# The Egyptian Way of War: A Tradition of Excellence Confronts the 21st Century


**A Monograph**
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# SCHOOL OF ADVANCED MILITARY STUDIES

# MONOGRAPH APPROVAL

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Title of Monograph: The Egyptian Way of War: A Tradition of Excellence Confronts the Challenges of the 21st Century

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# ABSTRACT

THE EGYPTIAN WAY OF WAR: A TRADITION OF EXCELLENCE CONFRONTS THE CHALLENGES OF THE TWENTY FIRST CENTURY by major Ahmed Mohammed Aly, Egyptian Army, 93 pages.

**Over an astonishing history dating back more than seven thousand years, Egypt maintained an advanced and relevant military force. This experience gave guidance for developing ways of war that were decisive in assuring victory in some of the most significant campaigns of Middle Eastern history, from Pharaonic times to the Egyptian –Israeli conflict of 1973.**

**This monograph provides an overview of that history, decisive campaigns, and the features of that military experience in former times that could be useful, in the opinion of the author, for the education of Egyptian military officers today and in the futures – as one element in continuing improvement in Egyptian military and operational art.**

**Some of the key lessons learned from Pharaonic, Islamic, and modern Egyptian military history are:**

- **The need for speed and mobility.**
- **The importance of support structures -- both an industrial base for producing weaponry, and strong logistical supply system for campaigns.**
- **Attention to strategic and tactical planning to assure that the enemy is engaged at times, in places, and under conditions of one's choosing**
- **The practice, following Clausewitz, of using war as "a continuation of politics by other means".**

**Conclusions and recommendations based on this analysis address how to apply learned lessons from Egyptian military history to current and future officer education. An advanced course, beyond the mid-career staff college, applying lessons from history to current doctrine, theories, and campaign planning, could provide a useful framework for using lessons learned from history for current and future military practice.**

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# INTRODUCTION

> "That men do not learn very much from the lessons of history is the most important of all the lessons that history has to teach."
>
> - Aldous Huxley
> "Voluntary Ignorance"
> in *Collected Essays*

## Background

Throughout history, warfare has assumed the characteristics and used the technology of its era. Today we are witnessing the transition from the industrial age, with its emphasis on mass, to the information age where the power of distributed networked forces and shared situational understanding will transform warfare. The Egyptian Army has to align itself with the on-going information revolution, not just by exploiting information technology, but also by developing information-enabled organizational relationships and operating concepts. As we prepare for the future, we must think differently and develop the kinds of forces and capabilities that can adapt quickly to new challenges and to unexpected circumstances.

The Egyptian military today faces challenges that are more complex and daunting than those of previous times. In order to understand the politics in obscure corners of the world, to integrate new technologies, and to create new systems of organization and discipline, the military will require first-rate thinkers to create a successful military education system and operating performance. To meet emerging security challenges demanded by the 21st century, we must constantly transform our military forces not only the capabilities at our disposal, but also the way we think, the way we train, the way we exercise, the way we fight, and the way we educate our planners and future leaders. Current and foreseeable conditions demand joint staff officers who

are more knowledgeable and innovative, and more joint force commanders who are better prepared for their expanding duties and responsibilities.[1]

Operational art and the increasing importance of joint operations demand more from commanders and their staffs than ever before. History and current trends suggest that merely attempting to hold on to existing advantages is a shortsighted approach and may prove disastrous. This process should be based on a review of historical experience, to produce insights that will lead to improved practices today and tomorrow in the profession of arms demanded by 21st century security challenges.

## Purpose of This Study

Reexamination of Egyptian military history provides useful concepts and methods for the education of military officers. Each of three main stages in Egyptian military history – Pharaonic, Islamic, and modern – reveal a tradition of innovation and excellence that can suggest fresh ways of dealing with current and future challenges.

## Significance of Topic

This analysis is based on advanced study in the School of Advanced Military Studies and the U.S. Army's Command and General Staff College. This experience gave the author an opportunity to reflect on how issues addressed in these programs could be applied to military education in Egypt. Some uniquely Egyptian understandings of the art of war, based on historical experience, can provide an excellent basis for fresh understandings and applications of doctrine and theory. Using these insights, military planners and future leaders can be better equipped to be agents of change for continual improvement of Egyptian military practice.

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[1]Lieutenant General Leonard D. Holder Jr. and Williamson Murray, "Prospects for Military Education,"*Joint Forces Quarterly,* no.18 (spring 1998): 9.

## Methodology

Having recognized the importance of the study of history as decisive part of a military education system, both in the U.S. and Egypt, the author was drawn to a more selective consideration of some aspects of Egyptian military experience – key battles and campaigns, tactics, methods of warfare, weaponry, logistics – and the implications of this experience for Egypt's military operations now and in the future.

Research for this monograph was based on examination of the open literature, in Egypt and the United States – books, professional journals, service schools' student monographs, databases, other scholarly publications, course materials, and academic presentations.

## Conclusions and Recommendations

This study shows how the history of Egyptian ways of war provides significant resources for military planners and future leaders. The summary of lessons learned from Egyptian military history provides a basis for restoring and strengthening the role of historical studies in Egyptian military education. The study recommends the rebirth of a history focused military education system along with theories and doctrine that would enhance the ability of selected officers to think clearly, logically, and rapidly, to conceptualize and innovate, to teach and develop subordinates, to integrate the work of specialists, and to create high-performing staffs that would anticipate and adapt to change.[2]

Lessons from historical experience, melded with theory, doctrine, campaign planning, and support taskings, can provide four themes for on-going improvement. The study of military history was heavily emphasized to acquire the theoretical foundations of military science and to gain an appreciation for human performance under the stresses of combat. This analysis provides

[2] Colonel Huba Wass de Czege, *Army Staff College Level Training Study,* (Carlisle Barracks, PA: U.S. Army War College, 1983): 11.

a basis for considering adaptations in Egyptian military education to use - not forge - history, in the continuing effort to train, educate, and organize for the future

# CHAPTER 1: The Ancient Egyptian Army

> The one cardinal fact of early Egyptian history is that the birth of the civilization on the Nile was fashioned in war, and the kingdom of the pharaohs was maintained by military force.
>
> Arther Ferrill

Almost seven thousand years ago, Egypt was divided into a number of provinces fighting each other one day and acting as close allies the next day, whenever common interests forced them to unite and cooperate. This prevailed until the state achieved stability as two independent kingdoms, one in Lower Egypt, taking "papyrus" as the insignia of the kingdom, and the other in Upper Egypt taking "lotus" as its insignia.

In these times, there were many attempts to unite the two kingdoms. Yet, they all failed, until King Narmer succeeded in unifying them, giving birth to Egypt in 3100 BCE and laying the foundation for the first Pharaonic Dynasty. With the unification of Upper and Lower Egypt, it was necessary to establish a strong army with headquarters in the city of Menf (modern Luxor). Narmer also established the first naval fleet at the beginning of the third Pharaonic Dynasty. In 2686 BCE, Egypt was exposed to many raids by nomads on its eastern borders. This led King Zosar to establish a regular army with a distinctive military tradition and banners. Zosar's army is considered to be the first regular army in history. Later on, Zosar organized Egypt into districts where he set companies. Moreover, he established his own royal army made up of corps, and built a substantial fleet as well.

From the seventh up to the tenth dynasty (2181-2040 B.C.) when riots and unrest took place, bloody conflicts arose among the rulers of provinces. They sought the assistance of mercenary soldiers from neighboring countries; this raised the army's combat efficiency. During the eleventh and twelfth dynasties the army tended to be more unified, and an active service system and conscription were introduced. Each provincial ruler was responsible for training and

strengthening his own army, pledged to join the army of the Pharaoh if the country were invaded or if one of the province rulers declared mutiny.

The army was divided into two sections: spear holders and archery soldiers. The weapons used at that time were bows, arrows, spears, swords, daggers, axes, and shields. Horns were used for calling the soldiers to assemble. The most prominent development added to the ancient Egyptian army was the use of war chariots, a weapon that was adopted from the Hyksos (see below). Chariots were further developed and used extensively by the Egyptians. They began to breed horses, an animal not very common in Egypt, and modified the chariots' design. In the well-known battle of Megiddo the Egyptian army, under the command of Thutmose III, captured 24 war chariots and 2238 horses.

Throughout the ancient Egyptian history, the army fought many battles. The most prominent was the liberation from the Hyksos, who occupied the country for almost 150 years (1725-1575 B.C.), until King Ahmos defeated them, expelled them from the country, and started the era of the modern Pharaonic state. Afterwards in 1468 BCE the Egyptian army, under the command of Thutmose III, fought the battle of Megiddo against a coalition of Asian princes to the north of present-day Palestine. Thutmose III is considered one of the greatest commanders in ancient history. He conducted 16 military campaigns to the east and south of the country, thereby establishing the first empire in human history. In 1285 B.C. Ramses II fought the famous battle of Kadesh in northern Syria against the Hittites and managed to establish the second Egyptian empire.

## The Grand Strategy of Ancient Egypt

In modern times, the term "grand strategy," from the time of Napoleon to the end of World War II, denoted the need to maintain a powerful, offensive striking army, designed to win decisive victories in major conflicts. This offensive approach to national security is usually

associated with the great German military theoretician Clausewitz, although he is merely the best known of a large group, including Jomini, du Picq, Foch, and Liddell Hart.

In that context, the grand strategy of ancient Egypt is particularly interesting, because over the centuries it changed from defensive militarism in the Old Kingdom to offensive imperialism in the New Kingdom. The first pharaoh of united Egypt seized control in a brutal display of military force, smashing Lower Egypt with his army and taking possession of it. Once the internal disposition of Egyptian affairs was settled by force, the pharaohs of the Old Kingdom pursued a defensive rather than offensive grand strategy. This does not mean, contrary to what many Egyptologists have claimed, that the Old Kingdom required no standing army. In fact, although evidence from the Old Kingdom is sparse, it seems clear that Egyptian grand strategy was militaristic, even though it was essentially defensive.

