



OPERATIONAL ART AND THE GULF WAR: MASTERPIECE OR FORGERY?

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AMSC 1

Research Essay

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Research Essay

**Operational Art and the Gulf War:
Masterpiece or Forgery?**

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OPERATIONAL ART AND THE GULF WAR: MASTERPIECE OR FORGERY ?

The Gulf War was indisputably a one-sided event in favour of the coalition. Assembling a diverse group of western and Arab forces, rapidly deploying over 350,000 troops, most of them from 10,000 miles away, and waging a short 100 hour ground war, the coalition unequivocally won the conflict with minimal casualties while the Iraqi forces suffered overwhelming losses and were quickly and effectively routed from Kuwait.¹ In the aftermath of such a convincingly-won campaign, it is worthwhile for us to assess the results to determine what allowed this success to enhance probability of similar success in future conflicts. A common perception is that western technology, particularly precision-guided munitions of the U.S. Air Force, tipped the balance early and decidedly. This point has come under significant debate.² A second conclusion is that major changes in U.S. military doctrine were at the heart of the success. This notion can be encapsulated in the concepts of the operational level of war and operational art.³

Although the concept of the operational level of war can be traced back to the Soviet Union in the mid-1920s, the resurgence in the use of the term and more relevantly

¹ The U.S. suffered 613 casualties: 146 killed (35 due to friendly fire) and 467 wounded (72 due to friendly fire). Michael R. Gordon and Bernard E. Trainor, The Generals' War, (Boston: Little, Brown and Company, 1995) 456-457. Although no records are available, Iraqi casualties are assessed as having been in the hundreds of thousands. Stephen Biddle, "Victory Misunderstood – What the Gulf War Tells Us About the Future of Conflict," International Security 21 (Fall 1996) 142.

² Stephen Biddle, "Victory Misunderstood – What the Gulf War Tells Us About the Future of Conflict," International Security 21 (Fall 1996): 176. Biddle states "Rather than a revolution through information dominance and precision strike, what the Gulf War really suggests is thus a new ability to exploit mistakes."

³ B.J.C. McKercher and Michael A. Hennessy, The Operational Art: Developments in the Theories of War, ed. B.J.C. McKercher and Michael A. Hennessy, (Westport: Praeger, 1996) 3-4. See also, for example U.S. News and World Report, Triumph Without Victory, (New York: Random House, 1992) ix.

the renewed focus on this level of warfare in the West stems primarily from the soul-searching within the United States Army in the aftermath of the Vietnam War⁴. Originally introduced in the 1982 version of the U.S. Army's FM 100-5 doctrine manual, the period between 1982 and 1986 saw the complete evolution of the U.S. Army's adaptation of the concept of operational level warfare, culminating in the 1986 version of the manual. The latest iteration, dated June, 1993, describes the three levels of war as strategic, operational and tactical, and reaffirms the concepts of operational level of war and operational art, with minor changes. The doctrine states that at the operational level, "joint and combined operational forces within a theatre of operations perform subordinate campaigns and major operations and plan, conduct, and sustain to accomplish the strategic objectives of the unified commander or higher military authority." Operational art is defined as "...the skillful employment of military forces to attain strategic and/or operational objectives within a theatre through the design, organization, integration and conduct of theatre strategies, campaigns, major operations, and battles...in its simplest expression, operational art determines when, where and for what purpose major forces will fight."⁵

These rather esoteric doctrinal enunciations on the operational level and operational art leave the reader wanting for a more practical and functional evaluation of these concepts. A review of the literature, which is replete with historical examples, leads to the emergence of four major characteristics as being relevant to the operational-

⁴ Richard M. Swain, "Filling the Void: The Operational Art and the U.S. Army," The Operational Art: Developments in the Theories of War, ed. B.J.C. McKercher and Michael A. Hennessy, (Westport: Praeger, 1996) 148.

⁵ FM100-5 Operations doctrine, (Washington: Dept of the army, June 1993) 6-1, 6-2.

level construct. One is an ability to create operational-level plans and conduct a war at the operational level which maintain strategic aims. This can be interpreted as the ability to generate operational plans, which, rather than maintaining a tactical focus, encompass the strategic objective. A second is that the operational perspective by definition consists of joint operations, encompassing a combination of air, land and/or sea elements. A third is manoeuvre warfare, in its broadest definition.⁶ Finally, logistics has clearly emerged as a key aspect of operational-level warfare.⁷

These more specific characteristics provide a clearer appreciation of the concept of the operational art. Space precludes a full review of the Gulf War from each of these perspectives. Therefore, this examination of the Gulf War will focus on the first two of the four primary colours of the operational-level palette just mentioned, namely operational-level planning and joint warfare, to assess the extent of operational art practiced. Closer examination leads to the conclusions that planning for the conflict was flawed and that the campaign, particularly the air effort, was far from a joint endeavour. The operational art as painted in the Gulf War was subject to some bold, but shaky, brushstrokes.

⁶ John English, "The Operational Art: Developments in the Theories of War," The Operational Art: Developments in the Theories of War, ed. B.J.C. McKercher and Michael A. Hennessy, (Westport: Praeger, 1996) 16-17. John English writes that manoeuvre warfare, enhanced with a faster OODA loop and mission-type orders, was attractive to the U.S. Army as this doctrine could compensate for smaller force numbers.

⁷ Clayton R. Newell, The Framework of Operational Warfare, (London: Routledge, 1991) 79. Newell refers only to the first three characteristics in his chapter "Conducting War". However, the entire following chapter, "Supporting War", is devoted to logistics. The themes of manoeuvre, logistics and planning are also identified by English as essential aspects of operational art. See English 16-19.

