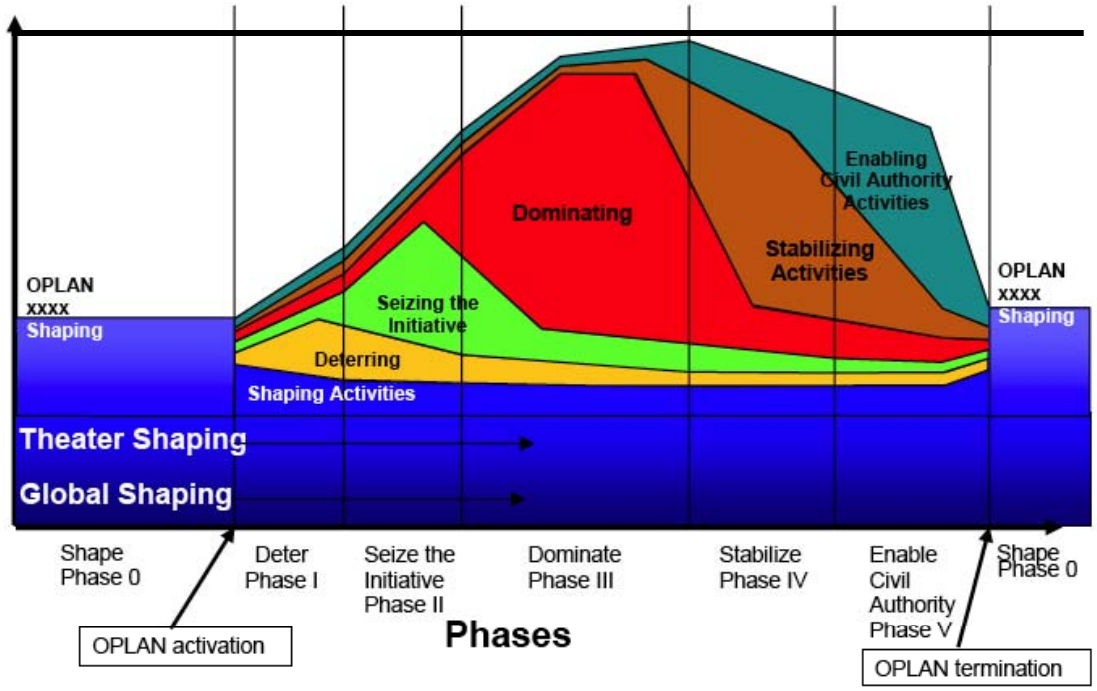

Figure 3: Line Depicting Total Effort

This cumulative effort graphically displays the earlier assessments that interagency participation is critical in the first and last phases of a campaign. It further shows significant interagency effort due to the implied nature of the Seize and Stabilize phases.

The end result of this analysis, based on interagency verses defense efforts, is displayed in Figure 4. The blue indicates a preponderance of interagency effort – in other words, the commander cannot expect to be successful in these phases without significant interagency coordination early in planning and execution. As one moves toward the middle, the transitions from interagency to military predominance (color shift from blue to red) are demonstrated by the shift from blue to red. The military receives primary consideration in the middle.

Figure 4: Phases by Predominance of Effort

Working with, incorporating, and utilizing the interagency are not new ideas. The "new" part is acknowledging that cannot happen without considerable change in military outlook toward planning. Unfortunately, if planners continue to resist the change by focusing on negative

aspects of the new construct based on an outdated notion of military purpose, the fixation on kinetic solutions to Phase III will continue. The six-phase construct compels planners to incorporate interagency expertise in the final phase of a campaign as the military enables civil authority. It further includes their expertise in the Shape and Deter phases by driving the purpose of those phases toward staying in or returning to Shape instead of moving forward. This changed outlook provides the impetus for the planner and commander to look beyond Phase III and incorporate interagency expertise throughout the planning and execution of a campaign.

Lt Col Jim Sears, United States Air Force, is an F-16 pilot with combat experience in Operations Southern Watch and Enduring Freedom, and was an Airborne Forward Air Controller during Operation Anaconda.

