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MASTER OF MILITARY STUDIES

THE YOM KIPPUR WAR:
OLD LESSONS FOR A MODERN BATTLEFIELD

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIRMENTS FOR THE DEGREE OF MASTERS OF
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EXECUTIVE SUMMARY

Thesis. The Yom Kippur War was a seminal moment in the evolution of the character of war and provides an essential framework for considerations about future conventional battlefields.

Discussion. The Yom Kippur War represents the last modern instance in which two symmetrical armies manoeuvred large ground forces against each other. Occurring shortly after the United States completed its withdrawal from Vietnam, the Yom Kippur War played a critical role in the development of modern US Army doctrine. The US military is again emerging from a decade of low intensity conflict and again finds itself at an inflection point as it considers the character of the modern conventional battlefield. This essay holds that the Yom Kippur War remains the most useful example of what such a battlefield might look like. Accordingly, the essay provides brief operational history of the Yom Kippur War and considers how the lessons of that war impacted the evolution of US Army Doctrine as articulated in the 1976 and 1982 editions of FM100-5 Operations. It concludes by considering what lessons from the Yom Kippur War are relevant today.

Conclusion. The Yom Kippur War significantly informed the evolution of American Warfighting doctrine. The Yom Kippur War continues to offer the following lessons for the future battlefield: The United States should expect to be surprised, and will initially cede the initiative to the enemy. That validating warfighting doctrine based on success in the last war is a recipe for failure. That firepower will be the dominant characteristic of the modern battlefield leading to the ascendance of the defence. That the United States should seek advantage on the future battlefield in the superior training of its soldiers and leaders.

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INTRODUCTION

At 1400 on the Sixth of October 1973, Egyptian and Syrian jets screamed into Israeli territory, indicating the opening of the fourth Arab-Israeli conflict. The Yom Kippur War would prove to be a pivotal event in the evolution of the character of war. The war, which involved some of the most ferocious fighting since the Second World War, was immediately recognized as an ideal focal point through which to examine modern conventional conflict. With the United States military emerging from a decade of low-intensity conflict in Vietnam, the newly formed US Army Training and Doctrine Command (TRADOC) studied the war in detail. Lessons from the war would form the foundational underpinnings for the evolution of American warfighting doctrine between 1973 and 1982. During this time, the US Army published two editions of its capstone warfighting manual FM 100-5 Operations, culminating in the publication of the 1982 edition and the introduction of the seminal AirLand Battle concept.

Senior leaders within the armed forces have concluded that we are approaching a major inflection point in the evolution of the character of warfare.¹ Equally as significantly, the latest US National Defense Strategy stresses a return to great power politics and aims to refocus the military on conventional conflict.² As the US military emerges from another decade of low-intensity conflict, it must again consider the Yom Kippur War as it attempts to understand the character of the modern battlefield.

In his seminal work “The Utility of Force,” Rupert Smith observes that the Yom Kippur War represents the last time in which the “armoured formations of two armies manoeuvred against each other supported by artillery and air forces, one in which the tanks in formation were the deciding force.”³ That is, the Yom Kippur War is our most recent example of a conventional

fight between relatively symmetric conventional forces.ⁱ Therefore, the circumstances that made the Yom Kippur War relevant to TRADOC in 1973 also make it relevant today.

This essay will begin by providing a short history of the Yom Kippur War. It will then examine the lessons that TRADOC took from the war, and how those lessons influenced the evolution of American doctrine. Finally, it will consider the continuing relevance and implications of the Yom Kippur War.

THE YOM KIPPUR WAR

Establishing Conditions

The conditions that would ultimately establish the character of the Yom Kippur War were set by Israeli success in the Six Day War of June 1967. In that war, Israel launched a massively successful pre-emptive attack on Egyptian forces mobilizing on its border. The Israeli Air Force (IAF) quickly destroyed its Egyptian counterpart, mostly before it could take to the air, and maintained air superiority for the remainder of the war. Simultaneously Israel launched an aggressive ground maneuver with armored forces, ultimately causing Egypt to evacuate the Sinai Peninsula. Jordan and Syria launched attacks to relieve pressure on the Egyptians but were quickly beaten back by Israeli counterattacks.

Four conditions resulted from this war that would impact the next: First, Israel gained significant territory (see Map 1.1). Occupation of Gaza, the West Bank, and East Jerusalem would have long-term strategic implications for Israel. Occupation of the Sinai Peninsula and the Golan Heights immediately altered the geographic circumstances of her defense. With the Sinai,

ⁱ Symmetry here is meant to imply proximate symmetrical warfighting capabilities and is not representative of force ratios.

Israel gained strategic depth magnified by the natural obstacles of the Suez Canal and the Sinai passes.ⁱⁱ The challenging terrain of the Golan likewise afforded the Israelis significant military advantage. Second, Israeli air power was so dominant that Israeli military intelligence assessed that the Arabs would not again attempt war without being able to challenge Israel in the air – particularly given Israel’s new geographic circumstances. Third, the overwhelming success of Israel’s armor and air power assured its ascendance as the kings of battle, to the detriment of other arms. Finally, Arab embarrassment over the defeat sowed the political seeds for the next Arab-Israeli war.

Arab planning for the Yom Kippur War began almost as soon as the Six Day War had concluded. President Gabel Abdel Nasser envisioned a new strategy in three phases. The first phase would be purely defensive, to allow for rebuilding of the Army and the Arab coalition. The second phase would involve active deterrence which became the War of Attrition. Finally, the third phase would liberate lost territory.⁴ This last phase materialized as the Yom Kippur War. The Arabs, under Sadat, envisioned a limited war that would enable it to attain strategic political objectives.⁵ Egypt would seize the Suez Canal and advance only to the Sinai Passes, while Syria would retake the Golan. The Arabs believed this would prove strategically untenable for Israel and would force political negotiations and Israeli withdrawal from all Arab territory. With these objectives in mind, Egypt and Syria began the final mobilizations for war on or about 13 September.⁶

ⁱⁱ While owning the Sinai provided Israel strategic depth, it also hindered strategic warning. Previously (as in the Six Day War) Egyptian movement into the Sinai had been a trigger for mobilization. Forward defense along the Suez left Israel less reaction time, as would be apparent in the Yom Kippur War.

Strategic Surprise

Israel benefitted from surprise during the 1967 war; this time Egypt depended on surprise being on its side, knowing that the success of its plan depended on seizing a bridgehead across the Suez Canal before Israel could mobilize her reserves.⁷ Whereas before and during the Six Day War the IDF was best described as adherents to maneuver warfare, the changing strategic realities of owning the Sinai peninsula and the Golan Heights had led to the adoption of a forward defense strategy. In the North, Israel occupied a series of fourteen high features along the Golan anchored on Mount Hermon, which offered Israel observation as far east as Damascus. In the South, Israel's defense was anchored on the Suez Canal, the width and high berms of which made an opposed crossing extremely difficult. To the canal's east, Israel had built a series of defensive positions known as the Bar Lev line. By October 1973, Israel occupied 16 strong points along the Bar Lev. A small force was occupying forward outposts in the Sinai on 6 October, the remainder of the division positioned in-depth with the task on the mobilization of closing the gaps between, and reinforcing, the outposts. The IDF's intent on both fronts was for these forces to hold the line until reserve forces could be rapidly mobilized. This plan was predicated on 48 hours' warning of a pending attack in order to ensure that mobilization occurred in sufficient time to respond to the initial attack. Israeli intelligence failed to provide such warning.