Planning is a critical component of the operational art. If the campaign plan does not adequately define the mission, the entire campaign will be on a weak foundation. In the U.S. Army Operations doctrine manual of the day, the objective of campaign planning at the operational level was "...converting broad strategic guidance into a campaign plan for a joint/combined force." Further on, it states: " Campaign plans set long-term goals - strategic aims such as control of a geographic area , reestablishment of political boundaries, or the defeat of an enemy force in the theatre of operations..." and "Initially, the commander must specify how the enemy is to be defeated."⁸ Although operational planning may not have been as clearly formalized in 1990 as it is now, the essentials of the process were present. Planning staffs carried out mission analysis and prepared options for courses of action. Closer examination of the planning process reveals inconsistencies and coordination problems. Two aspects of the operational planning phase will be reviewed: the staff process itself and the translation of strategic objectives into military operational terms.

Immediately following the Iraqi invasion of Kuwait on August 2nd, 1990, significant planning began for two separate actions: the first to establish a defensive position in Saudi Arabia, known as Desert Shield, and the second to prepare for an offensive campaign, eventually named Desert Storm. It is noteworthy that the air campaign plan and the ground campaign plan were prepared in isolation of each other as distinct and separate efforts and that for both plans General Schwarzkopf went outside his own staff to secure planners.

⁸ FM100-5 Operations doctrine, (Washington: Dept of the army, May 1986) 28-29.

In preparing the air campaign portion of the operational plan, General Schwarzkopf went beyond his CENTCOM headquarters and his own air staff (CENTAF), seeking assistance from the Air Force in the Pentagon. General Schwarzkopf required possible retaliatory capability in the early period following the Kuwaiti invasion, when ground forces were inadequate in numbers to provide any offensive capability, and his own air staff were, in his view, providing inadequate options. The request for Pentagon assistance would normally have been received by Lieutenant-General Adams, the Chief of Staff for Air Force Operations and a proponent of the Tactical Air Command position that the main role of air power was in support to ground forces. By a quirk of fate, which arguably had important repercussions for how the war was eventually run, General Adams was absent and the request filtered to Colonel John A. Warden III.⁹ The conceptualization of the strategic air plan, which eventually germinated into the first phase of the air campaign called “Instant Thunder”, was conceived by this officer.¹⁰

Even before receiving direction to do so, Colonel Warden had begun preparing an air campaign in his “Checkmate” war-gaming facility on August 5th, 1990.¹¹ Hence when the formal request to proceed with an air campaign was received, some critical concepts had already been determined independently of other factors. The basis for the plan was

⁹ Michael R. Gordon and Bernard E. Trainor, Gen., The Generals’ War, (Boston: Little, Brown and Company, 1995) 76. See also Richard T. Reynolds, Heart of the Storm: the Genesis of the Campaign against Iraq, (Maxwell Air Force Base: Air University Press, 1995) 30.

¹⁰ Williamson Murray, Air War in the Persian Gulf, (Baltimore: The Nautical & Aviation Publishing Company of America, 1995) 17. The name was appropriate and in direct contrast to the Vietnam War experience, where the air campaign Rolling Thunder had resulted in a compartmentalized, disjointed and escalating air effort, with six different organizations being involved.

¹¹ Richard T. Reynolds, Heart of the Storm: the Genesis of the Campaign against Iraq, (Maxwell Air Force Base: Air University Press, 1995) 15-22.

to attack strategic centres of gravity, at the higher levels of the military, political and economic systems, which would have the effect of “destroying Saddam Hussein’s ability to wage war by destroying targets critically important to his regime.”¹² The plan focussed strictly on the strategic level rather than the Kuwaiti theatre or ground forces.¹³ Colonel Warden’s plan had assumed that air power alone could win the war with a six day strategic campaign attacking 84 targets.¹⁴ In subsequent analysis, questions have been raised as to the validity of the centres of gravity assessed by Colonel Warden. For example, “...the plan’s assumption that a relatively short air campaign, attacking little of Iraq’s political infrastructure, could separate Saddam and his regime from the Iraqi population underestimated the strength of the Bathist control.”¹⁵

On August 10th, the Instant Thunder plan was briefed by Colonel Warden to General Schwarzkopf and General Powell, the Chairman of the Joint Chiefs of Staff. During this briefing, General Schwarzkopf scribbled notes, which eventually became his campaign plan. Based on this strategic briefing, four phases emerged for the campaign: Instant Thunder (strategic air bombing), suppression of air defenses over Kuwait, attrition of enemy force by fifty percent, and ground attack.¹⁶ This briefing was significant,

¹² Reynolds 54.

¹³ Murray 32. There were initially ten target sets: leadership; command, control and communications; strategic air defenses; airfields; nuclear, biological and chemical research and production; naval forces and port facilities; military storage and production; railroad and bridges; electrical power; and oil refining and distribution. General Schwarzkopf added the republican guard and Scuds were also added. Finally, once Desert Storm had begun, fixed surface to air missile sites and breaching sites for the ground offensive were added.

¹⁴ The Gulf War Air Power Survey (GWAPS), Volume I, Planning and Command and Control, Part I, Planning, (Washington:U.S. Govt. Printing Office, 1993) 145-146, 169.

¹⁵ Murray 19. See also Mark D. Mandeles, Thomas C. Hone and Sanford S. Terry, “Managing Command and Control” in the Persian Gulf War, (Westport: Praeger Publishers, 1996) 9.

¹⁶ H. Norman Schwarzkopf, General and Peter Petre, It Doesn’t Take a Hero, (New York: Linda Grey Bantam Books, 1992) 319-320.

because, in accepting the precepts of this plan and in fact formulating his entire campaign around this initial concept, General Schwarzkopf was bypassing his CENTCOM staff and their operational-level planning effort.