Deans Corner

By
COL Fred Kienle

The Joint Advanced Warfighting School (JAWS) Class 05-06 is immersed in the Operational Art 6500 course, developing and honing their skills as joint campaign planners. Once again, lessons learned from the inaugural class have resulted in numerous adjustments and improvements to the JAWS curriculum. This year's approach finds greater reliance on practical exercises and scenario-driven assignments while focusing on the most current versions of emerging doctrinal references. And once again, we are fortunate to host many distinguished senior fellows, superb guest speakers and subject matter experts in our seminars.

General McKiernan recently spent time with JAWS Class 05-06 while attending Allied Command Transformation's (ACT) Exercise Allied Reach conducted at the Joint Forces Staff College in January. As part of the rich discussions between General McKiernan and the JAWS students, the Commander of the United States Army Europe / 7th Army and Allied Land Component Command in Heidelberg provided some specific tips for aspiring campaign planners. Among the many lessons provided and guidance presented, General McKiernan reminded our JAWS students that:

1. The Effect-Based Approach is something that good planners have always understood. It is not an entirely new approach.

2. Components never have the final call on timings, force sizing, suspenses and other key decisions. These critical decisions reside at joint headquarters and are heavily influenced by political realities.

3. The planning process is usually more important than the plan itself. This is an age-old adage that applies as much today as ever before.

4. Wargaming must be done. The traditional "action-reaction-counteraction" method is essential and must examine the enemy, the environment and multiple options.

5. Interagency planning and execution are the way of the world. We must all become attuned to interagency processes and associated responsibilities.

6. Phasing is still an important part of the planning process. While the phases may become blurred they continue to provide needed organization. And note that Phase 0 never stops.

7. Planners and commanders must always keep all options open and determine what is the worst thing that could happen – then be prepared for it. This is the business of branches and sequels.

Needless to say, every JAWS student and faculty member copied these pointers into their notebooks for future use.

The JAWS faculty is looking forward to a visit by the CJCS' Process for the Accreditation of Joint Education (PAJE) team in early April. This team, much like the previous teams from the U.S. Department of Education and Middle States Association of Colleges and Schools, will examine the JAWS program in detail to ensure adherence to rigorous standards and compliance with directed joint learning areas. These visits always foster useful exchange and encourage the sharing of best practices between the team and the visited institution.

Thanks to all for the incredibly positive response to the JAWS Operational Art and Campaigning Department's *CAMPAIGNING* Journal. The e-mail exchanges and quality of timely article submissions is simply astounding. The dialogue and debate engendered has exceeded our hopes and expectations. As always, please pass copies of *CAMPAIGNING* along to your colleagues and practitioners of all aspects of operational art. Finally, a sincere thanks to all of our contributors; you challenge us to think about our craft, and that is important work.

Upcoming Events

2-6 April: Process for Accreditation of Joint Education (PAJE) visit

10-13 April: Joint Special Operations University course

24-27 April: COCOM West Trip

8-12 May: Information Operations Planners Course

16 June: JAWS Graduation

24 July: JAWS class of 2007 begins

Letter to the Editor

By
LtCol Matt Lopez

Congratulations on your inaugural issue of Campaigning. You hit the mark in attaining your goal of "providing planners with a source of insight into current issues regarding planning." To paraphrase Lieutenant General Paul Van Riper, USMC retired, what is missing in today's doctrine development is honest and open dialogue of concepts and ideas. Your first issue was a step in the right direction in opening this dialogue and providing planners a resource for insights into developing concepts and ideas.

The article, *Campaign Phasing and the New Joint Publication 5-0* by Dr. Milan Vego of the Naval War College was thought provoking. His critical analysis of Joint Doctrine's move to replace the four phases of campaign planning to a directed six-phase campaign plan highlights the challenge planner's face in translating policy and strategy into operational plans. His article is just the type of open dialogue that is needed to help improve the doctrine writing process. It is exactly the type of contrasting and thought provoking view LtGen Van Riper advocates.

Especially thought provoking are his insights into Phase 0 Shape and Phase 1 Deter. What is ambiguous in the current draft is the relationship between the shape and deter phase of an OPLAN and the Combatant Commanders Theater Security Cooperation Plan (TSCP). One could argue that for a designated OPLAN, Phase 0 and the TSCP are one in the same, with obvious flexibility to adjust to changing situations. I believe this option would meet the SECDEF's intent of making OPLANs living documents. The alternative view would be to separate the shape and deter phase of an OPLAN from the TSCP, which would in essence bring us back to the old four-phase campaign planning paradigm. Another advantage to having a conceptual separation of six phases vice four is the focus on interagency planning. The hope is that the separate phases lead to a better transition between when the military is expected to be the supported element of national power and when it is the supporting effort.