Egyptian mobilization along the Suez was disguised as, and interpreted as, normal exercise behavior. The scale of the mobilization started to trip alarms as early as 24 September and cause for alarm steadily progressed. However Israeli intelligence failed to connect the dots.⁸ On 5 October, Israeli intelligence produced a 40-page intelligence estimate. 39 paragraphs described Arab war preparations, but the final paragraph concluded "...according to our best

evaluations no change has occurred in the Egyptian assessment of the balance of power between their forces and the IDF... Therefore, the probability that the Egyptians intend to resume hostilities is low.”⁹ While many factors influenced this grave intelligence failure, two stand out. First, the intelligence community believed that Egypt would not go to war without the ability to gain air superiority, which Israel had assessed as still being years away.¹⁰ Israel also assumed that Syria would not go to war without Egypt.ⁱⁱⁱ Second, as Egyptian General Abdel Munim Riad correctly said shortly after the Six Day War, “the mere fact that we start an attack at all will be the most important element of surprise.”¹¹ Israel’s failure to predict the coming war largely a failure of cognitive perception.¹²

Late in the evening on 5 October, Israel did receive irrefutable intelligence indicating that war would begin at 1800 the next day. The Arab attack would actually begin at 1400. Nonetheless, Israel’s awareness of the impending hostilities gave Israel’s leadership a strategic dilemma. As in the Six Day War, Israel had a fleeting moment when it could disrupt the Arab attack before it started. Doing so, however, risked that Israel be perceived as the aggressor. In the early morning, Defense Minister Moshe Dayan and chief of staff of the IDF David Elazar met at the home of Israel’s Prime Minister Golda Meir. Elazar was keen to launch a pre-emptive strike. Dayan felt the need to wait for the Arabs to launch the war. Meir sided with Dayan, supposedly responding to Elazar’s request for a pre-emptive strike with the question “How many friends would we have left if we did that?”¹³ With the decision taken to allow the Arabs the first strikes, Israeli mobilization began at 1000 on the 6th of October.

ⁱⁱⁱ It is also worth noting that mobilization of the Israeli Army brings the Israeli economy to a standstill. Therefore, errors are costly. Israel had experienced such a false call-up in May of 1973. Naturally then Israel must be cautious of mobilising in responses to threats short of war.

First Battles:

The opening battles of the Yom Kippur War occurred simultaneously on two fronts. At 1400 hours (four hours earlier than expected) Egypt began its assault across the canal in the Sinai, while Syria assaulted into the Golan. For analytical ease, this paper will deal with the two fronts sequentially.

First Battles - The Southern Front

Egypt's invasion force consisted of Second and Third Egyptian Armies with the First Egyptian Army in reserve. In total, this force included some 1400 tanks, 1000 pieces of artillery, 62 missile batteries and tens of thousands of infantry.¹⁴ The Israeli forces in the Sinai were those of General Schmu'el Gonen's Southern Command. Arrayed along the Suez Canal was Maj General Albert Mandler's 252nd Armoured Division. Mandler's forces, as previously mentioned, were primarily arrayed in depth, with only a token force forward. In total, fewer than 500 soldiers occupied the Bar Lev line supported by seven tanks. The remainder of Mandler's force consisted of three armoured brigades (approx. 270 tanks and 48 field guns).¹⁵ Force ratios therefore overwhelmingly favoured the Egyptians.

Force ratios are only one indicator of relative strength. The Egyptians faced the unenviable task of breaching and crossing the Suez Canal. To counter this assault, the Israeli defensive plan envisioned deploying two of Mandler's Brigades forward along the Suez, reinforcing and closing the gaps between strong points. The third Brigade would remain in reserve ready to deploy against the main Egyptian effort once located.¹⁶ The Israelis believed this force would be able, through direct fires, to hold off any crossing attempts long enough for

mobilization to occur. This may have been, were it not for the first in a series of questionable command decisions.

Believing that the attack was not to commence until 1800, Gonen held Mendler's forces in depth until late afternoon. Gonen has argued that he did not want to expose Israeli armor to Egyptian artillery prematurely, and that he sought to make it evident that Israel was not the aggressor. Others have suggested that Gonen may have desired a fight with the Arabs and feared that deploying Mendler's forces forward might deter the attack.¹⁷ In any case, Mendler's forces were not deployed forward when Egypt began its crossing operation.

Egypt attacked along the entirety of the canal. Engineers breached the massive sand embankments on either side far faster than anticipated, using high-pressure water hoses. Egypt then rapidly broke out from the canal, expanding and securing lodgments on the east bank with dismounted infantry.¹⁸ Egypt bypassed and isolated the Bar Lev strong points with fires, while the infantry rapidly established defensive positions along the canal's west bank in preparation for an Israeli armored assault. Critically, the Egyptian infantry was armed not only with the RPG 7 but with significant quantities of Sanger Anti-Tank-Guided Missiles (ATGMs).

Mendler's brigades attempted to regain the canal line and rapidly halt the Egyptian onslaught. Charging forward in tank-only thrusts reminiscent of the Six Day War, Mendler's tanks met a wall of ATGMs. By early the next morning, Mendler had lost two-thirds of his tanks, and had failed to regain the Canal line.¹⁹ Meanwhile, the Egyptians had crossed more than 400 tanks into the Sinai and were beginning to cross second echelon forces.²⁰ Instead of expanding lodgement East they moved north and south to connect the bridgeheads across the length of the canal. Israel, meanwhile, re-established its defense along Artillery Road, which ran parallel to the canal approximately six miles inland.

First Battles: The Northern Front

The Northern front was more prepared for war than the South, commanders there having seemingly put forces on a higher alert. However, the force ratios again heavily favored the Syrians. The Syrian Army at the time consisted of some 1700 tanks and 125,000 infantrymen. Massing on the Golan front on 6 October were at least 600 tanks, 1400 armoured vehicles and 152 artillery batteries.²¹ Israel was defending the Golan with two Brigades. The 7th Brigade under Col “Yanush” Ben Gal with approximately 107 tanks defended the Northern Golan, and the 188th Brigade under Col Ben Shoham defended the South with approximately 72 tanks.²²

The war in the North began with a heavy artillery barrage. The Syrians’ immediate objectives were to seize at least two of the four crossing sites along the Jordan River.²³ Israel anticipated the weight of the Syrian thrust to come in the North part of the Golan; in fact, the main effort developed in the South. Nonetheless, the Israelis were able to meet the Syrian onslaught with ferocious, accurate tank fire from defended positions, despite being massively outnumbered. While the Israeli 7th Brigade desperately held its ground, the 188th eventually gave way. By the end of the day on the 6th, the main Syrian effort had reached its first day Objective of El Al. Critically, Syrian forward commanders elected to halt having reached their day’s planned objective. Had they not, nothing at this point stood between them and Israel proper.²⁴

Over the night of the 6th, Israel was able to regroup and continue its delay against the Syrian onslaught. Improbably, with the support of newly arriving reservists, Israel was able to stem the tide of the onslaught. By the 8th of October the IDF in the Golan had transitioned to a counterattack. By the end of the day on the 9th, the Syrian assault had exhausted itself, and the threat on the Northern front stabilized.