Shortly after briefing General Schwarzkopf, Colonel Warden and his staff flew to Riyadh to brief Lieutenant-General Horner, the Joint Forces Air Component Commander (JFACC) and Commander CENTAF, regarding his strategic plan. Seeking to regain control of his air campaign planning, the JFACC sent Colonel Warden back to Washington, while retaining his three key officers. This staff formed the nucleus of a special planning group, eventually called the “Black Hole”. Evidently, from the early stages of Desert Shield, the Black Hole planning cell was evolving a strategic approach to the air campaign in relative isolation, while CENTAF staff continued to concentrate their planning efforts on an AirLand battle in defense of Saudi Arabia as per the current U.S. Army doctrine.¹⁷ These staffs were eventually merged in December, 1990, but the Black Hole nucleus continued to be the prime drivers for the critical planning throughout the war.¹⁸

Evidence of a disconnect between the Black Hole air planning staff and the CINC’s intent can be found in examining the operational campaign objectives for the air war. These were:

- “1. Destroy Iraq’s military capability to wage war. (Attack Iraqi Political/Military Leadership and Command and Control)

¹⁷ Mark D. Mandeles, Thomas C. Hone and Sanford S. Terry, “Managing Command and Control” in the Persian Gulf War, (Westport: Praeger Publishers, 1996) 15.

¹⁸ GWAPS Vol I, Part II 200.

2. Gain and Maintain air supremacy. (Gain and maintain air superiority)
3. Cut Iraqi supply lines.
4. Destroy Iraq's chemical, biological, and nuclear capability.
5. Destroy Republican Guard forces.
6. Liberate Kuwait City with Arab forces.”¹⁹

Interestingly, items one, four and five co-relate to the centres of gravity identified by General Schwarzkopf. It is surprising that other air priorities were placed ahead of those identified by the CINC.

Hence, from the outset and primarily in the early stages of the effort, the Air Component Commander, General Horner, as well as his CENTAF staff, were bypassed in the conception of the air campaign plan. The bombing campaign against the Republican Guard is a clear example of the disconnect between the strategic planning effort and General Schwarzkopf's intent and is perhaps a result of the disparity in priorities just discussed above. During the August 10th briefing from Colonel Warden, General Schwarzkopf directed B-52 high altitude bombing of the Republican Guard "...I want the Republican Guard bombed the very first day, and I want them bombed every day after that. They're the heart and soul of his army and therefore they will pay the price.”²⁰ This direction was apparently not incorporated into the overall plan subsequently formulated by General Horner's staff. Two days before the beginning of the war, on January 15th,

¹⁹ GWAPS Vol II, Part II Effects and effectiveness, 78-79. Note the items in parentheses were for the U.S.-only document when wording was different.

²⁰ Schwarzkopf 320.

General Horner briefed General Schwarzkopf on the planned air effort. The CINC was angry that the air campaign was not planning on attacking the Republican Guard immediately, but that a phased campaign had been planned. General Schwarzkopf insisted that the strategic air effort, the air superiority phase and the air attack of ground assets, notably the Republican Guard, occur simultaneously.²¹ Colonel Warden's legacy that a strategic campaign alone could win the war in effect conflicted with the CINC's operational concept of the Republican Guard as one of the main centre of gravity.²²

The evolution of a strategic air campaign separate from the CENTCOM effort was to have ramifications throughout the war. Perceptions that the air effort was neither joint nor responsive to the land campaign's requirements would persist, and will be further discussed below.

Although General Schwarzkopf's early mission was to defend Saudi Arabia, as time progressed the UN resolutions and the embargo seemed incapable of generating favourable results. In October, General Powell ordered the CINC to prepare contingency plans for a possible offensive.

While it may seem that a major headquarters such as CENTCOM should have possessed integral resources to deal with any crises, this capability was apparently sacrificed in the name of the imperative for a joint representation on the CINC's staff.²³ Although some able planners undoubtedly existed within the organization, they had been

²¹ Robert H. Scales, Jr, Brig. General., Certain Victory: the U.S. Army in the Gulf War, (Washington: Brassey's Inc., 1994) 176.

²² Two other main centres of gravity, leadership (Hussein) and nuclear-chemical-biological capability, were essentially the domain of the air campaign. GWAPS Vol I, Part I 145.

²³ Gordon 125. Admiral Sharp was the senior planning officer and Air Force Major-General Moore the senior operations officer in CENTCOM. Neither had the background to plan a major land campaign.

focussed on a defensive plan. Given the ground forces then committed to the Gulf, they were unable to conceptualize what General Schwarzkopf called a “winning offense” option. Consequently, as was the case for the air planning effort, General Schwarzkopf was required to look elsewhere for brain-power to create his land campaign.

Again seeking help from the Army in the Pentagon, he was advised to avail himself of an elite cadre of officers who were all graduates from the School of advanced Military Studies (SAMS) at Fort Levenworth, Kansas.²⁴ Forming a second special planning group, unfavourably referred to as the “Jedi Knights” by CENTCOM staff as a result of the extreme secrecy and isolation in which they carried out their work, these four officers developed an initial course of action for the CINC’s consideration on October 5th.²⁵ Not surprisingly, given the geographic factor of long distances throughout the theatre combined with lack of transport and low numbers of troops available, the initial proposal was not that different from the previous efforts of the CENTCOM staff: a direct assault on the Iraqis. However, given the Iraqi defenses,²⁶ this plan had the inherent risk of significant casualties.

Despite the fact that the plan was not acceptable to General Schwarzkopf, it was briefed to the President, the Secretary of Defence and the Chairman of the Joint Chiefs of staffs on October 11th. This briefing proved to be a watershed for the overall planning effort. The White House was not impressed with the plan, which brought General

²⁴ Scales 109.

²⁵ Gordon 126-127.

²⁶ Francis Toase, “The Land War,” *The Gulf War Assessed*, ed. John Pimlott et al., (London: Arms and Armour Press, 1992) 148-149. The Iraqis had “fortified the Kuwaiti-Saudi border with a continuous belt of obstacles, including sand berms, mine fields, barbed wire, and oil-filled trenches which could be turned into a wall of fire, backed by entrenched infantry and covered by artillery.”

Schwarzkopf's credibility and competence into question. As a direct result of the briefing, both Secretary Cheney and General Powell endeavoured to provide more palatable options. Independently, their staffs arrived at the conclusion that an encircling manoeuvre well to the west of the Iraqi defenses along the Iraq / Kuwait border was the only viable option. This imposition from Washington unquestionably influenced the final configuration of the ground plan, although the left sweep of the encircling manoeuvre would not be as far west as proposed by Secretary Cheney's staff.²⁷ The positive outcome of this series of events was that additional troops, in the form of the VII Corps, would be deployed from Germany.²⁸ The manoeuvre to the west was undoubtedly a bold plan, which presented significant and unique challenges, particularly in the realm of logistics.