Dr. Vego's analysis that the new six-phase construct is too prescriptive is much the same argument that occurred when Joint Doctrine accepted the four-phase paradigm of campaign planning. Although I agree with Dr. Vego's assessment that the current draft's articulation of the six-phases is somewhat confusing, I believe that creating the separation in phases 0 thru 2 helps planners to focus on integrating the other elements of national power into campaign plans. Although seemingly simplistic from a military planner's perspective, viewed through an interagency perspective, phases 0 and 1 are imperative.

Prior to finalizing the draft of Joint Pub 5, its authors must address Dr. Vego's concerns that Phase II and III, as currently written, focus only on offensive/kinetic operations. Left as written, JP 5 fails to satisfy DOD directive 3500.5 which requires doctrine to equally focus on stabilization operations as it does on offensive/kinetic operations. I applaud Campaigning for presenting Dr. Vego's dissenting view.

In contrast to Dr. Vego's thought provoking contribution, the article *Network Centric Warfare at the Operational Level* by Fred Stein and Hugh Kelly lacked critical analysis. In their advertisement for network centricity, the article does an outstanding job of highlighting the brilliant success of the CFLCC during Operation Iraqi Freedom, Phase III - the attack to Baghdad. Unfortunately, it high jacks that success and falsely elevates "Network Centric Operation" (NCO) to have been the center of gravity of CFLCC's success. As the authors point out, information technologies are a key enabler and play an important role in C4ISR, but to credit every facet of the operation as a trumpet to Network Centric Operations is misleading.

A case in point is the author's inference that the CFLCCs staff was reorganized to conduct NCO. In reality, First Army, who serves as ARCENT had to reorganize to execute its functional role of a CFLCC. The re-organization for any Corp level staff is significant when they adapt to meet the functional role of a CFLCC. CFLCC's success is the result of changes across DOTMLPF, not only its ability to network its forces.

One of the most significant changes can be attributed to Generals Zinni's decision to pre-assign ARCENT the role of CFLCC which enabled First Army to focus their training and development of capabilities to support their future role as a CFLCC. This designation allowed for the establishment of the habitual relationship that First Army developed with its subordinate commanders.

Furthermore, if the authors expect the readers to accept that NCO was the driving force behind CFLCC's success, critical analysis dictates that NCO also hold responsibility for the failures/challenges of CFLCC. The challenges faced in defeating the Sadam Fedayeen at An Nasiriya, the failure of the deep attack into the Karbala Gap, and the challenges faced in the transition to phase IV can all be studied as examples where CFLCC experienced challenges that were not overcome by the panacea of NCO.

In conclusion, we, as planners, owe it to the young Americans who are forced to execute the plans we create to have the rigorous debate that LtGen Van Riper advocates. I congratulate "Campaigning" on its attempt to provide a venue for critical analysis and open dialogue about issues that affect planners.

LtCol Matt Lopez has served as a planner in several billets including, the I MEF staff, the Commandant of the Marine Corps Strategic Studies Group and the Joint Staff's Strategic Planning Cell He served as the Commanding Officer of 3rd Bn, 7th Marines during OIF I in Karbala, Iraq and during OIF II in Al Qaim, Iraq. LtCol Lopez was awarded the Silver Star for his actions in Husaybah on 14 April 2004. When the award was presented, LtCol Lopez was the highest ranking Marine to receive the Silver Star since the onset of the wars in Afghanistan and Iraq.

Update: Process for the Accreditation of Joint Education (PAJE)

The increasing need for current and relevant joint education is complicated by the fact that such education is presented by such a wide variety of institutions. Since a major purpose of joint education is to facilitate cooperation among the Services, there must be a certain level of consistency in what is taught and how it is presented, whether as part of the pure joint institutions of the National Defense University or the joint curricula of the Service staff and war colleges. The guidance to implement this consistency is provided by the CJCS in his *Officer Professional Military Education Policy*, CJCSI 1800.01C, or OPMEP. Each institution providing joint education is assigned specific joint learning areas and objectives in order to ensure that the students are receiving the appropriate education. There are also specific education standards that prescribe requirements for a variety of topics such as the learning environment, assessment, program evaluation, faculty hiring and development, and resurrecting, among others.