Over the course of this fighting, however, the IDF was pushed to its breaking point. The climax came on the 9th when, facing Syria's final massive push, the 7th Brigade Commander reported that his brigade could no longer hold back the Syrians. Almost simultaneously, the Division received reports from a smaller independent unit that it had captured a ridge line and could see the rear of the Syrian forces beginning to retreat. This message was relayed to the 7th Division which held on just long enough for the Syrians to break contact and begin their retreat.²⁵ Had the news of the Syrians breaking not reached the 7th Brigade when it did, and had they instead been the ones to begin a retreat, it is perhaps possible that momentum may have shifted again in Syria's favour – such is the role of the chance in war.

Counterattacks: The Southern Front

Following the initial battles, Israel endeavoured to counterattack on both fronts. Of the many blunders of the Yom Kippur War, the counterattacks executed by Southern Command are perhaps the greatest. A substantial breakdown in command resulted in confusion and led to significant tactical defeats.²⁶ Israel had failed to maintain contact with the Egyptians. With air assets committed to the more immediately desperate fight in the North, neither Southern Command nor General Headquarters had a clear picture of the Southern front. The Israeli objective was to regain the canal and stabilize the front. Dayan believed the best option was a deep withdrawal and the establishment of defensive positions along the Mitla and Gidi passes. Golan wanted to counterattack immediately, and Elazar favored a counter attack, but not until sufficient reserve forces had organized. Ultimately, Prime Minister Meir gave Elazar leave to visit the front and decide the best course of action. Southern Command Headquarters eventually decided that a “limited graduated” counterattack would take place working south from Qantara.²⁷

It would be initiated by Major General Abraham Adan's division and supported by Major General Ariel Sharon's division.²⁸ Should Adan not need support, Sharon would take over the counterattack. Crossing of the Suez was only to occur by way of exploiting success, and the decision to do so was reserved by Elazar.²⁹ A series of confused changes and command interjections in the plan followed the conference.³⁰ Not surprisingly, a confused and utterly defeated counterattack resulted on the 8th of October. By the end of that day, Israel had lost more than 350 tanks on the Southern front.³¹

Counterattacks: The Northern Front

In the North, after halting the Syrian advance with immediate counterattacks, Israel had the opportunity to take the offensive by 9 October. Its objectives were three-fold: eliminate the Syrian threat before Syria could reconstitute via Soviet resupply, discourage Jordan's entry into the war, and attain negotiating power in case a ceasefire were imposed before it could expel Egypt from the Sinai.³²

Israel launched an assault into Syria on two axes. The attack progressed slowly until Israel was within artillery range of Damascus on the 13th of October. By this point, though, it had become clear that the attack would not achieve its objectives. A strong Syrian defense had turned the assault into a battle of attrition, Syria was unlikely to be knocked definitively out of the war (at least not with acceptable Israeli casualties), and Iraq and Jordan had both entered the war (to little effect).³³ Israel halted the attack and began establishing itself in the defense.

While offensive did not meet its initial objectives, it did have an unintended positive consequence. As Nadav Safran observes, "the Israeli offensive had a crucial effect on the course of the war in a rather unanticipated manner. It forced the Egyptians to change their hitherto very

successful war plan and suffer their first major setback...”³⁴ This would manifest in the Battle of the Sinai.

The Battle of the Sinai

As Israel pressed into Syria, political pressure mounted on Egypt to alleviate some of the strain on its ally by launching an attack in the Sinai. Egyptian forces had thus far contented themselves with their initial beachheads and, under cover of its air defense umbrella, had been allowing Israel to smash into its hasty defenses. Ceding to political pressure Egypt resumed the offensive toward the Mitla and Gidi passes beginning with an air assault on the 13th of October—the same day that Israel halted her offensive into Syria of her own accord. On the 14th, Egyptian forces sallied forth from the Suez launching a massive attack involving upwards of 1000 tanks. 600 Israeli tanks met the Egyptian force in hull-down firing positions.³⁵ The result was one of the world's largest, and ultimately one-sided, tank battles. In the ensuing fight Israeli ground forces, supported by the IAF who could finally target the exposed enemy tanks, destroyed over 200 Egyptian tanks at the cost of 50 of her own.³⁶ The battle marked a turning point in the war. The Egyptian Second and Third Armies were badly mauled, and Israel transitioned to the offence.

Crossing the Suez

In an earlier operation under Sharon, Israeli reconnaissance elements had located a gap between the Egyptian Second and Third Armies. It was here that an assault crossing of the Suez would be directed. Sharon's Division was to secure the near bank and establish a small bridgehead on the far bank. Adan's Division would be the breakout force. The assault was launched the evening of 15 October.

Strong Egyptian counterattacks hampered initial attempts to establish a corridor to the canal for crossing. Known as the battle of the Chinese Farm, Sharon and Adan fought from 15-17 October to open a secure corridor on the east bank of the Suez. In the interim, Sharon had managed to cross a brigade of paratroopers and 27 tanks to the west bank. He split this force into raiding parties tasked to destroy enemy artillery and surface to air missile (SAM) sights.³⁷ Importantly this force opened up flight corridors for the IAF, who could now bring their weight to bear west of the canal.³⁸

By the 18th of October, the IDF had managed to open its bridgehead and started crossing significant forces into Egypt. From this point, the IDF moved to encircle the 3rd Egyptian Army. President Sadat viewed satellite photos flown in from Moscow that demonstrated the precarious position in which Egypt found herself.³⁹ A cease fire coordinated by Russia and the United States came into effect on 23 October. A few skirmishes followed, but for all intents and purposes, the war was over.

A Note on Air Forces

The account of the Yom Kippur War provided above is primarily focused on ground based operations. However, as in any modern war, the war in the air significantly impacted the war on the ground.

As previously mentioned, Israel considered the tank and the fighter jet as the victors of the Six Day War. Subsequently, a significant portion of the Israeli defense budget had been spent on the Israeli Air Force (IAF). Israel expected that the IAF would be able to dominate the skies, and subsequently, ground forces depended on IAF close air support as a product of their total firepower. This proved not to be the case against improved Arab integrated air defense systems.

The IAF generally understood the threat posed by the advanced air defense systems. Accordingly, Israeli war plans, which assumed the initial thrust of the enemy would be contained by a ground force with 48 hours warning of the attack, dedicated the bulk of the IAF's initial sorties to the suppression of enemy air defenses (SEAD). Only once the enemy air defense system collapsed would the IAF transition to close air support and strategic bombing.⁴⁰ Of course, this was neither how the war nor the air campaign played out.