The grand strategy of the Middle Kingdom was less expansionist than most historians have claimed. In the northeast it was based upon maintaining the frontier of the Old Kingdom by strengthening fortifications and using these as a base for large-scale search - and - destroy missions by their mobile army in Palestine. In the south, the pharaohs also accepted the Old Kingdom frontier at the First Cataract, but strengthened it by extending a series of forts to the Second Cataract and creating a militarized zone where the Egyptian army controlled the river and the countryside. This made the First Cataract a much stronger location for defending the southern frontier. This diversified grand strategy served the Middle Kingdom well and resulted in a period of peace, stability, and prosperity.

Egypt was toppled, however, at the end of the Middle Kingdom, by the appearance of the mysterious fearsome Hyksos, whose arrival inaugurated the Second Intermediate Period (1640-1550 BC). They gained much control of Lower Egypt, and the period of their predominance was regarded as a great humiliation. They seem to have come into the Delta from the east, where late in the Middle Kingdom there must have been a decline in the frontier defenses. However, the

Hyksos contributed to military development of Egypt by introducing the war chariot, which would soon become the primary offensive striking instrument of the Egyptian army.[3]

In the sixteenth century BCE the founder of the Eighteenth Dynasty, Ahmose, drove the Hyksos from the Delta and launched the New Kingdom of Egyptian history. Under Ahmose and his successors, particularly Thutmose III and Ramses II, the New Kingdom abandoned the defensive grand strategy of earlier periods, and the pharaohs deployed an army that regularly reached into modern-day Syria and Ethiopia (*refer to map 1*). Thutmose III (1479-1425) was the greatest of conquering pharaohs, and he did more than any other ruler to establish a new grand strategy for Egypt. Earlier, Thutmose I (1504-1492) had advanced with Egyptian armies to the Euphrates, and even earlier than that, had reasserted Egyptian control in the south, but conditions in both areas remained unsettled. Hatshepsut (1473-1458), regent during Thutmose III's minority, was more concerned with domestic affairs during her reign than with foreign adventures. Egypt's northeastern frontier was threatened by a coalition of the princes of Palestine under the leadership of the King of Kadesh. When Thutmose III acceded to full power in 1458 BCE, he moved out with his army, and in the great battle of Megiddo defeated the king and stormed the city; during the course of his reign, he was forced to lead fifteen expeditions into Syria-Palestine. Later, Ramses II (1290-1224) would duplicate Thutmose's achievements on the field of battle.

The grand strategy of the New Kingdom broke sharply from the military tradition of the Old and Middle Kingdoms. The Egyptian pharaohs had relied almost exclusively on mobile armies and foreign alliances rather than on fortifications and defensive perimeter for the maintenance of their hegemony in Syria-Palestine. During the age of the Hyksos, fortifications in the south had been lost to the Nubians. When Egyptian armies returned to the area in the New Kingdom, they found the fortifications destroyed and mostly covered with sand.[4] As they moved

[3] Sir Alan Henderson Gardiner, *Egypt of the Pharaohs* (Oxford: University Press, 1961), 404.

[4] A.W. Lawrence, *'Ancient Fortifications'*, *Journal of Egyptian Archaeology*, 51 (London, 1965), 69-94.

up to the Fourth Cataract, they built only a few new fortresses, relying for defense instead on the size and mobility of their army. One of the interesting features of the New Kingdom is that grand strategy became a matter for debate within the court. Some pharaohs, who could be called "doves", attempted to return Egypt to a more isolationist tradition. The hawks were more often in the ascendant, but inconsistency made their aggressive grand strategy less effective over the long run than it might otherwise have been.

The pharaoh often served as commander-in-chief, usually during the great campaigns, although other generals were occasionally in command of independent, minor operations. The pharaoh's vizier acted as war minister, and the generals of the Egyptian army formed a council of war, probably at home and definitely in the field, in much the same manner as Alexander the Great was later served by his high ranking Macedonian officers. Early in the New Kingdom, the field army consisted of divisions of about 5,000 men, including contingents of chariots and infantry, though the number may have varied depending on the occasion. The divisions clearly had tactical independence, with their own names drawn from the religion of Egypt -- the division of Amon, for example -- and their own standard. The commanding officer of a division had twenty company commanders, and each company consisted of 250 men. Companies were divided into units of fifty men each under a platoon leader known as the great of the fifty.

Ancillary units were probably incorporated into an Egyptian army division (or host) under the commanding general. An assault-officer seems to have outranked the company commanders while the commander of the chariot warriors was apparently equal in rank to the standard bearer of the company. Ordinarily mercenary foreign troops under an Egyptian officer served alongside native Egyptians in the armies of the New Kingdom. It is likely that by the time of Ramesses II the chariots were organized as a separate arm independent of the infantry.

The Egyptian army of the New Kingdom was a highly organized, tactically flexible striking force. Under Ramses II we know that four divisions, about 20,000 men altogether, were put into the field at Kadesh. An indication of the national burdens associated with Egypt's

aggressive grand strategy is that for at least one pharaoh of the late New Kingdom (Ramses III) recruitment officers demanded one man in ten from the native population, compared with one in a hundred in the Middle Kingdom. Although there is no way of knowing the size of the regional armies of the monarchs in the Middle Kingdom, it is nevertheless certain that in the New Kingdom conscription placed an ever greater demand on the manpower reserves.

## The Battle of Megiddo (1458 B.C.)

In 1458 BC, in the first year of his reign after the end of Hatshepsut's regency, Thutmose III decided to deal directly with growing problems in Syria-Palestine that threatened the integrity of Egypt's northeastern frontier, so long neglected by Hatshepsut. Earlier the king of Kadesh apparently hoped to take advantage of the change in leadership in Egypt by moving south from the Orontes in alliance with local princes, and by seizing Megiddo in Palestine, which dominated the main line of communication overland between Egypt and Mesopotamia at a critical point in the Fertile Crescent. His offensive strategy was to penetrate the Egyptian sphere of influence and secure military control of Megiddo, a strong fortified site where he could maintain his advantageous strategic position with defensive tactics.

By occupying Megiddo the king of Kadesh and his allies controlled the major military and trade road north to Lebanon and east to the Euphrates. Megiddo sat on a height where the road emerged from the constriction of the Aruna Pass into the Plain of Esdraelon. From the time of Thutmose III, when Megiddo enters the historical record, down to the twentieth century, this site has been one of the world's major battlegrounds; it is the place where the forces of evil will fight against the forces of God at the end of the world[5]. "Armageddon" means "the mount of Megiddo." [6] In World War I, British Field Marshall Edmund Allenby led Australian cavalry and Indian infantry up the Aruna Pass, surprising and defeating Turks on the *tel* (mound) of ancient

[5] *The Holy Bible*, *The Book of Revelations* (16:14-16)

[6] 2 http://www.bibarch.com/ArchaeologicalSites/Megiddo.htm

Megiddo. Recent scholarship has proven that the twentieth century British warrior had very much in mind the tactics of Thutmose III, over 3,000 years earlier.

Most of what we know about Thutmose III's Battle for Megiddo was compiled by the military scribe, Tjaneni, and inscribed on the walls of the Hall of Annals in the Temple of Amun at Karnak in ancient Thebes (modern Luxor). Speed was part of Thutmose's strategy. This is shown by the fact that it took only nine days for the army to move from Egypt to Gaza, which would have required an average march of about fifteen miles per day, a pace that rivals Alexander's marches and demands a sophisticated logistical support system (*refer to map 2*). When Thutmose reached the vicinity of Megiddo, he summoned his war council to discuss the final approach.

It was known that the Canaanites had concentrated their forces near Megiddo across the Carmel Ridge, to which there were three access routes. The northern and southern routes were longer than the central route through Aruna, but were less easily defendable. Furthermore, the Aruna road was through a narrow and difficult pass over a ridge that was presumed (particularly by the enemy coalition) to be too difficult for an army to use (*refer to map3*). Taking that route meant that "horse must follow horse, and man after man," and to be strung out in such a manner would be a recipe for disaster. Hence, Thutmose III's generals counseled the pharaoh to take the more conservative Yokneam or Taanakh routes.

> Now two (other) roads are here. One of the roads (behold, it is [to the east of] us, so that it comes out at Taanakh). The other (behold, it is to the north side of Djefti, and we will come out to the north of Megiddo). Let our victorious lord proceed on the one of [them] which is [satisfactory to] his heart, (but) do not make us go on that difficult road![7]

However, the advantage of the Aruna route was that it would allow the Egyptian army to deploy onto the Plain of Esdraelon less than a mile from the city of Megiddo. Also, many modern commentators, and perhaps the Canaanite coalition as well, seem to forget the major virtues of

[7] James Bennett Pritchard, *The Ancient Eastern Texts* (New Jersey: Princeton University Press, 1969), 234.

the Egyptian Chariots. They were light vehicles, and it was certainly conceivable that many could be carried through the pass, with the horses being led separately. Furthermore, Thutmose III and his generals must have known, through reconnaissance, that the coalition forces, and particularly their chariots, were deployed to cover the approaches of the two easier routes to Megiddo (particularly the one from Taanakh). The Canaanite alliance would have been ideally positioned to attack the Egyptian forces had they entered the plain along the Taanakh approach, first by mass chariot attacks and then with a process of attrition of the Egyptian infantry by long range archery. Thus, even before the Egyptian army was finally able to deploy for battle, the enemy already would have inflicted very heavy losses. Therefore, Thutmose III rejected the arguments of his generals and set out on the Aruna route. Notwithstanding the continued doubts of his officers, Thutmose announced his decision in a manner that gives some insight into his grasp of psychology, telling his officers that

> ...My majesty shall proceed upon this Aruna road! Let him of you who wishes come in the following of my majesty! Whatever their doubt about this plan, their loyalty to their lord, as he very well knew, was not in doubt.[8]

He reached the river Qinah south of Megiddo without encountering any opposition. This segment of the march took three days. Two days were spent approaching the Aruna road through the hills and finally the road was accessed in the early hours of the third day. It took an additional twelve hours for the whole Egyptian army to make the passage along the Aruna road, and it was not until late in the evening that they finally set camp on the plain.

The pharaoh's gamble paid off, and a tactical surprise was achieved, for even as the Egyptian army poured out of the pass, the leading elements could see the main enemy forces rushing back to cover the approaches to Megiddo. By nightfall this coalition army lay in front of the Egyptian lines in a hasty arrangement to guard their city.