The CJCS is specifically tasked to ensure the adequacy of joint education. His guidance must be implemented by an established process. The OPMEP accomplishes this through a Process for Accreditation of Joint Education, or "PAJE." This process is used throughout the Department of Defense for schools teaching joint matters, and is the same process followed by colleges and universities and their regional accreditation agencies. The CJCS is responsible for ensuring that joint education requirements are met, and so the Joint Staff J7 coordinates this thorough review, which for the Joint Advanced Warfighting School (JAWS) will take place during the period 2-6 April 2006.

The PAJE program is the means by which the CJCS provides oversight, assessment, and improvement of joint education programs. The first phase in the process is that of certification, which is what JAWS is currently undergoing. Within two years of certification, the program will be reviewed again with a goal of receiving full accreditation, normally granted for a six year period.

The review process began when JAWS faculty and staff conducted a detailed analysis of program strengths and areas needing improvements, with the information all detailed in a comprehensive self-study. This document then serves as the foundation for the assessment of the program by a team of experts from throughout DoD education institutions under the supervision of the Director, Joint Staff and the JS J-7. These experts are from peer institutions, and will carefully review the self-study in preparation for the visit. Then, during the week of 3-6 April 2006 they will visit Joint Forces Staff College and carefully review all aspects of the JAWS program and the support provided from throughout the College. Some individuals will examine the curriculum in detail, ensuring that current and relevant information is being taught in accordance with the OPMEP. Others will review how students and the program are assessed and evaluated, how faculty are hired and prepared, and how the administrative and resourcing requirements are being met.

The PAJE provides much more than just an assessment of the JAWS program, though that of course is its primary goal. Just as important, it is also a sharing of best practices, from the JAWS program to those who are assessing, as well as from those assessing sharing with the members of the JAWS team. Over time, this PAJE process helps all institutions to better themselves and improve the overall joint education experience of their students.

JAWS OPMEP Directed Learning Areas

***Learning Area 1** -- National Security Strategy, Systems, Processes and Capabilities*

***Learning Area 2** -- Defense Strategy, Military Strategy and the Joint Operations Concepts*

***Learning Area 3** -- Theater Strategy and Campaigning with Joint, Multinational and Interagency Assets*

***Learning Area 4** -- Joint Planning and Execution Processes (Pre-Conflict Through Post-Conflict)*

***Learning Area 5** – Information Operations*

***Learning Area 6** -- Characteristics and Conduct of the Future Joint Force*

***Learning Area 7** – Joint Strategic Leader Development*

Adaptive Planning (AP) Technology Update

By
CDR John "Mick" Meissel

The Secretary of Defense AP transformation initiative, as directed by the 13 December 2005 AP Roadmap, defines AP as "the Joint capability to create and revise plans rapidly and systematically, as circumstances require." Translated, it means the joint planning community will see a reduction in the traditional two year planning cycle to produce plans in less than six months. Planners will receive clear strategic guidance and benefit from frequent dialogue between senior civilians and military leadership. Plans will need to contain a range of embedded options for leadership consideration. They will be kept "living" through net-centricity and technology that automatically "trigger" flags that alert planners to key changes in guidance, assumptions, the threat, and the environment. The approved AP Roadmap defines a common agile AP Process that currently supports contingency planning, and in the near future, crisis planning and execution. The biggest capability gap faced by the planning community today is the lack of planning technologies to support AP.

An abundance of automation today directly or indirectly supports joint operations. However, very little automation supports the art of planning. Most tools and technologies are not truly "joint" or able to be used by all planners in a supported or supporting role to a joint planning effort. Many are built for only one Service's, COCOM's or organization's use. Most are execution-centric. Nearly all technologies are in varying states of development with fielding timelines that are unsynchronized. Result: Duplicative or stove piped capability gets delivered that is not interoperable with other technologies and does not support seamless data exchange. It is also not clear which "authoritative" databases will be used by these technologies. To implement AP as envisioned, the planning community needs integrated technologies that include a suite of planning and execution tools with transparent access to authoritative data.