With the IDF facing surprising and rapid pressure on two fronts, the IAF was quickly diverted from its SEAD mission in a desperate attempt to check the enemy advances. Subsequently the IAF fell prey to the Arab air defenses, and was less than effective in the close air support role. Ultimately, the strength of the IAF was not brought to bear in the conflict until, on 14 October, Egyptian Armor ventured out from its air defense umbrella in its attack on the Sinai passes. West of the Suez the IAF became effective only after ground forces had begun disrupting the Egyptian forward air defense systems.

TRADOC'S ANALYSIS OF THE YOM KIPPUR WAR AND THE EVOLUTION OF AMERICAN DOCTRINE

The United States Military took a keen interest in studying the Yom Kippur War as it sought to refocus on conventional warfighting. The Yom Kippur War represented a microcosm of what war in Eastern Europe might look like. Arab forces were heavily influenced by Soviet warfighting doctrine and operated with modern Warsaw Pact weapon systems. Conversely, Israel's equipment and doctrine were reflective of NATO equipment and doctrine. The similarities did not end here. Political constraints in the Yom Kippur War guaranteed the initiative to the Arabs. Surprise, therefore, was a key feature of the opening stages of the Yom

Kippur War, evoking similarities to the presumed opening of a war in Europe. The IDF was limited, particularly in the North, in the extent of the ground it could strategically cede to the enemy, as would NATO forces be in West Germany. Finally, the war was characterized by force ratios which dramatically favoured the Arabs, again similar to the conditions expected of a war in Europe.⁴¹

Moreover, The Yom Kippur War occurred at a time in which the US military was trying to break itself out of what it perceived to have been a decade of stagnation in Vietnam. As

General Starry observed:

The resources necessary to sustain a reasonable rate of force modernisation had been consumed by operational needs of the Vietnam War. New doctrine and subsequent development of equipment, organizations, and training and education for soldiers and leaders – non-commissioned and commissioned – had stood still for nearly 10 years.⁴²

As part of his effort to reinvigorate the US Army General Creighton Abrams established the United States Training and Doctrine Command (TRADOC) on 1 July 1973 under the command of General William E. DePuy. Immediately following the Yom Kippur War General Abrams tasked DePuy and TRADOC to study the war from the perspective of American interests. The resulting lessons significantly impacted the evolution of American doctrine over the next nine years.

TRADOC Analysis of the Yom Kippur War– Key Observations.

TRADOC approached its analysis of the Yom Kippur War along three lines of effort. First, TRADOC sought to understand implications as they related to doctrine, training, and equipment. Second, TRADOC analyzed the war's impact on ongoing weapon system acquisitions. Third, TRADOC studied captured Soviet equipment in detail.⁴³ The first line of

effort is of greatest relevance to this essay. In this regard, TRADOC observed three critical lessons from the war which it summarized in its report entitled *Implications of the Middle East War on US Army Tactics, Doctrine and Systems*:

First, that modern weapons are vastly more lethal than any weapons we have encountered on the battlefield before. Second, in order to cope with these weapons, it is essential we have a highly trained and highly skilled combined arms team of armour, infantry, artillery and air defense backed by the support required to sustain combat operations. Third, training of the individual as well as the team will make the difference between success and failure of the battlefield.⁴⁴

Critical Lesson One: Lethality

The lethality of the Yom Kippur War was starkly apparent to the TRADOC analysts. Total tank losses in just twenty days of fighting represented a loss of all US Armor held in Europe at the time. Put another way, tank losses in the war represented three years of tank production in the US.⁴⁵ The same is nearly true of artillery losses. TRADOC observed, “if the rate of loss which occurred in the Arab-Israeli War during the short period of 18-20 days were extrapolated to the battlefields of Europe over a period of 60 to 90s days, the resulting losses would reach levels for which the United States Army is not prepared in any way.”⁴⁶ TRADOC assessed that, as a result of optics and ballistic qualities of modern armor, first round hit probability of a tank engagement had significantly increased in comparison to previous conflicts. Likewise improved was the probability that a first hit would result in a kill. Lethality was increased further still through ATGMs. To describe this new lethality, DePuy turned a phrase that is familiar to soldiers to this day; “What can be seen can be hit. What can be hit can be killed.”⁴⁷

Critical Lesson Two: Shoot First

TRADOC assessed the lethality of Soviet and American weapon systems as being reasonably similar. Therefore, without a technical answer to the problem of lethality, TRADOC recommended a tactical one. TRADOC attributed much of Israeli success in the Yom Kippur War to the superiority of its tank crews.⁴⁸ If what can be seen can be hit, and what can be hit can be killed – then, like Israel in the Yom Kippur War, the US Army had to ensure that it would shoot first. In practice, this meant that TRADOC viewed that survivability on the modern battlefield would be predicated on the ability to acquire and destroy the enemy before he could do the same to you.

Critical Lesson Three: The Combined Arms Team

TRADOC's analysis next turned to the value of the combined arms team. Some pundits took Israel's disastrous counterattacks in the first days of the Sinai campaign as indicative of the demise of the tank.⁴⁹ As Martin van Creveld observed in his analysis of the war "while the tanks' mobility and striking power were not seriously put in question by the Yom Kippur war, its ability to protect itself – the very quality for which it was originally designed – was put in doubt by [the Egyptian infantry]."⁵⁰ Nonetheless, General DePuy and TRADOC still assessed the tank to be "the single most important weapon on the mechanised battlefield."⁵¹ However, independent tank attacks were no longer viable tactics.

Instead, the modern battlefield required the integrated efforts of the combined arms team. The combined arms team offered a means by which to suppress the ATGM-wielding infantry, allowing tanks to again operate at maximum effectiveness. Although a key lesson from the Second World War had been the value of the combined arms team,⁵² the lethality of ATGMs necessitated its reemphasis in 1973. Besides "shooting first" and individual and crew skill, the

combined arms team (in this case infantry, tanks, and artillery), could offer an additional advantage of suppression. If, through the application of fires, the enemy could be disrupted, the likelihood of “shooting first” is increased. General Depuy put it thus:

The tank and the aircraft have now joined the infantry in their vulnerability, but this does not mean they cannot be used. It just means they must be used judiciously. The infantryman has been vulnerable to the rifle and machine gun for many years. He cannot be employed on the battlefield unless the weapons that could kill him are suppressed. We’ve learned to live with that. The tank cannot now manoeuvre on the battlefield unless the enemy weapons that can kill the tank are successfully suppressed. So, it is with the fighter; the fighter cannot fly through the air over the battlefield unless the enemy weapons that can destroy him have been suppressed.⁵³

Additional Lessons

Critical lessons on air support also come from the Yom Kippur War. The Arabs made strong use of an integrated air defense system. The IAF understood and planned for this threat and had planned to conduct an air superiority campaign first, but were unable to do so owing to other pressures. TRADOC, therefore, observed the following: A successful air superiority campaign is critical to effective close air support. Ground forces can play a role in the air superiority campaign, and close air support cannot be counted on to replace artillery or antitank weapons.⁵⁴ TRADOC observed that “air defense suppression in concert and collaboration with the US Air Force is now one of the most important problems facing the ground commander.”⁵⁵ This newly articulated relationship between ground and air forces would become the foundation upon which the AirLand concept battle would later be built.