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[8] James Henry Breasted, *Ancient Records of Egypt: Historical Documents* (Chicago, 1906). http://www.hillsdale.edu/academics/history/War/Classical/Egypt/1469-Megiddo-Egypt.htm

Thutmose understood the need to concentrate his forces and to attack in massed formation in line of battle, so this time he deferred to the advice of his generals. Because the king of Kadesh was uninformed about the Egyptian tactical plan and had assumed a tactically defensive position around Megiddo, Thutmose executed the extremely difficult maneuver of deploying his troops from line of column into line of battle without interference from his opponent. He divided his army into three groups, one to attack the defenders in the north, another in the south, and the main group under the pharaoh's personal command to strike directly at the center of the enemy army in front of Megiddo. The battle began at dawn. The Egyptian army drove back the defending forces all along their line into the protection of the walled city. The rout was so decisive that the inhabitants closed their gates and used ropes made of clothing to haul the defenders back over the wall.

Clearly, Thutmose should have pressed his advantage and stormed the city in its chaotic state, but unfortunately, his army began to loot the camps outside the city in search of booty. The official record reveals a recognition that the army failed to maintain military mission and aim: "Now if only His Majesty's army had not given up their hearts to capturing the possessions of the enemy, they could have captured Megiddo at this time." Yigael Yadin argues that this was "an occurrence which is typical of many undisciplined and untrained troops,"[9] but this judgment is too harsh. As John Keegan has shown, in the face of the battle, looting was a customary for many highly organized armies of medieval and modern times, and in antiquity the vaunted Persian army against Alexander at Gaugamela fell victim to the temptation at even greater cost than the Pharaoh's army at Megiddo[10]. The principle of maintenance of mission and aim is easier to state than to apply in the field, and Julius Caesar was more than once exasperated by one of the most highly trained and disciplined forces in military history when his legions ignored mission and

[9] Yigael Yadin, *The Art of Warfare in Biblical Lands in the Light of Archaeological Study, 2 vols* (London and New York: McGraw-Hill, 1963).

[10] John Keegan, *The Face of Battle* (London and New York: Penguin books, 1976), 182-183.

aim. At Megiddo, the result was that Thutmose had to settle for a formal siege during which the city fell after seven months. A moat was excavated around the city and beyond a wooden palisade was built to seal in the population. However, not until December of 1482 BCE did the city finally surrender. Despite the lost opportunity to bring the war to a rapid conclusion Egyptian tactical success outside the city ultimately enabled the pharaoh to win the war.

Thutmose III led many more campaigns through Canaan and into Syria, and eight years after the battle of Megiddo, he took Kadesh on the Orontes. However, his victory at Megiddo was of great importance, for it was sufficient to render the whole of Canaan quiescent for virtually the rest of his reign. Following the conquest of Retenu, he built a big navy, which was instrumental in his extending Egyptian influence over much of the Near East. His army could now reach any coastal town in Syria by ship in four to five days, while by foot the journey would take more than a fortnight. This would greatly aid Thutmose III in his campaigns over the next twenty years in his contest with Mitanni for the control of Syria. In Megiddo, the Egyptian strategic victory was achieved through tactical implementation.

## The Battle of Kadesh

About 200 years later, in the 1280s BCE, Ramses II conducted a similar campaign to the north, this time against the city of Kadesh on the Orontes and the King of the Hittites, who had moved from Asia Minor into the area with an army of 17,000.[11] Ramses' army of 20,000 advanced all the way to Kadesh in a stunningly rapid march that took only a month (*refer to map 4*). His strategic goal was to end Hittite interference in the Egyptian sphere of influence in Syria by striking far away from his home base in Egypt to defeat and destroy the enemy's main force in the field.

He arrived within fifteen miles from Kadesh at a hill overlooking the city near Shabtuna, encamped for the night and departed the next morning, presumably hoping to seize Kadesh by the

end of the day. The Egyptian army was divided into four divisions of 5,000 men, each named for a god - Amon, Ra, Ptah, and Sutekh - and consisting of chariots, archers, spearmen and axe-wielders. Ramses crossed the Orontes near Shabtuna. At that time two deserters from the Hittites, who claimed that the enemy was still far away and had not yet arrived at Kadesh, were brought to the pharaoh. In fact they were spies sent by the Hittite king Muwatallis. Upon receipt of this information, Ramses moved ahead with his bodyguard to establish a camp northwest of the city while his army advanced from the south in a line of columns several miles long.

As Ramses sat on a golden throne in his camp awaiting the arrival of his army, two captured Hittite scouts revealed under torture that a great force of Hittites was hidden to the east of Kadesh. By that time the leading division Ra had approached from behind near the southeast of Kadesh. Before Ramses knew what was happening, the Hittites crossed the Orontes from the southeast and hit the exposed flank of the division of Ra with their chariots, which were heavier than the Egyptian ones, three-man rather than two-man vehicles. The division of Ra broke in chaos and fled up against the division of Amon, which as a result also seems to have fallen into confusion and disordered fighting (*refer to map 5*).

According to the Egyptian account, at this point Ramses personally mounted his chariot and rushed forward by himself into the thick of the foe, launching a desperate counter-attack. He could not halt the Hittites in the center, but he observed that their eastern flank by the river was thin, and it was here that he attacked with his chariots.[12] Surrounded by 2,500 enemy chariots, he single-handedly defeated the Hittites. In fact, though the exploit is often dismissed as sheer fable on the part of the braggart warrior, it is likely that Ramses rallied his troops by an amazing display of personal bravery on the field, just as Alexander and Caesar did later on more than one occasion. The heavier Hittite chariots must have made pursuit difficult, and with their lighter

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[11] Simon Goodenough, *Tactical Genius in Battle* (London: Phaidon, 1979), 29-32.

[12] Montgomery of Alamein, Bernard Law Montgomery, *A History of Warfare* (Cleveland: World Pub.Co, 1968), 47.

chariots Ramses' forces were able to escape from some of the devastating effect of the Hittite attack. Because of greater maneuverability, it was easier for them to regroup than the Hittites realized. At least some of the Hittite troops had begun to loot the Egyptian camp, but the last-minute arrival of the pharaoh's mercenary troops who had been summoned earlier from the coast caught the Hittites by surprise (*refer to map 6*). This permitted Ramses to regroup the division of Amon and Ra and drive the Hittites, now north of the city, back across the Orontes.[13]

Near nightfall, the division of Ptah came up from the south, and the Hittites decided to move into Kadesh for protection. The division of Sutekh did not appear in time to participate in the battle. Under these circumstances, so far north from his base, Ramses was not strong enough to conduct a siege against such a powerful force behind firm walls, and he withdrew his army and accepted tactical success. Egypt and the Hittites later negotiated a non-aggression pact. When Wellington said after Waterloo that his victory "was a near run thing", he was correct, but Ramses more than 3,000 years earlier had come closer to the edge of defeat.

## Analysis

The strategic and tactical significance of these New Kingdom battles, especially if they are considered to be representative of the warfare of their period, is staggering. The size of the armies, their tactical organization, the use of chariots and other specialized units and the quality of generalship all show a degree of military sophistication that would be hard to match in many later historical periods. If one makes an allowance for the technological limitations of the Bronze Age, it is not difficult to conceive that the quality of generalship found in some Egyptian pharaohs was comparable to the best generalship of any period down to modern times.

This may be best illustrated by some interesting parallels between Waterloo and Kadesh. In both cases an army moving up from the south hoped to destroy a northern force, and, just as

[13] Hans Goedicke, 'Consideration on the Battle of Kadesh', *Journal of Egyptian Archaeology, 52* (London, 1966), 71-80.

Napoleon intended to have dinner in Brussels after defeating Wellington, so Ramses undoubtedly expected to have his evening meal in Kadesh. Wellington was at or near the front throughout the battle of Waterloo, apparently indifferent to the risk of personal injury, but Napoleon stayed some distance behind his army watching the action through his field glasses, angry because Marshal Ney had started the cavalry attack too soon, yet unable to prevent it because he was so far removed from the fighting.[14] At Kadesh Ramses threw himself into the thick of the battle and rallied his troops, while the Hittite king Muwatallis stayed behind on the eastern side of the Orontes and was not present to hold his troops to mission and aim after their initial and highly successful assault on the flanks of Ramses' advancing columns. The last-minute arrival of Blucher at Waterloo is reminiscent of the rescue of Ramses by his mercenary units. Napoleon had no fortified Kadesh to fall back upon, and he was destroyed; Muwatallis had selected a site so strong that even in defeat he could avoid destruction.

## Conclusion

The Egyptians were among the first, if not the first, to develop and to apply military grand strategy to preserve their civilization. The military grand strategy of ancient Egypt is particularly interesting, because over the centuries it changed from defensive militarism in the Old Kingdom to offensive imperialism in the New Kingdom. In Megiddo the Egyptians were able to march an army very quickly into hostile territory (150 miles from the Nile delta border to Gaza in nine days) and keep themselves supplied throughout a seven-month siege. This implies a sophisticated logistical system, supplemented probably from local sources. The army consisted of an estimated 1000 chariots (2000 horses minimum) and a contingent of infantry that must have carried out the siege. The existence of so many chariots would require an advanced industry for making them, plus a system for obtaining and training horses. The deployment and attack of chariots required training in battlefield maneuvers.

[14] David Armine Howarth, *Waterloo: Day of Battle* (New York: Galahad Books, 1969), 142.

The battle itself was a chariot engagement. All of the captured war booty is chariot equipment. The chariots were probably used as mobile platforms for composite bow archers. The composite bow was more powerful than the simple bow but much more difficult to construct. Use of the composite bow was an additional indication of an advanced weapons manufacturing capability. It is clear from the pharaoh's accounts that military affairs had advanced significantly by the time of this first recorded battle. We see already evidence of logistics, leadership, strategy, battle tactics, the military-industrial complex, and weapons technology. In Kadesh, Ramses demonstrated the significance of having the commander present on the battlefield. He rallied his troops with the lighter Egyptian chariots, regrouped more quickly than the Hittites expected, and launched a counterattack that drove the Hittites from the Egyptian camp into the river. Kadesh was a tactical victory and a strategic stalemate for Ramses. Meanwhile, the Battle of Kadesh demonstrated the significance of sophisticated generalship, the size of the armies, and complicated strategy and tactics. All of this proves that principles of organized warfare already existed as early as 1285 BCE.