In final form, General Schwarzkopf's plan consisted of three major elements: an air campaign to dominate the theatre; a land battle which would move rapidly to the west and north around the Iraqis (dubbed "the great wheel") and sea superiority in the gulf, allowing him to practice deception in the form of the constant threat of a marine amphibious landing along the east coast of Kuwait, tying up seven Iraqi divisions on the coast.

²⁷ Gordon 142-158. General Schwarzkopf's recollection of how the western encirclement plan evolved is somewhat different. Recounting his Nov. 14 meeting with his senior staff, he states "At last I turned to the plan for the ground offensive- a fully realized version of the envelopment I'd proposed to Powell three weeks before." Schwarzkopf, 382. Given the varied sources, Gordon et al's account has credibility, and clearly shows that Washington's dissatisfaction with the initial proposal briefed on Oct. 11 significantly influenced the final ground plan.

²⁸ Scales 131-132.

November 10th was also a significant milestone as General Schwarzkopf presented his final plan to his senior Commanders down to division level. However, on presentation in outline form, the plan did not meet with immediate support. General Schwarzkopf later admitted that “only a few of the commanders had any idea of the plan I was about to present or of the tough assignments I was going to mete out.”²⁹ There were several objections pertaining to the large-scale move of the XVIII and VII Corps, the tight timelines for that move, and the secondary role planned for the 17,000 marines. Despite two months of resistance from at least some of his senior commanders, the plan was finalized virtually as initially conceived.³⁰

To summarize the difficulties encountered in planning the ground war, it is evident that much secrecy was necessary to preclude Iraqi knowledge of the planned encirclement. The isolated work of the SAMS planning staff while developing their early course of action options based on one corps arguably led to their miscalculation in overlooking an encirclement from the west as a more politically acceptable option. Had this planning effort been carried out with less secrecy, a better sense that additional troops could perhaps be provided might have assisted the development of other courses of action. Without question, General Schwarzkopf should have provided a better interface between his operational level and the strategic military/political levels. Given his apparent understanding of the sensitivity towards U.S. casualties,³¹ he should have been prepared to present a preferred course of action for an encircling manoeuver, with

²⁹ Schwarzkopf 380.

³⁰ Toase 151-152.

³¹ Scales 126.

the caveat of additional resources, along with the less attractive and more dangerous course of action for a frontal assault based on existing troop commitments.

While it is on the surface surprising that CENTCOM would not have the ability to plan a major contingency, it is not illogical that additional resources would be sought out for such a major crisis. What is perhaps more surprising is the fact that no formal process existed for recalling pre-identified and trained officers to assist with such critical and complex staff-work. As concluded by Mandeles et al, "...they should also wonder how it came to pass that the defense department's formal organizational design...and concepts of operation had to be propped up and supported by so much informal and ad hoc work."³² Perhaps more telling of the flawed planning process is the fact that, despite bringing in the best minds to form his core planning staff, the courses of action initially developed were far from acceptable to the political and senior military levels. This precipitated a significant attempt by the highest political and strategic levels to impose themselves in the operational planning process and exerting much influence on the final course of action developed for the ground war.

The second aspect of the operational planning process to be assessed is the critical element of translating political objectives into clear military terms. Successful campaign planning requires clear political direction, which must then be translated into a concise military mission with precise objectives and a well-defined end state. Having learned their lessons in previous military situations, notably Vietnam, the senior levels of the

³² Mandeles 149.

political and military establishment endeavoured to ensure a proper political framework for the operation in the Gulf. United Nations Security Council resolution 678, which had been approved on November 29, provided the legal authority for “member states... to use all necessary means to uphold and implement resolution 660 and all subsequent relevant resolutions and to restore international peace and security in the area”, unless Iraq fully implemented all previous resolutions by the deadline date of January 15, 1991. Hence the three clear political objectives were:

1. “The unconditional withdrawal of Iraqi forces from Kuwait (Resolution 660, reaffirmed in resolution 678)
2. The restoration of the sovereignty, independence, and territorial integrity of Kuwait (Resolution 661, reaffirmed in Resolution 678)
3. The restoration of international peace and security in the area (Resolution 678).”³³

In addition to the UN resolutions, President Bush’s objectives had been extremely specific: “unconditional withdrawal of Iraqi forces from Kuwait, restoration of Kuwait’s sovereignty, destruction of Iraqi capability to produce and employ weapons of mass destruction, and destruction of Iraq’s offensive capability.”³⁴

Since the war, much has been written regarding the circumstances and the extent to which the Republican Guard were allowed to slip through the fingers of the coalition. There is significant debate as to whether the third United Nations objective, “the

³³ John H. Cushman, “Implications of the Gulf War for Future Military strategy”, Turning Point: The Gulf War and U.S. Military Strategy, ed. L. Benjamin Ederington et al., (Boulder: Westview Press, 1994) 91.

³⁴ Scales 111. A fourth Presidential objective, protection of American lives, was overtaken by events with the release of hostages in December. GWAPS Vol I, Part I 225.

restoration of international peace and security in the area” as well as President Bush’s directive to destroy Iraq’s offensive capability, were effectively translated into military strategic- and operational-level objectives. General Schwarzkopf had himself identified the Republican Guard as one of the primary operational-level centres of gravity. His intent in dealing with the elite Hussein guard was unequivocal; “We need to destroy - not attack, not damage, not surround - I want you to *destroy* the Republican Guard. When you’re done with them, I don’t want them to be an effective fighting force anymore. I don’t want them to exist as a military organization.”³⁵

Despite this seemingly clear military objective, a significant portion of the Republican Guard was allowed to escape. According to CIA estimates, half of the Republican Guard T-72 tanks and half of the armoured Personnel Carriers in the theatre managed to retreat out of harms way, as well as seventy percent of troops of one of the Guard Divisions.³⁶ Another division, having borne the brunt of the VII Corps attacks, was in fact deactivated.³⁷ Nevertheless, additional remnants of the Republican Guard escaped in smaller formations. Similarly, the senior Iraqi headquarters escaped north of the Euphrates River.³⁸

Notably, the survival of at least a portion of the Republican Guard necessitated the intervention of the West to assist the Kurds in northern Iraq following the war in Operation Provide Comfort. The Kurds”...could not stand up to Saddam’s Republican

³⁵ Schwarzkopf 381.