Finally, in addition to the lethality of the battlefield, TRADOC took note of the scale of equipment deployed. At a speech to TRADOC leadership, General DePuy observed that the American way of war had previously been a product of deploying exponentially more equipment and firepower than her adversary. This was no longer a reliable means of ensuring success.

Moreover, TRADOC assessed Soviet equipment as being just as good as American equipment.⁵⁶ In short, the American military should expect to fight its next war outnumbered.

After analyzing the war, TRADOC made 162 formal recommendations which ranged from observations about night fighting⁵⁷ to the flammable nature of American hydraulic fluid. The most significant lessons were that the modern battlefield was exponentially more lethal and that the United States could not and should not expect material advantage to deliver victory. This lethality did not mean that the tank was to be relegated to history. Instead, it meant that the tank would only be effective if employed in well-trained combined arms teams. Individual and crew skills were to be emphasized as the key to battlefield survival.

How to Fight Outnumbered and Win – From Active Defense to AirLand battle.

Lessons from the Yom Kippur War were integral to the publication, on 1 July 1976, of an update to FM 100-5, Operations. The 1976 edition of FM 100-5 advanced a concept of Active Defense predicated on Israeli success fighting outnumbered on the Golan. In America's next battle, it says the US Army can expect the enemy to possess weapons as effective as our own and in greater numbers. It highlights the new lethality. The impact of this reality was starkly expressed:

The United States could find itself in a short, intense war – the outcome of which may be dictated by the results of the initial combat. This circumstance is unprecedented: we are an Army historically unprepared for its first battle. We are accustomed to victory wrought with the weight of material and population brought to bear after the onset of hostilities. Today the US Army must above all else, **prepare to win the first battle of the next war.**⁵⁸

While winning the first battle was necessary, the doctrine did not imply that doing so would be sufficient. FM100-5, however, acknowledged that, as historian John Shy has noted:

“preparedness has never been reckoned the strong suit of US military capacity.”⁵⁹ Winning the

first battle, as the paragraph indicates, was about changing the fundamental policy assumption that the US could rely on time and material to overcome initial disadvantages.⁶⁰

From its publication, the Active Defense Doctrine became the object of intense criticism, both valid and not. Of the latter, the doctrine was primarily criticized for emphasizing firepower over maneuver and for over-emphasising the defense.⁶¹ These criticisms missed the symbiotic relationship between firepower and maneuver that the doctrine was attempting to espouse. As military theorist Richard Simpkin has observed, while maneuver and attrition theories of war can be considered separate prior to the commencement of a battle, once the fighting has commenced the two theories become complimentary.⁶² Moreover, the ascendance of firepower was in fact a critical take away from the Yom Kippur War. Likewise, critiques that cited the doctrine as overly emphasizing the defense were misplaced. The doctrine did discuss the offense in as much detail as the defense and held that the offense was key to victory.⁶³ Nonetheless, the strategic situation in Europe was inherently defensive in nature, and the doctrine was focused on war in Europe. As Philip Karber suggested in response to this critique, theatre level political constraints in Europe made an operational offensive doctrine “patently absurd.”⁶⁴

More valid criticism focused on the actual feasibility of the Active Defense model, questioning the presumptions about the ease with which the Army would be able to move across internal lines to concentrate the force as the doctrine demanded.⁶⁵ Even more credibly, the doctrine was criticized for being singularly focused on Europe.⁶⁶ While the Soviet threat in Europe represented the most dangerous contingency the US Military might fight, more probable contingencies existed outside of Europe. In 1980 the Chief of Staff of the Army published a white paper in which he argued that “the Army of the 1980s faces a strategic requirement for unprecedented flexibility, flexibility in tactical employment options, in strategic deployability, in

our thinking as well as in our force structure.”⁶⁷ Whether the 1976 edition of FM 100-5 was sufficiently broad for the range of anticipated global contingencies was uncertain.

Finally, the doctrine was criticised for its singular focus on the first battle. The logic of focusing on the first battle was sound in context. DePuy’s objective, expecting future conflicts to be short, sharp affairs, had been primarily concerned with ensuring that the US Army would be well prepared for the first battle. General Donn A. Starry, who as Commanding General of the US Armor Center from 1973 to 1975 had played a significant role in the development of the 1976 edition of FM 100-5, grew concerned about the first battle focus as he became responsible for applying the doctrine as V Corps commander in 1976. Starry later acknowledged the doctrine’s weakness in dealing with second and third echelon forces observing “I simply hadn’t an answer to that in the ‘76 editions... We tackled the tactical problem up forward but we kind of brushed aside the operational level considerations, the theatre-level considerations.”⁶⁸

In light of these criticisms, the 1976 edition was to be short-lived. General Starry assumed command of TRADOC in 1977, and began the process of redrafting the doctrine to answer some of the critiques and to incorporate newly available technologies. The 1982 edition signaled a departure from the first battle focus, stating that, “Breaking or restraining the enemy’s initial ground attacks will not end the hostilities. We must be prepared to fight campaigns of considerable movement, complemented by intense volumes of fire and complicated by increasingly sophisticated and lethal weapons used over large areas.”⁶⁹ The 1982 edition expanded the AirLand Battle concept, a term that first appeared in the 1976 edition. The new doctrine observed that “Wide-ranging surveillance, target-acquisition sensors, and communications that provide intelligence almost immediately will affect the range and scope of the battlefield.”⁷⁰ The new doctrine, therefore, was predicated on the concept of the extended

battlefield framework, that is, a battlefield that could and must, with modern technologies, be extended in depth, time, and a wider means of attack.⁷¹ The central idea was that the US Army and US Air Force weapon systems coming online in the 1980s would enable the US to acquire and destroy second echelon forces through long-range fires and coordinated deep air strikes before the enemy could muster in for the attack.

The AirLand battle concepts espoused in the 1982 edition of FM 100-5 continue to serve as the foundation of modern warfighting. Taken together the 1976 and 1982 editions of FM 100-5 provide astute commentary on the nature of the modern battlefield. The DePuy edition of the manual succinctly captures the lethality of the modern battlefield that had been made clear by the Yom Kippur War. It fairly assesses the probability that future war between major adversaries is likely to be short and sharp and thus endeavours to place a premium on preparedness. Ultimately though, in failing to adequately deal with second and third echelon forces, the DePuy edition does not provide a sufficient answer to the problem of fighting outnumbered and winning. The Starry edition corrects this shortfall by applying new technology to the extended battlefield. In doing so, the Starry edition increased its applicability to a broader range of contingencies. Although the AirLand Battle was replaced in 2001 by the Full Spectrum Operations concept, its central tenets have remained the cornerstone of the US Army's approach to conventional warfighting.⁷² Moreover, as the US Army seeks its next evolution in warfighting doctrine, AirLand Battle is again a watchword amongst doctrinal planners.⁷³

REVISITING LESSONS FROM THE YOM KIPPUR WAR AND THEIR APPLICATION TO THE MODERN BATTLEFIELD

The Yom Kippur War significantly informed the evolution of American Warfighting doctrine as it advanced towards the AirLand Battle concept. Forty-five years later, the Yom Kippur War should continue to inform our thinking on the future battlefield. From the Yom Kippur War we can take the following lessons: First, the US should expect to be surprised by the next war, and should anticipate initially ceding the initiative to the enemy. Second, validating warfighting doctrine based off of success in the last war is a recipe for failure. Third, firepower will be the dominant character of the modern battlefield leading to the ascendance of the defense. Finally, the United States should seek advantage on the future battlefield in the superior training of its soldiers and leaders.