# CHAPTER 2: The Islamic Egyptian Army

"O Muslims, do not wish to meet the enemy; ask God for peace. But when you meet the enemy, be patient and remember that paradise lies in the shadow of swords."[15]

- Prophet Muhammad

## The Beginning of Islam

The initial expansion of the Arabs following the death of Prophet Muhammad in 632 A.D. was extraordinary. A political and military empire was organized in the space of a few decades based on a religion with a universal message. Part of this drive came from the fact that Islam provides religious justification for war. The notion of the Jihad, a holy war waged on behalf of God, like that of "Shahid", martyrdom for the faith, is to be found more than once in the Koran: *"And say not of those who are killed in the way of Allah, 'they are dead.' Nay, they are living, but you perceive (it) not."*[16] With the introduction of Islam, the faith and discipline born of the Koranic precepts were added to the individual qualities of the Bedouin fighter. This was not an army of mercenaries, ready to mutiny as soon as it was not paid, but of volunteers, soldiers of God. The distinguished individual warrior qualities of the Bedouins are well known. In the fourteenth century A.D., Ibn Khaldun, considered the first Arabic sociologist, noted that the nomads live an isolated life. They are not protected by a wall. Therefore, they provide their own defense. They always carry weapons and are ever on the watch; they watch carefully for the least sign of danger, putting their trust in their fortitude and their strength. Fortitude has become a character trait of theirs, and courage their second nature, according to Ibn-Khaldun.[17]

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[15] To know the Sunna and the Hadiths -- that is, all the saying and deeds of the Prophet and his principal companions -- the work of Al-Bukhari is essential. After the Koran, Al-Bukhari Sahih (authentic) is the chief source of Muslim law and ethics.

[16] *The Holy Qur'an*, Surah 2 Al-Baqarah (2.154), Part 2 (Madinah Munawwarah, Saudi: King Fahd Complex for the printing of The Holy Qur'an, 1996), 31.

[17] Howard Becker, *Social Thought from Lore to Science:* " *Esprit de Corps and Nomadic Life*" *chap.7* (Washington D.C: Harren Press, 1952), 270-272.

Less than half a dozen years after the death of the Prophet, the mobile and highly motivated armies of the Muslims had conquered both forces of Byzantium in Syria-Palestine (Battle of Yarmk, 636 A.D.) and the Persians at Kadisiya (636 A.D.). Penetration into Mesopotamia began; Damascus had already fallen into the hands of the Muslims in 635 A.D. In the west, they advanced as far as Antioch, at the foot of the Taurus Mountains, and in the east they reached as far as Ctesiphon on the Tigris (in 641). By 638, they seemed irresistible. Byzantium was able to counterattack and retain control of Asia Minor, but Muslim expansion continued eastward, toward the borders of central Asia and India, and westward into Egypt. Given the maritime superiority of the Byzantine Empire, the conquest of Egypt, at least in the Nile delta, might have been very difficult. But the Byzantine patriarch, who himself had continuously oppressed the Copts (the Christians of Egypt), chose to submit after a single defeat in battle. By 641, the Arabs controlled Egypt from the east bank of the Nile, except for Alexandria, which capitulated in 642.

The Arabs suffered a reverse in the Sudan but moved victoriously toward Tripoli, which they took in 643. In a dozen years (632-44), from the reign of the caliphs Abu Bakr and ‘Umar on, there was a period of uninterrupted expansion, and these successes had to do with the fact that the conquered population was not subjected to systematic forced conversions. Provided that they paid tribute, the “people of the book” (Jews and Christians) could continue to practice their faiths. The greatest two empires in the world had been defeated, and the Arab conquests proved durable.

## The Holy Qur’an on Holy Wars

> “And fight in the way of Allah those who fight you, but transgress not the limits. Truly Allah likes not the transgressors. And kill them wherever you find them, and turn them out from where they have turned you out. And [Al-ftinah][18] is worse than killing. And fight not with them at Al-Masjid Al-Haram [the sanctuary at Makkah], unless they [first] fight you there. But if they attack you, then kill them. Such is the recompense of the disbelievers. But if they cease, the

[18] *Al-Fitnah*: polytheism, to disbelieve after one has believed in Allah, or a trail or a calamity or an affliction.

> Allah is Oft-Forgiving, Most Merciful. And fight them until there is no more Fitnah [disbelief and worshipping of others along with Allah] and [all and every kind of] worship is for Allah [alone]."[19]

## Abu Bakr on The Rules of War

> Abu Bakhr, the First Caliph, successor to Prophet Muhammad, said:
>
> "O people! I charge you with ten rules; learn them well!
> Do not betray, or misappropriate any part of the booty; do not practice treachery or mutilation. Do not kill a young child, an old man, or a woman. Do not uproot or burn palms or cut down fruitful trees. Do not slaughter a sheep or a cow or a camel, except for food. You will meet people who have set themselves apart in hermitages; leave them to accomplish the purpose for which they have done this. You will come upon people who will bring you dishes with various kinds of food. If you partake of them, pronounce God's name over what you eat. You will meet people who have shaved the crown of their heads, leaving a band of hair around it. Strike them with the sword.
> Go, in God's name, and may God protect you from sword and pestilence."[20]

Starting from the Holy Qur'an and through the *Hadiths* of the Prophet and the directions and guidance that were given by the Caliphs, Islam provided a lot of motivation for the Muslims to fight their wars with passion and a strong belief that they waged their wars on behalf of God. It also stressed discipline, honor, and respect for "the people of the book" as well as seeking peace rather than killing.

## The Islamic Way of War

During the Islamic Era, war has been waged in two ways. One is by advance in close formation. The other is attack and withdrawal. Arabs and the Berbers used the technique of attack and withdrawal because of the nature of the their traditional environment. Living in the desert shaped the Arabs' way of fighting even before the appearance of Islam. As hunters and nomads,

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[19] *The Holy Qur'an,* Surah 2 Al-Baqarah (2.190-193), Part 2 (Madinah Munawwarah, Saudi: King Fahd Complex for the printing of The Holy Qur'an, 1996), 39-40.

[20] Bernard Lewis, *Islam*: *From Muhammad to the Capture of Constantinople, vol.1*, *Politics and War* (New York: Harper Torchbook, 1974), 213.

they tended to engage in small tribal conflicts using ambushes and raids and often targeted trading parties.

At the beginning of Islam, the Arabs fought their battles in close formation, although they knew only the technique of attack and withdrawal. Two things caused them to fight in a way to which they were not accustomed. First, their enemies fought in close formation, and the Arabs were thus forced to fight them in the same way. Second, the Arabs were willing to die in a holy war, because they wished to prove their endurance and were very firm in their belief. At that time, the closed formation was the fighting technique most suitable for those who were willing to die.

There is no certainty of victory in war, even when equipment and numerical superiority make victory more likely. Victory and superiority in war often come also from luck and chance. The causes of superiority are, as a rule, a combination of several factors. There are quantitative factors, such as the number of soldiers, the perfection and good quality of weapons, the number of brave men, skillful arrangement of the line formation, the proper tactics, and similar considerations. Then, there are hidden factors such as trickery, deception, concealment, and confusion. The Arabs were distinguished by trickery to a great extent in their conquests. Their leaders showed great skill in tricking their enemies. Prophet Muhammad said: “War is trickery."[21] Interestingly, the Chinese military sage Sun Tzu in his classic, *The Art of War*, approximately a thousand years earlier made the same observation when he stated that warfare must be viewed as a matter of deception, of constantly creating false appearances, spreading disinformation, and employing trickery and deceit.[22]

It is thus clear that the superiority in war is, as a rule, the result of internal, hidden factors not external ones. This explains Prophet Muhammad’s victory with small numbers over the polytheists during his lifetime, and the victories of the Muslims during the Muslim conquests

[21] Abbas Mahammud El- Aqadd, *Abqrayat Khalid* (Cairo: Nahdet Misr Press, 2002), 102.

[22] Sun Tzu, *The Art of War*, trans. Ralph D. Sawyer (Oxford: Westview Press, 1994), 136.

after Muhammad's death. Their motivation to fight for the cause of the religion and Jihad brought terror in the hearts of their enemies.

The Islamic expansion during the Prophet's time and after his death set a standard for an Islamic army that fought with high morale and motivation for the cause of the faith. Islam provided the Arabs with strong values and discipline in their expansion. It was most likely that the high morale that came from the belief in fighting as an army of God for the cause of the religion was their secret key to victory, and which also brought terror to their enemies. Enemy armies even began to tie their troops with chains to prevent them from running away from the Muslim armies. Competitive leadership of the army, a good logistic system, lead by example, fighting in columns and closed formation, flexibility, security, pursuit, and a notion of "be keen to die, life will be granted to you"[23]. These were all traits that distinguished for many centuries the Muslim armies and Islam as a civilization. This is shown by the fact that after five hundred years of Islamic civilization, the planning, execution, and the outcomes of the decisive battle of Hattin in 1187 showed the durability, power, and persistence of the Islamic way of war.

## Background of the Battle of Hattin (1187)

The Battle of Hattin (3-4 July 1187) was one of the most decisive battles of the Middle Ages that the Islamic Egyptian Army fought. The battle was waged between the combined Crusader armies, commanded by the King of Jerusalem, and the Muslim army, led by Saladin, Sultan of Egypt. Over the course of the battle, the Crusader army was virtually eliminated. Without a field army to oppose him, Saladin destroyed the Crusader States with the exception of three major cities and a few isolated fortresses. What the Crusaders had spent ninety years building was destroyed because of poor tactical and strategic decision making by the Crusader leadership.

[23] El- Aqadd, Abbas Mahammud. *Abqrayat Khalid* (Cairo: Nahdet Misr Press, 2002), 105.