³⁶ Gordon 429. In the Army account, Certain Victory, only one-third of the Republican Guard T-72s are said to have escaped. Scales 315.

³⁷ Scales 316.

³⁸ Gordon 429.

Guard, the remnants of which had escaped from Basrah to deploy to the north, fully supported by helicopter gunships and artillery. The Iraqi counterattack was at once vicious and indiscriminate...”³⁹

As the tempo of the ground war accelerated and it quickly became clear that Kuwait would be promptly liberated, political pressure was being applied on the domestic front to ensure the U.S. did not appear to be overzealous in inflicting undue casualties as a result of the clearly one-sided rout. The concern over minimizing American casualties was also significant. The specter of additional and unnecessary American casualties was certainly a major factor for General Schwarzkopf.⁴⁰ Notwithstanding these concerns, President Bush had left the door open for the military to determine when the war objectives were achieved.⁴¹

Clearly, confusion existed as to what constituted a satisfactory military end-state. General Schwarzkopf and his staff had neither expected nor planned for a general withdrawal of the Iraqi army. The offensive by the coalition had proved so successful that it could arguably have been possible to close off the Republican Guard withdrawal. In fact, the aggressive and unrestrained advance of the U.S. Marines along the east coast of Kuwait is credited with precipitating the surprising early retreat before the encircling manoeuver from the west could be in place. Efforts between the army units to the west and the marines on the coast were not coordinated, an issue which will be further explored later. From General Schwarzkopf’s perspective, the VII Corps advance was

³⁹ Scales 340.

⁴⁰ Schwarzkopf 469.

⁴¹ Gordon 415.

pedantic in the face of virtually little opposition. His view was that a more rapid engagement of the enemy would have assured destruction of the Guard forces.⁴² However, Iraq had ordered withdrawal of her forces from Kuwait as early as mid-day on February 25th, less than twenty-four hours into the ground war. Given the Desert Storm plan as executed, capturing the guard would have been difficult to achieve.

When discussions between General Powell, General Schwarzkopf and his senior staff eventually focussed on a cease-fire, inadequate time was given to assess the situation from an operational-level perspective. Conditions were such that the XVIII Airborne and VII Armoured Corps could have fully closed the escape highway north and south of Basra and trapped a significant portion of the Republican Guard.⁴³ Seemingly irrelevant issues such as having a “five day war” or a “100 hour war” were topics of conversation between Generals Powell and Schwarzkopf. As a result of a decision by President Bush, the possibility of a cease-fire at 0500 on day four of the ground war had no sooner been transmitted to the corps when it was readjusted to 0800 a few hours later to make the war exactly 100 hours, and in the process caused confusion in the field and significantly affected the momentum of the ground advance.⁴⁴ Had a proper assessment of the situation been undertaken, and it is apparent that the flexibility to call the end-state was left to General Schwarzkopf, a decision to delay the ceasefire another twelve to twenty-four hours would likely have allowed the army to complete the exploitation.⁴⁵

⁴² Schwarzkopf 455-465.

⁴³ Cushman 97. See also Gordon 403-404.

⁴⁴ Scales 308.

⁴⁵ Gordon 419.

Reflecting on the outcome, President Bush admitted in a press conference following the war:

...to be honest with you, I haven't yet felt this wonderfully euphoric feeling...but I think it's that I want to see an end. You mentioned World War II – there was a definite end to that conflict. And now we have Saddam Hussein still there – the man that wreaked this havoc upon his neighbors.⁴⁶

The second determining aspect of the doctrine of operational art that will be examined is the concept of joint operations. The literature has many historical references and doctrinal statements to this effect.

“Jointness” can be traced back to the First World War. Describing the battles of the “hundred days”, John English states “At Amiens, interarm cooperation among the forces of the British empire reached new heights as aircraft, guns, tanks, and infantry all acted in concert”.⁴⁷ Similarly, regarding the successes of the Russian army on the eastern front towards the latter part of the Second World War, he states:

...the Russians at the operational level displayed considerable skill in being able to deceive the enemy by covertly manoeuvring and massing combined arms armies on breakthrough axes, and, subsequently, launching mobile groups of armour, supported by fleets of air armies, to cut through to unprecedented operational depth.⁴⁸

⁴⁶ Gordon 432.

⁴⁷ English 12.

⁴⁸ English 14.

In the modern context, the doctrine of operational-level warfare is inexorably intertwined with the concept of joint operations. The current doctrine of the U.S. Army declares: “ The operational level is the vital link between national- and theatre-strategic aims and the tactical employment of forces on the battlefield. The focus at this level is on conducting joint operations...”⁴⁹

The Gulf War is considered to be a validation of major revisions to U.S. doctrine towards an operational focus and joint operations. Unquestionably, Desert Storm was intended to be conducted as a joint campaign. However, key aspects of the command and control structure raise questions as to the true effectiveness of the organization as a joint entity. As the air campaign has been held up as the decisive element of the war, having had such an overwhelming impact that the land war required only one hundred hours, we will focus our examination primarily on the former. Three areas of the air campaign will be assessed in a joint context; the authority and relationship of the Joint Force Air Component Commander (JFACC), the extent of jointness of the air planning cell, and the perception of the other Joint Force Commanders.

Notwithstanding, it must also be understood that the daily Air Tasking Order (ATO), the end product of the air planning cell detailing every daily air mission, was a major achievement. Massive in scope, it consisted of some hundreds of pages and an average of 2,847 sorties per day,⁵⁰ and was being accomplished in the fog of war, in a rapidly changing environment and with less than complete information.