The Joint Staff (JS) J-7 and Office of the Secretary of Defense (Policy) (OSD (P)) have formed an AP Technology Users Group consisting of planners from the Services, combatant commands and combat support agencies to determine capability gaps and requirements for an integrated tool suite. The near-term goal is to leverage existing technologies, making them interoperable and able to exchange data; and to develop new capabilities to address the gaps. These requirements are validated, approved and forwarded to Defense Information Support Agency (DISA) or other appropriate technology users' groups to provide the desired material solutions.

There are several key AP Technology initiatives being developed to complement the existing capabilities provided by Global Command and Control System-Joint (GCCS-J). The Collaborative Force Analysis, Sustainment and Transportation (CFAST) system is one success story with core capabilities that support planning. It is a joint operational prototype web portal that offers a "one-stop-shopping" collaborative planning environment. It contains more than 20 applications that support capability-package requirements generation, phasing of forces, lift planning, sustainment and logistics planning, flow generation and transportation feasibility analysis. It is endorsed by the Joint Requirements Oversight Council (JROC) as an operational

prototype and has been globally fielded to the planning community via SIPRNET access. Pacific Command, European Command, Transportation Command and others are using it with great success. There is also huge emphasis on the integration of service sourcing tools with planning systems like CFAST to rapidly source contingency requirements, consistent with Service title 10 responsibilities and JFCOM's UCP Joint Force Provider mission, based on actual force availability and readiness.

The Defense Readiness and Reporting System (DRRS) is a promising operational prototype that will greatly improve the tracking, visibility and, in the future, prediction of joint readiness. DRRS provides a new way for units to report readiness based on Mission Essential Tasks. Global Force Management (GFM) is an initiative that will provide a process, automation and global visibility of all forces while managing them across operations and contingencies based on actual force availability and readiness. The Interactive Gaming System (IGS) has shown tremendous potential to conduct traditional wargaming. When used in conjunction with other Modeling and Simulation (M&S) technologies, the combatant commands will have the means to rapidly assess the operational feasibility of courses of action, conduct detailed excursion analysis, and better assess risk to plans.

The JS J-7 and OSD (P) are partnered to lead the AP transformation effort. The Joint Planning and Execution Community (JPEC) and other defense organization's and communities recommendations and comments are welcome and encouraged. For more information, please contact CDR J. "Mick" Meissel, USN, at the Joint Operational War Plans Division, J7, the Pentagon, at commercial 703-697-2949, or DSN 227-2949; e-mail at john.meissel@js.pentagon.mil.

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JAWS Operational Art and Campaigning Publications

The following campaign planning publications are available from the Joint Advanced Warfighting Schools, Department of Operational Art and Campaigning web site.

http://www.jfsc.ndu.edu/schools_programs/jaws/publications.asp

Case Studies

- Horatio Nelson and the 1798 Mediterranean Campaign
- The Mexican American War

War Plans

The following collection of war plans are from the Joint Forces Staff College Library. These are original World War II campaign plans that have been scanned electronically to enable easy accessibility by students of campaign planning. Each campaign plan consists of a back ground introduction (Word document) followed by the original plan in PDF format.

- Introduction Reno IV Outline Plan
  - RENO IV Outline Plan 6 March 1944
- Introduction Mindoro Operations Instruction NO. 74 MINDORO
  - Operations Instruction NO. 74 MINDORO 13 October 1944
- Introduction to Operation "ECLIPSE"
  - Operation "ECLIPSE" Appreciation and Outline Plan 24 November 1944
- Introduction Operation Plan 14-44
  - Operation Plan 14-44 Operation Iceberg 31 December 1944

NEW!

- Introduction to Tarakan Island Operations Instruction NO. 99
  - Operations Instruction NO. 99 Tarakan Island 21 March 1945

Intent

The Joint Advanced Warfighting School (JAWS) is envisioned to populate the Joint Staff and combatant commands with a cadre of officers expert in the joint planning processes and capable of critical analysis in the application of all aspects of national power across the full range of military operations. Graduates will be capable of synergistically combining existing and emerging capabilities in time, space and purpose to accomplish a range of operational or strategic objectives.

Disclaimer: The views expressed in this journal are those of the authors and do not represent the views of the Joint Forces Staff College, National Defense University or the Department of Defense.