## Muslim Military Organization, and Equipment

The Muslim military force that faced the Crusaders at the Battle of Hattin was one of the largest military forces that had been arrayed against the Crusaders since the foundation of the Crusader States. By uniting the Muslim territory from Cairo to Mosul, Saladin was able to utilize the vast manpower resources of the region for the sole purpose of destroying the Crusader army. The Muslims were no longer divided, so Saladin did not have to divert troops to defend against Muslim rivals. Muslim troops, their equipment, and tactics were similar to the armies that had fought the Crusaders for the previous fifty years. But the difference at the Battle of Hattin was the composition of the army and its unified leadership under Saladin.

Twelfth-century Muslim armies consisted predominantly of cavalry. There were four primary sources of Muslim cavalry: Mamluks, non-nomadic Arabs, Bedouins, and Turkomans.[24] The elite of the Muslim armies were the Mamluks.[25] The second source of cavalry was non-nomadic Arabs; less used by the latter half of the twelfth century.[26] Auxiliary but useful sources of cavalry were the Bedouins. Bedouins were used primarily as scouts and foragers.[27]

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[24] Ian Heath, *Armies and Enemies of the Crusaders 1096-1291* (Worthing, UK: Flexiprint Ltd., 1978), 91-93.

[25] Mamluks were slave troops with no Arabic origin, especially trained to fight as the personal guards of an emir or sultan. They had no tribal or regional loyalties and were therefore considered to be more reliable, forming a more integrated unit in the Egyptian Muslim Army. They provided the bulk of Muslim medium-to-heavy cavalry. Mamluks normally wore metal armor somewhat similar to the Crusader Knights. Their primary weapons were the bow, lance, and mace. Typically, the Mamluks would form the personal guard of an emir and were used to deliver the decisive or final attack. At the time of the Battle of Hattin, the Mamluks were the elite cavalry of the Arab world. They converted to Islam in the course of their training.

[26] These non-nomadic Arabs were considered less reliable, because of their clan and regional loyalties. The non-nomadic Arabs fought primarily with lance or sword. They were not considered good horse archers compared to the Turkomans. Like the Mamluks, Arab troops were equipped as medium to heavy cavalry. They were used to charge the enemy positions and fight hand-to-hand. Arab cavalry were better trained and equipped than the Bedouins and Turkomans to fight the Crusader army in hand-to-hand combat.

[27] Bedouin cavalry wore little or no armor and were equipped with spear and sword. They were able to survive off the land, even in harsh terrain. The major drawback of the Bedouins was their unreliability. Prior to the battle of Hattin, Bedouins fought for both the Crusaders and Saladin. Bedouins operated in tribal units, and would normally serve only on a campaign-by-campaign basis. Saladin's Egyptian army did have a small permanent force of Bedouin cavalry; however, there is no reference to Bedouin troops serving in Saladin's army at the Battle of Hattin.

The final and one of the most important sources of cavalry were the Turkoman tribes. Turkoman tribesman formed a major portion of most of the Muslim armies.[28]

While the bulk of the army was cavalry, there were also professional infantry units. Infantry was used to conduct sieges and to defend fortified positions. Because Muslim tactics relied on mobility, infantry was either not included or formed a small portion of a field army. If infantry was required, it was raised locally for a specific battle or siege, then disbanded. If a professional infantry unit took the field, it usually had a specialized function. Most infantry supporting siege operations were either artillerymen or sappers. Muslim infantry were lightly armored and were equipped with bow and spears. At the time of the Battle of Hattin, Muslim armies had no equivalent to the Crusaders' heavy infantry.[29]

In short, a Muslim field army consisted of all four types of Muslim cavalry. The Bedouins or Turkomans would be used as the advance guard and scouts. Turkomans would also form the wings of the army and were used to weaken and divide the opposing army. The Mamluks and non-nomadic Arab cavalry were held in reserve to deliver the final or decisive blow.

## Muslim Strategy at Hattin

Muslim strategy focused on two possible centers of gravity: the Crusader army and fortifications that supported the army to force the opponent to come to terms. Both the Crusaders and Muslims relied on fortification to allow them to control territory. Since neither side kept an army in the field year-round, fortification allowed a small garrison to control a region effectively. Because of problems of communication and logistics, the Muslims were unable to keep an army

[28] Turkomans were usually lightly armored horse archers, who were able to fire arrows effectively from horseback while the horse was in motion. Due to the requirement of firing on the move, Turkoman armor had to be light and flexible, not constricting. When fighting hand-to-hand, Turkomans carried a small round shield and a sword or mace. Due to their armor and small shields, the Turkomans were at a distinct disadvantage in hand-to-hand combat with Crusader knights.

[29] Edaret al Madboatt wa Al Nishr, *Maraket Hattin 1187* (Cairo, 1977), 44-45.

in the field for more than a single campaign season. Therefore, campaigns had limited objectives. A typical campaign would focus on seizing a single major fortification.[30]

## Tactics of Muslim Forces at Hattin

Saladin continued to use the age-old *razzia* raiding tactics of the Arab Middle East, though there had been a change in the way these raids were carried out. The old mixed infantry and cavalry armies now gave way to smaller elites of Mamluks, horse-archers supported by auxiliary cavalry using Turkish tactics of rapid maneuver, dispersal and harassment. Military manuals from the Islamic Middle Ages may reflect theory rather than reality, but the organizing of a battle array, an encampment, line of march, siege or counter-siege were very similar to the Fatimid, Ayyubid or even Mamluk periods. Saladin's siege tactics were almost entirely the same as those of his Fatimid predecessors, while his cavalry tactics were far more flexible than those of the Crusaders. Saladin's horsemen would even, if the situation were suitable, stand against a full-scale charge by the enemy's knights. Considerable skills were, in fact, demanded of a late twelfth century cavalryman. Literary sources give primacy to the spear, which could be wielded with one or both hands, thrust at the foe's arms or legs as well as his body. Once lances were broken, horsemen drew their swords. Only in specifically Turkish accounts are bows given much prominence.[31]

Cavalry manuals written a generation or so after Hattin deal with the initiating and maintaining an attack, feigning retreat, wheeling around in battle, evading the enemy and renewing an attack. Horse-archers are instructed how to control their mounts and how to shoot. Being on horseback gave advantages for various forms of archery, including the use of thumbguards for long-distance shooting. The training of foot soldiers received less attention, but manuals did give advice for fighting on foot in the open. A little later, military experts were

[30] Ian Heath, A *Wargamer's Guide to the Crusaders* (Cambridge, UK: Patrick Stephens, 1980), 44-45.

[31] Edaret al Madboatt wa Al Nishr, *Maraket Hattin 1187*, 52-53.

suggesting that infantry must be able to march long distances, recognize dangerous enemy formations that indicated an impending attack, know how to take cover, check and chase cavalry, and how to scatter or scare enemy horses.

Once in enemy territory, any force should always keep its escape route open. This was particularly true of lightly equipped raiding parties, whose function was to sow confusion and fear among the enemy. Arab Bedouin auxiliaries excelled in setting ambushes, particularly if they were native of the area. If a raid were to be made at night, cloudy, windy and rainy weather was best. If the enemy were strong, it was advisable to attack him just before dawn while he was still confused and sleepy. Set-piece battles were generally avoided, but when they did take place it is difficult to tell how far the tactics of Saladin's day really followed the theories in the manuals.[32]

The *jandariyah* guard remained with the ruler, and though Saladin normally placed his best *halqa* regiments in the center, *halqa* troops also operated as independent formations. Heavy cavalry were certainly used in the charge, operating much like Latin Knights, and, like knights, were divided into small *tulb* squadrons. Yet, horse-archery remained the cavalry's most effective tactic. At longer distance, it could disrupt enemy formations by wounding horses and infantry. At close range, the Muslim composite bow could penetrate most twelfth century armor. Islamic infantry may have declined in importance since the eleventh century but they still appeared in major set-piece battles as well as siege warfare. Although infantry were dismissed by many Moslem chroniclers as *harafisha* (rabble), Saladin's tactics often relied on separating an enemy's infantry from his cavalry even when fighting fellow Muslims. Terrain would be used to full advantage. *Shirkuh* lured Latin cavalry in 1167 into an impossible charge up a slope of soft sand, a *tal* (an artificial hill of debris long typical in the Middle East). Saladin often used a *tal* to hide his reserves. But such sophisticated battlefield tactics demanded reliable battlefield

[32] David G Chandler, *Hattin 1187: Saladin's Greatest Victory,* Campaign Series 19 (London: Osprey Publishing Ltd, 1993), 31.

communication. For this, the Moslems were well served by musical instruments, flags and *munadi* (criers).[33]

Siege warfare was the main purpose of large expeditions. Lightly armed troops would be the first to reach and besiege an enemy castle. The attackers would then protect their position with palisades before digging entrenchments. Siege towers might be built and sappers would start undermining the enemy's walls. More than the Crusaders, the Muslims used mining operations, which demand skilled personnel and careful direction. In addition to battering rams, the Muslims had a variety of stone-throwing engines, some of which were large enough to damage a wall or at least the battlements giving cover to the defenders. The numerous smaller engines were essentially anti-personnel weapons designed to clear defenders from their positions prior to general assault. One of the attackers' most important tasks was to protect their wooden siege engine and mines from defenders who might make a sortie. Once a breach had been made or a wall undermined, the garrison would be given an opportunity to surrender. If this were refused, assault parties would be organized under the best available officers. When these managed to seize the breach they might again stop while the enemy was offered a final chance to surrender. Sieges could go on for months and in such cases the besiegers' camp could turn into a temporary town. Moslem armies were just as sophisticated in defense of fortifications, most of which were based on long-established designs going back to the pre-Islamic period. The *burj* or tower was basic to Islamic military architecture. Covered galleries along the top of a wall were also widespread while city walls tended to be high rather than thick.[34]

There was also an additional component of Saladin's strategy. He used the fleet to transport troops rapidly from Egypt to Syria, and to hamper traffic between the Latin States and Europe. Marines would sail aboard larger merchant ships as well as fighting galleys and could include archers, fire-troops and operators of stone-throwing machines. When facing an enemy's

[33] Edaret al Madboatt wa Al Nishr, *Maraket Hattin 1187*, 48.

fleet, Muslim galleys used crescent-shaped or compacted formations, feigned retreat and used coastal features for cover. Although Muslim naval power had been in decline for more than a century, a naval manual of the thirteenth century could still claim that the Muslims were superior to Byzantines in naval warfare. In actuality, Saladin's ships were essentially the same as those of his enemies.[35]

## The Muslims' Plan

The Sultan had to make a major effort against the Latin States to maintain his prestige among fellow Muslims. Through raids, Saladin used the first part of the year to test the enemy's strength and to weaken him. But once his main force was committed across the frontier there was no further raiding. All efforts were directed to enticing the Latin field army into a major battle. This battle had to occur quickly because it was difficult for Saladin's army to remain in the field for a long time. The Sultan may also have taken into account the losses inflicted on the Military Orders at the Springs of Cresson earlier in 1187; these were the most effective troops in the Latin army.