Surprise and Ceding the Initiative.

Israeli military planning prior to the Yom Kippur War was predicated on the false belief that the Israeli intelligence would be able to provide 48 hours warning of any pending attack. No such warning occurred. As discussed above, Israel's failure was not one of insufficient information, but a cognitive failure. Although the United States intelligence apparatus is likely the most formidable in the world, it is susceptible to the same error. Interpreting an adversary's intent is, by its nature extremely difficult.

Additionally, the United States faces the same challenges of pre-emption as Israel did during the Yom Kippur War. Once war was deemed inevitable, Israel had a limited opportunity to conduct a pre-emptive strike. Had it done so, the outcome of the war may have been very different. Instead, Prime Minister Meir ceded the initiative to the enemy in order to ensure that

Israel was not seen as the aggressor. The United States, wary of being perceived as the aggressor, might make a similar choice. The US military should therefore anticipate that in the next war it will initially cede the initiative to the enemy.

Validating the AirLand Battle Concept.

The Yom Kippur War also offers a critical lesson about the dangers of validating warfighting doctrine based on past successes. Israeli assumptions about how it would fight its next war, based on how it fought the Six Day War, left her ill-prepared in 1973. Hubris left her blind to the possibility of attack, and an overemphasis on airpower and the tank led to an imbalanced force and wasteful frontal attacks in the war's opening stages.

In the 35 years since the 1982 AirLand Battle edition of FM 100-5 was published, the ideas espoused have appeared massively successful. In both the First and Second Iraq Wars the United States military fought outnumbered and won definitively. These successes are frequently taken as validations of the AirLand battle concept. However, superior American warfighting technology, combined with the training and doctrine necessary to leverage the technology, assured American success in both wars. That is, a result of the advances in warfighting encapsulated in the 1976 and 1982 editions of FM 100-5, the United States held an overwhelming asymmetric advantage in both Iraq Wars. Since these wars the United States has moved forward under the dangerous assumption that it can continue to achieve similar asymmetries.

The current democratization of information assures the rapid proliferation of technology. The United States Marine Corps Operating Concept notes, "Any monopoly we might have on 'break-through' systems will likely be short lived. Designs can be stolen from compromised

information environments and cutting-edge equipment can be captured or illicitly acquired and reverse-engineered.”⁷⁴ Moreover, fighting across the extended battlefield is inherently dependent on the communications link between sensor and shooter. It is increasingly acknowledged that this represents a critical vulnerability of the American military. As Chief of Staff of the Army General Milley recently observed when speaking to the US Army Association about future war,

soldiers will operate routinely in a partially or significantly degraded environment. That means we must invest in hardening our systems and, equally important, train on the techniques of operating with limited electronics... We may have to read a paper map again and learn to use a magnetic compass.⁷⁵

Milley’s observation, combined with speed of modern technological proliferation has profound implications for the future battlefield. If the electronic environment has degraded to the point that soldiers are unable to rely on GPS for navigation, the United States also should expect not to be able to utilize the deep fires on which its warfighting doctrine is so dependent. That is, the extended battlefield is reliant on a network of systems that may be extremely vulnerable on the modern battlefield. Conversely, if the US is able to harden its networks to reliably resist electronic attacks, then it must expect that its peer and near-peer enemies will be able to do the same. In this environment, US forces will be equally vulnerable to the devastating effects of deep fires. In this situation mass, presumed a principle of war, becomes a critical vulnerability.

Inherent assumptions of US technological superiority on the future battlefield are dangerous. Just as Israel’s past success led to false assumptions that put it at risk as Arab warfighting technologies advanced, the United States risks a sense of false security in a doctrine assessed solely against its Iraq War victories. The military capability of the victor is only one factor in the outcome of a war. As Mohamed Heikal wrote of the Yom Kippur War “[Israel] forgot that it was not their genius but [Egypt’s] failure that handed them victory in 1967 on a plate.”⁷⁶ America must be cautious of making the same mistakes. The modern conventional

battlefield should be anticipated to be far more symmetrical than the battlefields on which America fought in Iraq. AirLand Battle remains untested on such a battlefield.

Firepower and the Ascendance of the Defense

The Yom Kippur War demonstrated that the increased lethality of the modern battlefield neutralizes offensive mobility. On both fronts, attempts at offensive maneuver were blunted by the defense. Breakthrough was never achieved in the North by the Syrians and breakthrough for the Israelis did not occur in the South until Egypt had attrited itself during its own futile attempts at offensive maneuvers. This is indicative of the ascendance of the defense on the modern battlefield. The reality, of course, is not new. The strength of the defense has long been understood as the strongest form of warfare.⁷⁷ Major advancements in firepower have always accentuated this reality. The Battle of Fredericksburg in 1862, the Austro-Prussian war of 1866, and the Western front during the First World War are examples of the this dynamic. The Yom Kippur War is yet another. Both Iraq wars are further examples of the ascendancy of firepower on the modern battlefield. Iraqi forces were not destroyed by maneuver, but by the application of mass fires when they themselves tried to maneuver.⁷⁸ As Van Creveld notes, the post-Yom Kippur War battlefield should expect to see an increased use of prepared positions in which “ruses and retreats will take place in short, breathless rushes.”⁷⁹ On Europe’s Cold War battlefields, the strength of the defense benefited the US. Today it is likely to benefit America’s adversaries. US warfighting doctrine calls for a maneuverist approach to warfare defined by the United States Marine Corps as a “*fighting philosophy that seeks to shatter the enemy’s cohesion through a variety of rapid, focused, and unexpected actions which create a turbulent and rapidly deteriorating situation with which the enemy cannot cope.*”⁸⁰ While it is difficult to offer a useful

alternative to maneuver warfare, future planners must, at a minimum, consider its limitations within the framework of a battlefield in which firepower can effectively limit offensive maneuver and in which the enemy is likely to hold the initiative. Parallels to the First World War and the Western Front are easy to make.

Seeking Advantage Through Superior Training and Leadership

In response to the increased lethality of the modern battlefield General DePuy and TRADOC observed survival on the modern battlefield is predicated on being able to shoot first. Absent notable technological advantage, the ability to shoot first is predicated on superior field craft. Moreover, on a firepower-dominated battlefield in which mass is a vulnerability the United States should anticipate operations being conducted by dispersed small teams. Success on the future battlefield, then, is likely to depend on the independent initiative of well-trained soldiers and leaders working in small teams towards a collective end. These are not new lessons, in fact, they are old ones. Reflecting on the future of the tank following the Yom Kippur War, General Avraham Adan recalls that the British used the tank to break the deadlock of the Western Front.⁸¹ In this instance, General Adan is wrong, but the reference point is valid. Stalemate on the Western front was not broken by British tanks. It was first broken by *Operation MICHAEL*, a German offensive that depended on the independent actions of well-trained soldiers and low level combined arms integration. It was this action that returned mobile warfare to the Western front, not the tank.