⁴⁹ FM 100-5, 6-2.

⁵⁰ GWAPS Vol I, Part II 7. A war-maximum of 3,279 sorties were flown on 23 Feb. 1991.

Right at the outset, General Schwarzkopf set the tone for the joint nature of his air campaign. In a conversation with General Glosson, who eventually headed the CENTCOM air planning team, he is attributed as having stated “If you aren’t part of the air campaign under Horner, you don’t fly.”⁵¹

Despite this clear assertion, there remained confusion on this critical issue. CINCCENT’s operation order of August 10th issued conflicting direction regarding marine air assets. On the one hand it stated the Marine Corps commander would have “operational control of his organic assets” while also stating “sorties in excess of MAGTF direct support requirements will be provided to the joint force commander for tasking through the air component commander,” and “nothing herein shall infringe on the authority of the...joint force commander, in the exercise of operational control, to assign missions...to insure unity of effort.”⁵² The marine concern obviously stemmed from the complex and proven system they had incorporated for coordinating air support to their ground operations.⁵³

Similarly, the relationship between the JFACC and the Navy was also strained in some areas. Vice Admiral Mauz, Commander Middle East Force and also NAVCENT, the Navy Component Commander, had early on recommended to Lieutenant-General Horner that the Navy and Air Force take responsibility for separate areas of the theatre. This was reminiscent of the approach taken during the Vietnam War, and was discounted by General Horner, based on the argument that the Air Tasking Order was already well

⁵¹ Murray, 33.

⁵² Mandeles 128.

⁵³ Mandeles 128-129.

established in the gulf.⁵⁴ Another problem arose in defining Rules of Engagement (ROE), particularly for the Navy carrier fleet. Normally, carrier defence doctrine required an F-14 to provide beyond-visual-range protection using their Phoenix missiles. However, as the F-14 electronic target identification capability was not as sophisticated as that of more current aircraft such as the F-15C, the JFACC directive required visual identification of the enemy. The Navy argued against this rule, which in their view made the carrier vulnerable to surprise attack.⁵⁵ This issue was resolved in favour of the JFACC when eventually raised to General Schwarzkopf's level.⁵⁶ Notwithstanding, the agreement had been reached that CENTAF would control the airspace over land while NAVCENT would control the airspace over the Persian Gulf.⁵⁷

In fact, General Horner was required to use the ATO as an argument for insisting the other services remain on board and support the joint air concept. The Saudi Arabians had shown flexibility in accepting the ATO process, primarily because it provided a vehicle for coordinating their air defence system with the significant amount of air activity. Hence General Horner would argue that without the ATO, coordination with Saudi air defence could not be assured, and without a joint approach, an ATO was not possible.⁵⁸

⁵⁴ Mandeles 129.

⁵⁵ GWAPS, Vol II Operations and Effect and Effectiveness, Part II 123. Although U.S. Navy F-14 aircraft did achieve three kills, the ROE was a factor in the F-15 being the primary platform for overland combat air patrol.

⁵⁶ Mandeles 131.

⁵⁷ Jean H. Morin, and Richard H. Gimblett, Operation Friction: The Canadian Forces in the Persian Gulf, (Toronto: Dundurn Press, 1997) 106.

⁵⁸ GWAPS Vol I, Part II 52.

However, some manipulation of the ATOs inevitably occurred. For example Major-General Moore, the commander of Marine Corps air units in theatre, would have an excessive number of marine air tasking lines incorporated into the ATO, subsequently cancelling those he did not want to execute, thus retaining personal control over marine air sorties.⁵⁹

In summary, it is clear that the concept of the JFACC was far from being enthusiastically endorsed by the other component commanders of the day.

A further flaw in the joint air campaign was located in the heart of the entire JFACC organization, the Joint Targeting Coordination Board (JTCCB). Intended to be the focal point for target selection proposals, this board should have been truly joint to properly reflect the requirements of the other services. In the Gulf War, the JTCCB was headed by a Lieutenant-Colonel with a staff of two.⁶⁰

In reality, target lists were the purview of the “Black Hole”, the air planning staff of the CENTAF headquarters, with no formal joint staff review: “the combination of overwhelming air force representation in the Black Hole with the extreme secrecy of the planning effort reduced the amount of interaction and coordination with central command and component staffs.”⁶¹ Further, a rift existed between the Black Hole and the CENTAF intelligence organization. Differences of opinion existed on key subjects such as capabilities and effects of precision-guided munitions.⁶² The personality friction between these two organizations, coupled with the isolated nature of the Black Hole, resulted in

⁵⁹ Mandeles 129.

⁶⁰ GWAPS Vol I, Part II 171.

⁶¹ Mandeles 15.

⁶² GWAPS Vol I, Part II 172-175.

the latter actually looking outside the organization for information. According to Brigadier-General Glosson, the CINCCENT intelligence cell in Riyadh could not provide critical target information and photography in a timely fashion. Seeking workarounds and using connections established previously in his career, he established contacts directly with Checkmate, Colonel Warren's organization in the Pentagon, the Defence Intelligence Agency (DIA), and the CIA, who afforded him more timely intelligence.⁶³

Brigadier-General Glosson's position as head of the Black Hole was further complicated as a result of a CENTAF reorganization initiated by Lieutenant-General Horner. Consequently, Brigadier-General Glosson, as a staff officer within the CENTAF organization, was given operational control of the 14th Air Division(Provisional), which in effect gave him control of all fighter and attack aircraft in theatre.⁶⁴ He was thus able to in effect circumvent the system of ATO production. With his perception of the changing real-time situation, General Glosson's staff could make last-minute changes, often by phone, to the complex daily air plan based on what some considered to be inaccurate intelligence information.⁶⁵ These changes caused great difficulty for the crews trying to adjust and coordinate their missions. More importantly, this brings into question whether key decisions regarding the air campaign were in fact being considered at the appropriate operational level, and in isolation from the overall campaign. This unsatisfactory situation has been summed up in one assessment as follows:

⁶³ Mandeles 21-22. See also GWAPS Vol I, Part II 184-185.