Skirmishing failed to lure the Latins out of their strong defensive position, so Saladin committed his forces to a full-scale assault on Tiberius. In so doing he put himself in a very dangerous position with the possibility of being caught between enemy forces, but the gamble worked and the Christians marched to relieve Tiberius. Everything depended on not allowing the Latins to reach adequate water supplies once they left Sephorie (*Saffuriyah*). Saladin then staked everything on a major battle before the Latin field army came off the dry plateau to reach water at Lake Tiberius. Saladin's scouts had of course, already reconnoitered the likely area of battle. His plan for the following day was simple. The enemy must still not reach water, his infantry must be separated from his cavalry, and none must escape. In the event things turned out almost exactly as

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[34] Edaret al Madboatt wa Al Nishr, *Maraket Hattin 1187*, 59-61.

[35] Ibid., 65.

Saladin hoped, although more Latin troops did escape from the battle than is generally acknowledged.[36]

After victory at Hattin, Saladin exploited his success and captured as many fortified places as possible before another European Crusade arrived. Saladin's preoccupation with the threat from the West is shown by his seizure of the coastal towns first, before going on to take the greatest prize of all – the Holy City of Jerusalem (*refer to map 7*).

## The Battle of Hattin, "The Battle for Water and Morale" (1187)

Saladin assembled his army at Tal Ashtrab in June. The army included a core of 12,000 professional cavalry and a large number of auxiliaries and local Syrians. The army was organized into three larger divisions. The right was commanded by Tarqi al-Din, the center by Saladin himself, and the left by Gokbori. On the 26th June the army marched to Khisfin in the Golan Heights. The next day they crossed the Jordan. Saladin established a camp at Cafarsset (Kafr Sabt). After a probe towards King Guy's position at Sephorie (1 July) he began his siege of Tiberius.

The Latin army was at Sephorie *(Saffuriya),* 24 kilometers away. This was a common mustering point for Latin armies facing invasion from Syria. It was difficult to attack and well supplied with water. It was close enough to intercept opponents in the Crusaders' Principality of Galilee, while also covering the Acre region.

The Latins debated whether to confront Saladin at Tiberius or stay put at Sephorie. Allegedly Raymond of Tripoli advocated staying and waiting for the large Muslim army to disperse on its own accord. King Guy agreed until the Master of the Temple -- Gerard de Ridefort -- persuaded Guy to confront Saladin (3rd July). The marching plan was to take the southern route through Casal Robert *(Kafr Kana)* then either to Touraan (north) or Tiberius (north east). Count

[36] David G Chandler, *Hattin 1187: Saladin's Greatest Victory*, 53-54.

Raymond of Tripoli led the vanguard, King Guy with the Holy Cross led the center, and Balian of Ibelin (with the Templars) led the rear guard (*refer to map 8*).

Saladin then intercepted the Latin army on its march. When Guy reached Tourran, harassing attacks seriously slowed the rear guard. Geographically, the Latin army had marched across a plateau towards a low ridge between the high points of Cafarsset in the south (site of Saladin's camp) and Nimrin to the north. Beyond the ridge was a valley leading to the village of Hattin, where water supplies were abundant. Guy on Raymond's advice decided to make for Hattin. However, Taqi al Din's division now blocked the way to Hattin, and Guy decided to encamp (*refer to map 9*). This would give the army a chance to regroup before pressing on Hattin the next morning (4th July).

Hattin was now about 5 kilometers distant. Saladin, in effect, now had trapped the exhausted and thirsty Latin army. As the Latins pushed forward to Hattin, Saladin pressed his attack. Raymond of Tripoli with a few others broke through Taqi al din's lines to the north and escaped the battle (*refer to map 10*). Part of the rear guard also escaped the battle, possibly through carelessness on part of Gokbori's division. The bulk of the army however was unable to push forward to Hattin.

Guy then took up a position on a hill known as the Horns of Hattin, so-called because the hill had two peaks. There he set up a royal tent (*refer to map 11*). The hill was attacked from two sides. Despite two fierce counter-charges by the Latin knights, the Muslim cavalry captured Guy's tent. The fall of the Royal tent terminated the unequal struggle. Christian's resistance collapsed and the survivors were captured.[37]

## The Muslim Army's Performance at Hattin

The Battle of Hattin was a typical encounter of its kind in which Saladin relied on varied and long-established tactics. Muslim morale may have been superior as a result of the Latin

leaders' decision to lead their men on an exhausting march. But although the Christians blundered, Saladin showed obvious tactical superiority. In the end, the battle was won by the superior military capabilities of the Muslim troops in the situation in which the two armies fought. With better logistical support, superior speed of maneuver, greater ability to change position while retaining cohesion, and probably better battlefield communications, one might think that the Muslims were bound to win – but in many other clashes they had not.[38]

Muslim strengths in close combat have often been denigrated on the grounds that they wore lighter armor, wielded lighter weapons and rode smaller horses. The first two points are an over-simplification, while the third is probably incorrect. *In the end Hattin was won because Saladin figured out six and half centuries before Napoleon Bonaparte how to get his enemies to fight where he wanted, when he wanted and how he wanted.*

The Muslim army had strong leadership. Saladin had extensive experience, and there were no doubts about the loyalty of his commanders. To shape the Battle of Hattin, he had taken into account the effects of the terrain and climate and used them to full advantage. Saladin also made sure that his troops were well supplied and that morale remained high. Muslim leadership, both prior to and during the Battle of Hattin, was superior in every aspect to the Crusader leadership.

The Battle of Hattin was Saladin's greatest victory and established him as the defender of the Muslim faith. Saladin's political position in the Muslim world was assured, and the Ayyubid Empire was now established. The Holy City of Jerusalem and the Dome of the Rock were restored to Muslim faith.

While the Battle of Hattin was fought over eight hundred years ago, it still provides useful lessons in military strategy and decision-making. The battle of Hattin shows the twelfth

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[37] Edaret al Madboatt wa Al Nishr, *Maraket Hattin 1187*, 85.

[38] Chandler, David G, *Hattin 1187: Saladin's Greatest Victory*, 88.

century Muslims' unique understanding of the importance of terrain, climate, logistic, and morale domain of the battlefield on the outcome of a battle.

Islam provided its people with strong motivation, beginning with fighting as soldiers of God and for the cause of the faith, to the implications of the concept of *Jihad.* The Muslims then established their highest civilization, which included all aspects of science, architecture, social development, and a great military institution, one of the most advanced at the time. Besides their spiritual motivation, they acquired more effective war tactics, better logistical systems, more inspiring leaders than the Crusaders, a sophisticated army composition, and a uniquely effective comprehension of the terrain they were fighting in and for. By separating the infantry from the cavalry, the battle of Hattin demonstrated Muslims' understanding of tactics of envelopment, harassment, and enemy disintegration. The Battle of Hattin could be described as a battle for water and morale, in which the Muslims took all possible military actions to prevent the Crusaders from reaching any water sources, and sapping their confidence. The Moslems thus selected and created the conditions under which they chose to fight.

After Egypt went through centuries of occupation, The Islamic way of war and its traditions were reborn in the October 1973 Arab-Israeli war. How and why this happened will be discussed in the next chapter.

# CHAPTER 3: 1973 Arab – Israeli War: Continuation of Politics by Other Means

> War is only a branch of political activity…. A continuation of political intercourse, with the addition of other means…. Policy converts the overwhelmingly destructive element of war into a mere instrument. It changes the terrible battle-sword that a man needs both hands and his entire strength to wield, and with which he strikes home once and no more, into a light, handy rapier--sometimes just a foil for exchange of thrusts, feints, and parries…. The conduct of war … is therefore policy itself, which takes up a sword in place of the pen.[39]

War, as preeminent military theorist Carl von Clausewitz stated, is an instrument of policy--a means by which nations may achieve political ends. In October 1973, Arab nations led by Egypt and Syria chose war as their instrument of policy. Their primary policy objective in waging war was to recover Arab lands occupied by Israel since the 1967 Six Days' War.

This chapter examines the 1973 Arab-Israeli War, focusing on Arab policy objectives and the historical circumstances framing the strategic setting, which influenced Arab leaders' decision-making. The Arab leadership translated policy into the Arab grand strategy, then planned and executed that strategy.

Arab leaders, under President Sadat's direction, translated their policy objective to recover the occupied territories into a grand strategy designed to achieve that objective. The Arab grand strategy contemplated limited military action, followed by political pressure to compel recovery of all the occupied territories. Their return to Middle East hostilities, the Arab leadership reasoned, would militarily compel partial Israeli withdrawal from the occupied territories and create international and internal political pressure upon Israel to give back the remaining Arab lands for the sake of regional peace.

The Arab military strategy planned limited Egyptian and Syrian offensive campaigns against Israel to secure lodgments within the occupied territories, thereby achieving the military

[39] Carl von Clausewitz, On War, eds. & trans. Michael Howard & Peter Paret (Princeton: Princeton University Press, 1976), 605-610

aspect of their grand strategy, followed by immediate Arab reversion to the offensive to facilitate the political aspect of the strategy.