While technology is the American military's most transferable capability,⁸² the skills of its soldiers and leaders are its least transferable. On the future battlefield the United States should

seek advantage through application of *auftragstaktik* through mission-type orders, executed and led by better trained soldiers and leaders. The ability to shoot first requires a skilled force.

CONCLUSIONS

Van Creveld effectively captures the essence of the Yom Kippur War in his observation that, “Shock had lost in importance as against firepower; maneuver as against attrition; and quality as against quantity. *The result was not merely a different war but a new type of warfare.*”⁸³ The Yom Kippur War represented a change in the character of war. As the United States military seeks to understand the character of the future war, it should consider the Yom Kippur War. The fundamental lesson of that war was the increased lethality of the modern battlefield. Lethality of modern weapon systems has only increased, however, in the recent past that lethality has been unevenly distributed. The bloodless wars of late 20th and early 21st centuries were not actually bloodless, they were simply extremely one-sided. A future conflict on a more symmetrical battlefield is likely to look similar to the Yom Kippur War. Future large-scale combat is likely to involve a cost in blood and treasure not seen in a generation. Senior military leaders must ensure that the nation’s political leaders understand this reality.

The lethality of the modern battlefield must be understood as implying the ascendance of the defense. Advances in firepower are likely to make offensive maneuver nearly impossible on the future battlefield. The US Military must consider how to account for this reality prior to the onset of the next war or face a tragedy akin to the First World War. Most importantly in accounting for the lethality of the modern battlefield, the United States should seek advantage through the superior training of its soldiers and leaders.

In the closing paragraph to *The Attack in Position Warfare*, the doctrinal foundations for *Operation MICHAEL* issued to the German army on the 1st of January 1918 General Erich Ludendorff offered the following observation “Methods of warfare and tactics have changed in detail, but the great military principles which formed the backbone of our military training in peacetime and to which we owe all great successes of war, are still the old ones. Where they may have been forgotten, they must again be aroused.”⁸⁴ Study of the Yom Kippur War offers an opportunity to arouse those lessons today.