⁶⁴ GWAPS Vol I, Part II 200-201.

⁶⁵GWAPS Vol I, Part II 205-264. In the course of the war, some 23,000 ATO changes were made, of which 5,800 were target changes and 3,500 were timing changes.(232)

At each level of CENTAF key and significant officers believed they were managing the chaos of war. However, when the activities of the many significant participants are pieced together, the problem is that neither planners nor General Horner, the Joint Force Air Component Commander-knew the details of what was happening in the air campaign or how well the campaign was going.⁶⁶

This led to other problems regarding perceptions of lack of support for the army effort.

Kill boxes were used by the Air Force to prepare the ground for the army, which allowed for Battlefield Interdiction without requiring use of the less responsive ATO. However, the targets selected using this method remained the prerogative of the pilot. For example FB-111 bomber aircraft used infra-red imagery to select the warmer vehicles inside the box, “plinking” them with laser-guided bombs. Hence, the targeting was out of the hands of the supported ground commander. Further, kill boxes were not based on the corps commander’s scheme of manoeuvre nor were they based on prioritizing the most threatening Iraqi defenses.⁶⁷ Also, from the army’s perspective, the ATO cycle of 72 hours from initial request to execution was not responsive to the needs of the corps commanders. The comparison has been made to Vietnam, where the pre-planned mission cycle for air support to ground forces took only twenty-four hours.⁶⁸

However, General Horner did support the army in their requirement for Close Air Support (CAS). In this instance, a concept of “push CAS” was introduced which

⁶⁶ GWAPS Vol I, Part II 264.

⁶⁷ Scales 188.

⁶⁸ Scales 368.

provided for pre-programmed CAS assets in accordance with ATO process.

Consequently, CAS missions were made available to the ground commander for their use as required, rather than on demand on a case by case basis. While this met with the approval of the ground commanders, the Black Hole staff was not impressed, as resources were diverted away from the strategic effort.⁶⁹

Key to initiating phase IV of the war, the ground effort, was an assessment that the air campaign's phase III had destroyed fifty percent of the Iraqi armour and artillery. Based on the battle damage assessments to date, February 21 was selected as G-Day, the beginning of phase IV. Three weeks prior to G-Day, the ground commanders prepared target lists which were fed to General Schwarzkopf's operational staff for prioritization externally to the Black Hole process. General Horner's air effort subsequently increased the number of targets in the Kuwaiti Theatre of Operations to satisfy the CINC's direction for greater emphasis on phase III. Commensurately, the number of sorties flown against each target was reduced to minimize the net impact on the air strategic campaign, which obviously caused additional friction between the services. Analysis has revealed that of the 3,067 targets submitted by ARCENT for inclusion in the ATO, 1,582 were flown.⁷⁰

Although the previous discussion centres on joint issues within the air component, problems were also evident with the joint aspects of the ground component. The relationship between the main army groups in the west and the Marine Corps along the coast presented a major problem for General Schwarzkopf.

⁶⁹ Mandeles 133.

⁷⁰ Scales 189.

In preparing the land campaign, General Schwarzkopf's SAMS planning staff had placed the main emphasis of the push against the Iraqis in the west, with the marines providing a supporting role protecting logistic lines on the right flank of the major army units. Again due to the secrecy involved, and due to the secondary nature of the marines' contribution, the SAMS planners had neglected to consult them until November, 1990. This resulted in significant acrimony on the part of the senior marine commander, who eventually raised his strong objection to General Schwarzkopf. As a result, General Schwarzkopf deferred to the marines and authorized them to prepare their own plan. Notwithstanding, the CENCOM planning staff subsequently evolved a role for the marines as a deception manoeuver, masking the main thrust of the army to the west. Again, General Schwarzkopf intervened and instructed his staff to allow the marines to plan their own effort.⁷¹ In taking this approach, General Schwarzkopf gave priority to the Marine doctrine rather than joint doctrine. As has been previously discussed, the result was an unbalanced plan which had a negative impact on the end-state of the campaign.

To summarize this section on the extent of the joint nature of the campaign, several examples of coordination problems have been reviewed. In evaluating the inter-relationship of the Black Hole staff with the CENTCOM staff, particularly the intelligence staff, the isolation characterizing their efforts precluded a truly joint effort. This assessment is supported by the additional observations that the JFACC did not establish a truly joint air component, the ATO was not universally accepted as the appropriate vehicle for all air taskings, General Glosson appeared to unilaterally

⁷¹ Gordon 159-162.

determine the air campaign, and finally, the Army perceived that the air effort did not adequately serve them.

Further, discord between the Army and Marine Corps in the land effort significantly detracted from the synergistic intent of joint operations. In fact, a strong case can be made that the unsynchronized efforts between them resulted in the incomplete effort against the Republican Guard.

To conclude, this paper has assessed operational art in the Gulf War based on the defining characteristics of strategic- and operational-level planning and joint operations capability. With respect to planning, the CENTCOM planning staffs were clearly not up to the task, requiring assistance from other sources for both the air and land campaigns. These staffs worked in isolation, particularly the air staff, resulting in a significant divergence between the strategic objectives of the Air Force's campaign and the operational-level joint support expected by the land forces. As an addendum, it is interesting to note that the lessons learned from the Gulf War by the Air Force have in fact served to further widen the chasm between the operational-level doctrine of the Army and the strategic perspective of the Air Force.⁷²

⁷² The latest United States Air Force doctrine manual has unquestionably injected the lessons learned from the Gulf War – most of them positive and seen in the eyes of the USAF as justifying the existence of the Air Force on its own terms. The unique flexibility of air power, particularly with today's satellite and precision-munition technology, is described as follows: "Versatility in air and space power stems from the fact that it can be employed equally effectively in the strategic, operational and tactical levels of warfare. Unlike other forms of military power, air and space forces have the versatility to be employed globally with unmatched responsiveness in support of strategic, operational and tactical objectives and can simultaneously achieve objectives at all three levels of war- in parallel operations." Further, the decisive edge provided by the initial air campaign of the Gulf War lends credibility, arguably for the first time, to this statement: "All Service air arms operate in the third dimension to attain strategic-, operational-, and tactical-level objectives. However, **it is the global strategic perspective that differentiates Air Force**

Significantly, it is argued that the strategic political objectives were never properly quantified in the operational plan, such that the Republican Guard was likely not rendered operationally ineffective, and the war may well have been prematurely terminated. It can be argued that joint operations existed in name only, certainly with respect to execution of the air phase of the campaign and equally with the ground component.