## Introduction

The Six Days War in June 1967 gave Israel reason for jubilation, and also cast a long shadow over the entire Arab Middle East, particularly Egypt and Syria. Their militaries had been largely destroyed and their economies suffered from staggering military expenditures necessary to replace their losses. Perhaps most importantly, the humiliating defeat of 1967 and its aftermath—continued Israeli occupation of Arab lands—deeply wounded the Arab psyche. The stigma placed on the Arabs was unbearable. Arab nations collectively vowed to have revenge. Buffered by the occupied territories and buoyed by a sense of overall military superiority, Israel was certain it could crush any Arab military attempt to achieve these political aims. Convinced they could eventually force the Arabs to peace on Israeli terms, the Israelis were satisfied with the status quo.[40]

Arab leadership adopted a grand strategy, developed principally by Egypt that contemplated a combined military-political approach to force Israeli withdrawal from the occupied territories (*refer to map 12,13,14*). The renewal of hostilities, they believed, would refocus world attention upon the Middle East question and disrupt the Soviet-American détente, resulting in American, as well as international, political pressure upon Israel to make concessions in line with Arab political objectives. Simultaneously, military action would shatter Israeli feelings of security, significantly disrupt their economy, and inflict casualties upon their small population. These factors, the Arabs reasoned, would force Israelis to reexamine and soften their position, resulting in internal political pressure upon Israel to concede the remaining occupied Arab lands for the sake of peace. The return to war and combined international and internal

[40] Shlomo Aronson, *Conflict & Bargaining in the Middle East: An Israeli Perspective* (Baltimore: The Johns Hopkins University Press, 1978), 136.

Israeli political pressure, the Arab leadership theorized, would break the political impasse, the no peace-no war situation, and compel Israeli withdrawal from occupied Arab lands.

Arab military strategy designed to force partial withdrawal from the occupied territories envisioned a sophisticated and brilliant strategic deception operation, followed by separate, but strategically integrated, Egyptian and Syrian offensive campaigns. The Arab campaign plans reflected critical lessons learned from previous wars, maximized Arab capabilities, and minimized Israeli strengths. The central operational focus of both Arab campaigns was to quickly seize limited military objectives before Israelis could fully mobilize. Egypt planned to cross and seize a perimeter along the eastern shore of the Suez Canal, defeating Israeli defensive positions there, and then prepare to advance further to seize strategic passes, if circumstances permitted. Egypt's plans and training completed, the Arab forces would undertake to achieve their purposes through the instrument of war, shocking Israel and the world in the process.

## Strategic Settings

Egyptian President Sadat believed that diplomatic resolution of the situation was impossible and that Egypt could not hope to achieve peace through the Americans so long as Israel did not want peace and the United States did not exert pressure upon Israel to sue for peace. Sadat further believed that as long as Israel felt secure, it had no incentive to negotiate. In order to extract Israeli concessions, Sadat determined that direct pressure on both Israel and the United States was necessary. The Arabs must shatter the Israeli sense of security to make them more inclined to negotiate. Further, the Arabs must convince the United States of the need to pressure the Israelis for concessions. This required that the Arabs demonstrate that failure to resolve the Middle East question would disrupt the Soviet-American rapprochement. Sadat reasoned that only a Soviet-supported Arab war against Israel could accomplish both of these aims. At the end of March 1973, Sadat gave an interview to *Newsweek* magazine in which he warned:

> If we don't take our case in our own hands, there will be no movement.... Everything I've done leads to pressures for more concessions.... Every door I have opened has been slammed in my face -- with American blessings.... Everything [in Egypt] is now being mobilized in earnest for the resumption of the battle -- which is now inevitable.... This will be the nightmare to end all nightmares -- and everybody will be a loser.... Everyone has fallen asleep over the Middle East crisis. But they will soon wake up.[41]

Sadat, believing he had exhausted diplomatic avenues for resolution of the Middle East question, announced to the world Egypt's intention to go to war. The decision made, Sadat turned to the task of formulating the details of the strategic plan.

At a summit meeting in Cairo, the political leaders ratified the principal Arab policy objective of the war -- to recover the Arab territories seized and occupied by Israel in the 1967 Six Days' War. Coupled with this was the aim of restoring Arab pride, which had been embarrassingly stripped away in the humiliating military defeat suffered in 1967. Finally, Arab policy objectives sought to punish and humiliate Israel internationally for what Arabs believed was its policy of arrogance and brutality toward Arabs in the occupied territories. The Arab plan was to compel militarily the partial Israeli withdrawal and achieve politically the total withdrawal. Prior to adjourning the Cairo summit, the Arab political leaders ratified the military strategy previously developed, and left the final decision to go ahead with the war to Sadat.[42]

The overarching military strategy ratified by the Arab political leaders was the outgrowth of the attack plan formulated by Egyptian Chief of Staff Shazly and adopted by Egyptian and Syrian military leaders, Generals Ismail and Tlas, when they met in April 1973. The plan sought to achieve limited military objectives in order to facilitate the political aspects of the Arab grand strategy. Ismail focused the Arab military strategy on achieving strategic and tactical surprise, commenting that "in war there are two plans, one an operations plan and the other a decoy

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[41] Insight Team of the *Sunday London Times*, 34-35, quoting Sadat's interview with the Arnaud de Borchgrave in *Newsweek* magazine, March 1973.

[42] Ibid, 43.

plan."[43] Arab forces, on the strategic and operational offensive, would seize the initiative by attacking and defeating the Israeli Defense Forces (IDF) at the frontiers, making limited advances on two separate fronts. Egypt would cross the Suez Canal, defeat the Israeli fortifications on the east bank and seize a narrow strip along the entire length of the canal. If circumstances permitted, the Egyptians would exploit the advantage by pushing their perimeter out between 30-40 miles, in order to seize the Mitla, Gidi, and Khatmia passes, strategic choke points to the Sinai. Simultaneously, Syria would defeat the Israeli strongholds on the Golan Heights and seize the entire Golan plateau. Jordan would merely pose the threat of a third front, tying up Israeli forces and preventing Israel from launching a flank attack through Jordan against southern Syria.[44] The sudden, violent surprise attacks would force Israel to withdraw and enable Arab forces to seize the limited territory, establish lodgments and consolidate their positions before Israel could mobilize her reserves, reinforce, and counterattack in strength.[45] Arab forces, firmly entrenched, would revert to the operational and tactical defensive and hold their positions until superpower or United Nations intervention solidified their gains through a cease-fire.

The desired military end state was to hold lodgments within the occupied territories at the time a cease-fire was proclaimed, and then achieve further territorial gains to reach a strategic end-state through negotiations conducted from a position of Arab strength. The limited military objectives selected directly supported Arab policy aims by enhancing the possibility of successful military action and creating the condition for international intervention and political pressure, as well as internal Israeli pressure, for negotiations and concessions. If the military strategy failed to achieve the political objectives quickly, the Arabs were prepared for a prolonged war of attrition

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[43] Edgar O'balance, *No Victor: No Vanquished The Yom Kippur War* (London: Presidio Press, 1978), 1.

[44] Insight Team of the *Sunday London Times*, 42-43.

[45] Saad el-Shazly, *The Crossing of the Suez* (San Francisco: American Mideast Research, 1980), 33-36.

with the Israelis, until Israel, through exhaustion of money and lives, would be compelled to negotiate concessions.[46]

Sadat, with President Hafez el-Assad of Syria, and their military staffs, ultimately agreed to conduct the attack on 6 October 1973. The leaders chose this date because it offered optimal conditions of illumination: maximum moonlight, necessary for building the bridges across the canal, with darkness later when troops and equipment would pass across, and favorable tide and current conditions within the canal. The date also furthered the deception plan since it fell during Ramadan, when Moslems fast during the day, and the Israelis might well expect the Arabs' energies to be failing. Further, the date fell on Yom Kippur, the holiest day in the Hebrew calendar. The operation was code named Badr in honor of Mohammed's victory at the Battle of Badr on the same date in 626 A.D.

## Campaign Planning

The Arab strategic plan envisioned separate, but strategically linked Egyptian and Syrian campaigns. The overall intent was to neutralize Israeli advantages and enhance Arab capabilities through technological improvements to Arab equipment and detailed, intensive planning and preparation. The plan called for a deliberate, systematic, set-piece action, denying to the Israelis the opportunity to fight their combined-arms maneuver battles. In order to neutralize the vast Israeli air advantage, both the Egyptians and the Syrians would build formidable air defense umbrellas with surface-to-air missiles (SAMs) and ZSU-23 cannon (AAA) over their forces. The Arab infantry would employ precision-guided munitions, principally the *Sagger* anti-tank guided missile (ATGM), to defeat Israeli armor counterattacks.

The plan called for the Egyptians to bridge the Suez Canal and attack under a massive artillery barrage in great strength all along the length of the canal, rather than at only a few selected points (*refer to map 15*). In this manner, the Egyptian forces hoped to confuse the

[46] Insight Team of the *Sunday London Times*, 43.

Israelis as to where to launch their counterattacks, delaying them as they tried to determine the Egyptians' main attack and forcing the Israelis to spread their forces all along the frontier. Once across the canal, the Egyptian forces would attack and isolate the Bar-Lev Line, a series of Israeli strong points defending the East Bank, then advance eastward six to nine miles and dig-in to await an Israeli counterattack.[47]

Simultaneously, the Syrians would attack all along the 1967 cease-fire line, to recapture the entire Golan Plateau and then hold their positions and await counterattack. While the land campaign raged, Egypt's navy would impose a strategic blockade of Israel, while tactically seeking to avoid direct confrontation with Israeli vessels. At this point, the Arabs hoped the superpowers or the United Nations would intervene and force a cease-fire. If no cease-fire were forthcoming, the plan was to conduct a protracted war of attrition, inflicting heavy casualties upon the Israelis. A prolonged war would cripple Israel's service industries and severely disrupt the country's economy, by requiring the continued mobilization of more than one-fifth of its three million inhabitants in order to support the war effort.[48]

The Arabs' limited military end-state translated directly into operational objectives. The Egyptians' operational objective was to seize bridgeheads and cross the Suez Canal, at a decisive moment, penetrate a short distance into the Sinai, and seize and hold operational lodgments along the length of the canal north to the Mediterranean Sea and south to the Gulf of Suez. The Syrians' operational objective was to seize and hold operational lodgments across the entire Golan Plateau, particularly the Mount Hermon massif, a decisive point, the loss of which would deprive the Israelis of their vision over the battlefield, and the Benot Yacov Bridge, a decisive point that served as the main military supply route (MSR) to Israel.