END NOTES

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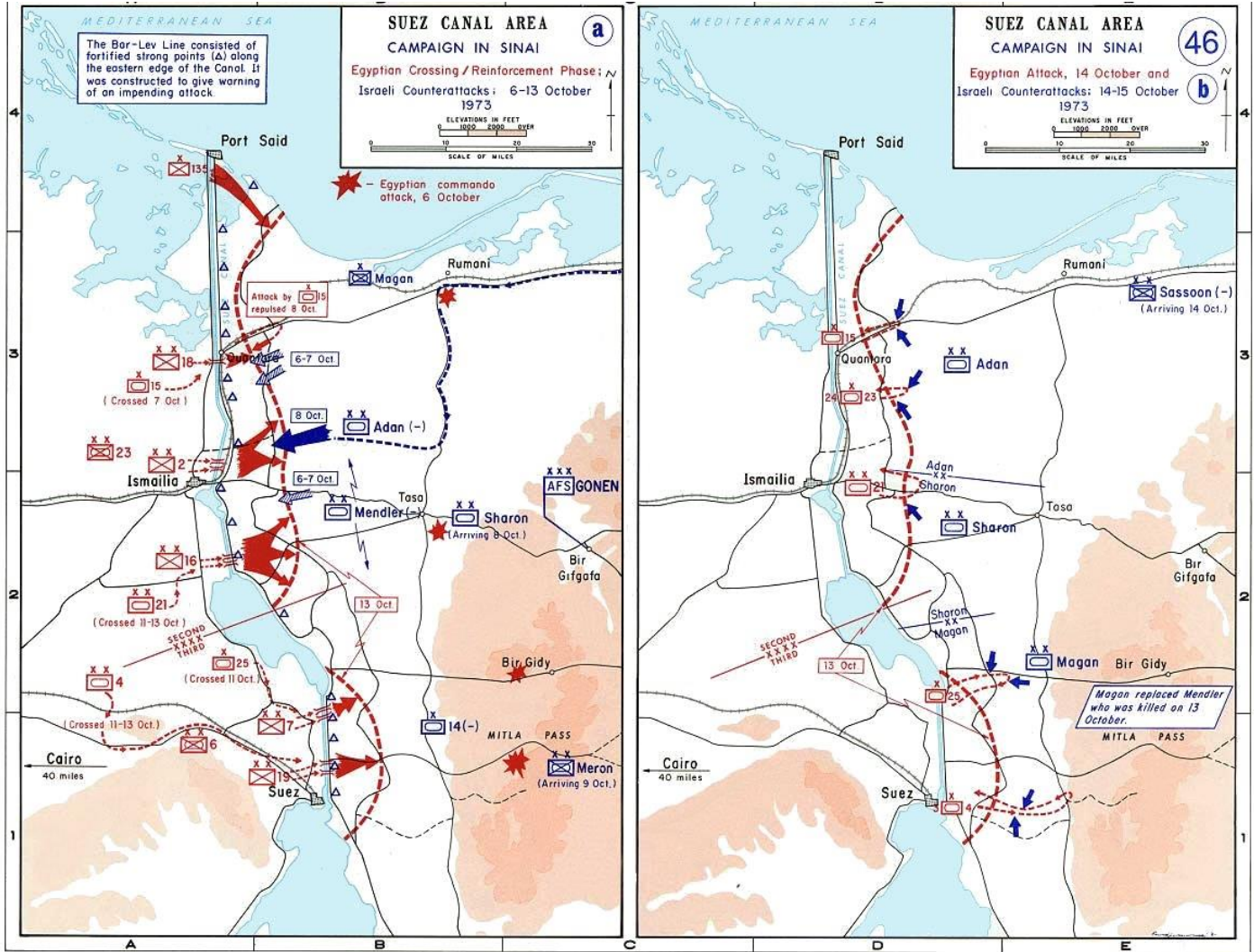
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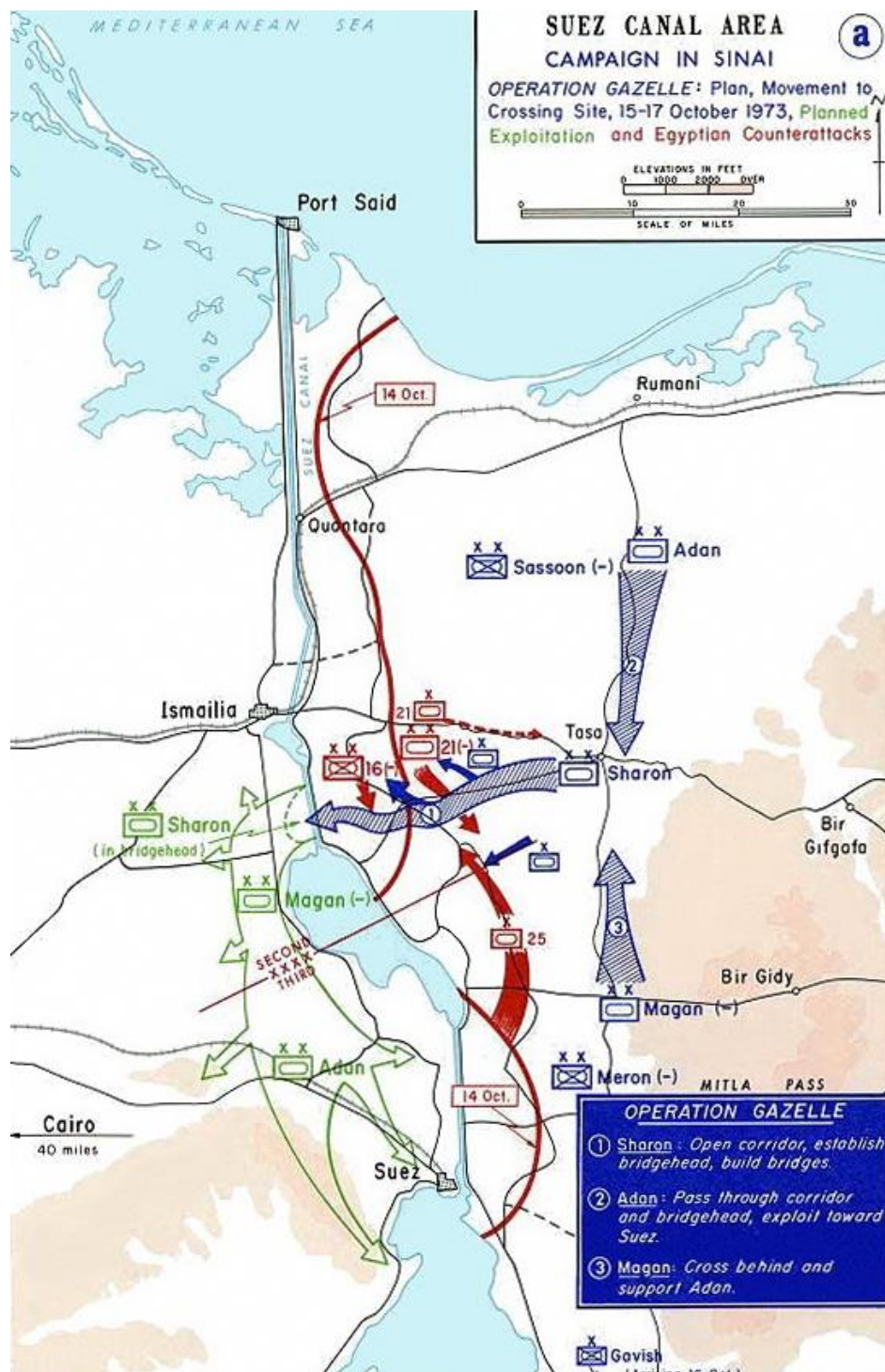
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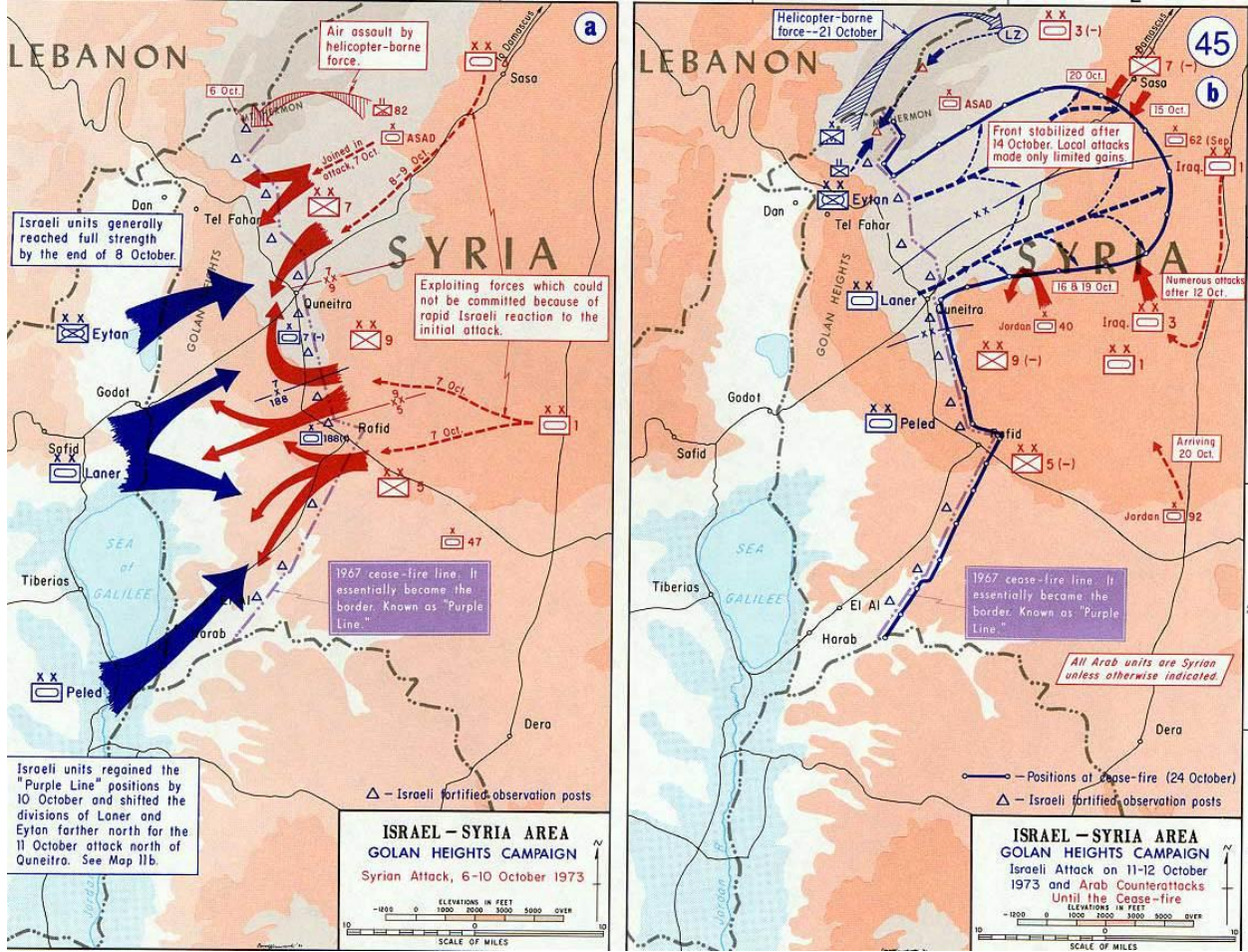
Map 1.1 – Israeli Territory Before and After the Six Day War (Source: [USMA Department of History](#))



Map 2.1 The Southern Front 6-15 October (Source: USMA Department of History)



Map 2.2 The Southern Front Post 15 October (Source: USMA Department of History)



Map 3.1 The Northern Front (Source: UMSA Department of History)