In the gallery of war, few tableaus have caught the eye as has the Gulf war with its overwhelming success and almost unbelievably low casualty rates for the coalition. The quick glance taken here clearly leads to the conclusion that one would be misguided in admiring the Gulf War as a modern example of the operational art. However, that the Gulf War serves as testimony of the ability of an American-led coalition to overcome significant challenges and bring to a successful conclusion such a daunting proposition remains unchallenged.

forces from the air components of the other Services. The Air Force's assigned mission is...-to provide the nation's air and space power- *not in support of other tasks as with the air arms of the other Services but as its sole reason for being.*" (bold & italics in the original) AFDD-1 24, 43-44.

BIBLIOGRAPHICAL ESSAY

Given that the conflict occurred less than a decade ago, arguably more analyses have been published on the Gulf War than in a comparable time frame following any previous conflict. The plethora of documentation is a double-edged sword: allowing for significant numbers of sources, but conversely overwhelming the researcher with detail, often conflicting. Several references were particularly useful due to their richness of detail and credibility as valid sources.

Those interested in gaining a thorough and in-depth understanding of the air campaign are referred to the five-volume *Gulf War Air Power Survey*. A result of painstaking research by a staff of fourteen, this effort commissioned by the United States Air Force is likely the best single source of matters related to the air force contribution. Complete with photographs, charts and maps, the survey offers objective and frank assessment not only of the events, but the reasoning behind decisions which are well summarized in conclusions following each chapter.

Equally rich in detail but focussing on the command and control aspect only, *Managing "Command and Control" in the Persian Gulf War* by Mark Mandeles, Thomas Hone and Sanford Terry is an excellent source. One drawback is that the book draws heavily from the Gulf War Air Power Survey just mentioned, although this is understandable as Thomas Hone was one of the contributors to that project.

The U.S. Army's perspective is adequately provided in General Scales' *Certain Victory*, who indicates in his preface that the "only instructions from the Army leadership

as we did our research...were to uncover what soldiers term “ground truth.”(Scales vii). This account of the Army’s view focuses on the operational and tactical levels of war, and is an important complementary source as the war was primarily the domain of the air forces. However, an understandable army bias is detected as evidenced by the lack of critical assessments, except as concerns the air force support to the army.

In seeking the perspective of the senior commander on the scene, we are fortunate to have General Schwarzkopf’s autobiography, *It Doesn’t Take a Hero*. Although the General provides invaluable insights, the sequence of events depicted is not as detailed as one might expect, and some items are presented differently than in other accounts. A glaring example is the issue of tempo during the 100-hour war. While General Schwarzkopf has a fairly detailed account of the slow progress of the VII Corps, no mention is made of the unbridled advance of the Marine Corps. Overall, too many details are noticeable by their absence, precluding this from being an ideal source.

In direct contrast, *The Generals’ War* by Michael R.Gordon and General E. Trainer is perhaps one of the more critical exposés of the war. Covering the full spectrum from the desert battlefield to the White House, this source is particularly noteworthy for the behind-the-scenes examination of the decision-making process and the political considerations which shaped the conflict and its termination.

The Gulf War was not only a joint effort but also a coalition effort. Hence the perspective of our allies is certainly welcome and refreshing. *The Gulf War Assessed* is a compilation of submissions from British contributors, all but one of whom are scholars in the Department of War Studies at the Royal Military Academy at Sandhurst. Excellently

written and well organized, the book provides a logical sequence of chapters and contains valuable insights and details not found elsewhere.

The evolution of the air campaign is unquestionably one of the more intriguing aspects of the Gulf War. The secrecy and notoriety of the Checkmate organization in the Pentagon, then headed by Colonel Warden, planted the seed of the strategic plan which evolved almost intact into the first phase of the war. *Heart of the Storm: The Genesis of the Air Campaign Against Iraq* by Richard T. Reynolds is a detailed day-by-day log of the meetings, events and decisions which clearly show the significant influence held by Colonel Warden in this planning effort.

For a concise yet broad and thorough discussion of the operational level of war and the operational art, one is referred to *The Operational Art: Developments in the Theories of War*, a compilation of works by thirteen authors edited by B.J.C. McKercher and Michael A. Hennessey. This work is unquestionably a significant addition to the body of work on the operational art, providing insightful historical perspectives as well as casting a forward eye to the Revolution in Military Affairs. A Canadian effort with an international scope, the book is an important contribution to the extremely limited Canadian literature on the subjects of the operational level of war and the operational art.

Speaking of things Canadian, an excellent summary of the Canadian contribution to the Gulf War can be found in *Operation Friction: The Canadian Forces In the Persian Gulf* by Major Jean Morin and Lieutenant-Commander Richard Gimblett. Richly detailed and well researched, the book is extremely enjoyable to read. More importantly, it provides insights not only on the tactical level involvement of the Canadian Forces

units which deployed to the gulf, but explores strategic and command and control issues as well.

Logistics was a critical part of the Gulf War. Lieutenant General Pagonis' *Moving Mountains* provides a personalized account of the monumental logistic dimension of this campaign. Although General Pagonis' personalized approach detracts from the book's use as a source of operational details, his attention to the human element must not be overlooked. Two chapters at the end of the work are devoted to leadership and most readers will gain invaluable insights from at least some of the General's lessons learned.

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