None of the literature concerning the October War written by its political or military leaders discusses military strategy or planning in terms of the Clausewitzian concept of centers of

[47] Saad el-Shazly, *The Crossing of the Suez*, 36.

gravity or the more recent constructs of critical capabilities, critical requirements, or critical vulnerabilities. Rather, the literature published by both Arab and Israeli leaders associated with the War simply discusses strengths, weaknesses, and means of neutralizing or enhancing them.[49] From these discussions, though, taken in the context of the military strategy to which they were relevant, one may reasonably infer Arab intentions and apply them to the constructs by analogy.

Clausewitz wrote, "A center of gravity is always found where the mass is concentrated most densely."[50] This was clearly the case from the Arab perspective during the October War. The fully mobilized Israel Defense Force (IDF), once it took the field, comprised one of two Israeli centers of gravity at the strategic level. Each of the two separate IDF commands, Northern Command concentrated against Syria, and Southern Command massed to face Egypt, constituted the single Israeli operational center of gravity in its respective theater of war. The IDF was what Clausewitz described as the "hub of all power and movement."[51] It was essential to Egyptian and Syrian forces' military success that each should achieve its operational objectives before the time the IDF could fully mobilize and deploy. Pursuant to their strategy of limited military action, once they had defeated the Israeli strongholds in their respective theaters, the Egyptians and Syrians planned to seize lodgments and revert to the operational and tactical defensive and fight until the superpowers or the United Nations intervened. The Arab intent was to engage the Israeli center of gravity, once mobilized, from a strong defensive posture, employing a number of means to neutralize Israeli strengths and enhance Arab capabilities. To neutralize the Israeli air force's ability to affect the Suez Canal crossing operation, Egypt identified the air defense umbrella as its own operational center of gravity. The Suez bridgehead and crossing, and isolation and defeat of the Israeli static defense positions on both fronts, would be at significant risk, if not impossible, if

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[48] Ibid, 26-27.

[49] Moshe Dayan, *Moshe Dayan: Story of MY Life* (New York: William Morrow & Company, Inc. 1976), 523.

[50] Carl von Clausewitz, *On War*, eds.& trans. Michael Howard & Peter Paret, 595-596.

[51] Ibid, 595-596.

Israel were able to fully mobilize and deploy to face the Arabs with the whole of their combat power at these very vulnerable points in the Arab attacks.

Given this strategic plan, it is possible that Arab leaders also considered the Israeli national will and public support for continuing the war effort, a second strategic center of gravity. The follow-on political aspect of the Arab grand strategy, seeking Israeli concessions of the remaining occupied territories, was premised upon pressure from within Israel, as well as from external international pressure to force concessions. The Arabs, therefore, planned to attack the Israeli national will and public support for war in order to compel them to seek peace through concessions.

The vastly superior Israeli air power and ability to fight lightning-quick combined-arms maneuver campaigns constituted Israeli's critical capabilities. The Arab planned to fight a set-piece defensive battle to take away the Israeli's maneuver advantage. Arab military planners knew that they could not defeat Israeli air power head-to-head with their own air force. Instead, they built an air defense system with anti-aircraft artillery and various surface-to-air missile systems, including the new Soviet SA-6, whose hardware and characteristics were unknown to the Israelis. The air umbrella would neutralize the Israeli air advantage and leave vulnerable Israeli armor, which Arab forces would engage with *Sagger* ATGMs.

Israel's critical vulnerabilities at the strategic level included: an extended frontier, 500 miles in length and surrounded by Arab enemies, which could prove particularly relevant during the crucial first hours of the war, as Israel mobilized forces to defend on possible multiple fronts. Israel also comprised a population of fewer than three million, strongly adverse to casualties, as compared to Egypt's 36 million and more than 82 million collectively for the Arab states hostile to it, and an overstrained economy already suffering from defense commitments.[52] Israel's manpower, let alone her national will, could scarcely support a protracted war if significant

[52] Elizabeth Monroe & A. H. Farrah-Hockley, *The Arab-Israeli War, October 1973: Background and Events* (London; International Institute for Strategic Studies, 1975), 15.

casualties began to mount. Additionally, prolonged defense expenditures would be ruinously expensive, and, coupled with the loss of productivity resulting from mobilization of roughly one-fifth of Israel's population, could cripple the country's economy if the war was protracted. This too, would severely degrade popular support for a prolonged war.

Israel's extended lines of communication (LOCs) constituted an operational critical vulnerability. These LOCs, supporting operations at the frontiers in two separate theaters, though internal, were nonetheless difficult to defend. The Arab forces planned to attack the Israeli lines of communication with special operations forces behind the lines to disrupt the flow of supplies, equipment, and troops, particularly initial Israeli reinforcements. Israeli overconfidence, resulting in extremely aggressive doctrine and tactics, also constituted an operational critical vulnerability. Israeli doctrine, calling for immediate combined-arms counterattack at the frontiers, initially was vulnerable because it played directly into the Arab plan and their enhanced strengths. The Arab forces knew the Israeli tactics and specifically planned to take advantage of them. After seizing their lodgment, the Egyptian forces would dig in and wait with their *Sagger* anti-tank missiles, their SAMs, and anti-air artillery for the coming Israeli counterattacks. Just as the Arabs expected, the Israelis, who had trained to fight the 1967 war again, rushed headlong into the counterattack tactics; this cost them dearly during the initial battles of the October War.

Arab leaders believed that obtaining at least partial strategic and tactical surprise was essential to military success in order to offset significant Israeli military superiority. Surprise was particularly critical to initial success, as they crossed the Suez Canal and attacked the Israeli strongholds on both fronts. Achieving even a partial measure of surprise would increase the chances that Arab forces could seize their operational lodgments and prepare for the coming counterattacks before Israel could fully mobilize her reserve forces and build-up along the borders of the occupied territories. Equally important, surprise would prevent a preemptive air attack like that Israel conducted in 1967, which effectively won the war in a matter of mere hours.

Finally, surprise would ensure the Israelis did not have a reason to seek and obtain additional weapons from the United States based on their assertions that an Arab war was imminent.

In an effort to achieve surprise, the Arabs devised a sophisticated and brilliant strategic deception plan, employing both political and military means of deception, on-going as part of Sadat's two-pronged strategy since late 1972. The Arab military strategy and campaign plans were in large measure built around this elaborate deception plan. The desired purpose was to disguise the Arab's ultimate intentions by conditioning the Israelis to Arab troop build-ups along the borders of the occupied territories. Additionally, the Arabs sought to force the Israelis to operate at a high state of alert for long periods of time, exhausting Israeli troops and equipment and placing considerable financial burdens on the Israeli economy. The plan involved movements of various size units, progressively increasing in size up to divisions, toward the borders where they conducted tactical exercises and then returned to the rear. These actions, the Arabs believed, would ultimately condition the Israelis to accept even mass movements as routine, giving them a false sense of security, and ultimately disguising the actual attack when it was executed as simply another exercise. Whether the Israelis fully mobilized each time, expending millions of dollars in the process, or became conditioned to the exercises, the result was to the Arabs' advantage.[53]

## Operational Setting

As already explained, the 1973 Arab-Israeli theater of war involved two primary theaters of operation, the Suez front and the Golan Heights, each with its own strategically related campaign. The theater of war included the entire country of Israel, the occupied territories seized by Israel in the 1967 war, the Gulfs of Suez and Aqaba, and the whole Red Sea, as well as Israel's and Egypt's coastlines on the Mediterranean Sea. The southern or Suez theater included the Sinai Peninsula and operations focused around the Suez Canal. The northern or Golan Heights theater included the Golan Plateau and Israel's northern borders with Syria and Jordan.

Topographical considerations in the Suez theater centered upon the Suez Canal, a strategic decisive point, and its man-made 30 to 60 foot tall sand ramparts. The canal was the single most important terrain feature, militarily and politically, in the theater of war. Moshe Dayan, Israel's Defense Minister, believed and publicly stated that the Suez Canal presented an insurmountable obstacle to Egyptian attack. In the Golan theater, Mount Hermon was the most significant terrain feature on the Golan Plateau, an operationally decisive point.

Command and Control:

Command and control of the Egyptian forces ran from President Sadat, who assumed the office of Premier, to General Ismail, the Egyptian Minister of War and Commander-in-Chief of the Federated Armed Forces of Egypt and Syria. Ismail, the military commander of both countries' forces for Operation Badr, was the only individual common to the otherwise separate chains of command. Lieutenant General Saad el-Shazly was the Egyptian chief of staff and served as the top military officer at the Egyptian General Headquarters (GHQ) located in Cairo. Egyptian forces were divided into two armies under the command of the GHQ: the Second Army, commanded by Major General Saad el-Din Maamun; and the Third Army, commanded by Major General Abdel Moneim Mwassil. On the Syrian side, command and control ran from President Assad to his Minister of War Lieutenant General Mustafa Tlas -- directly to the five Syrian division commanders in the field.

Command and control on the Arab side was centralized and retained within General Ismail in Cairo on the Egyptian side and General Tlas in Damascus for the Syrians. Field commanders were given little latitude in their decision-making. Centralized control was valuable for the canal crossing, given the sheer magnitude of the operation as the success of the crossing depended on a fixed timetable and specified distention on schedule.

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[53] Ibid., 16.

Firepower, Maneuver, and Movement:

The Arab campaign plan combined limited maneuver that optimized their advantage as they moved to secure operational objectives, with firepower that neutralized Israeli strengths. Egypt's operational maneuver - to cross the canal, seize, and establish a lodgment in the Sinai - was perfectly planned and executed to facilitate Arab strategic aims. Egypt executed its cross-canal attack across a broad front, rather than massing its forces. This operational maneuver caused the Israelis to delay their counterattack and prevented them from concentrating their forces, as they sought to determine from where the Egyptian main attack was coming. In support of the maneuver, Egyptian infantry with anti-tank weapons crossed first, setting-up their anti-armor protective shield, while air defense forces simultaneously established a formidable air defense umbrella, and Egyptian Rangers conducted deep operations to harass and interdict Israeli counterattack forces. These tactical actions succeeded in neutralizing Israeli strengths of combined-arms maneuver warfare and firepower, and in facilitating Egyptian operational maneuver as the Arab forces flowed across the canal, moved into the Sinai and established lodgments, securing their operational objectives.

Israeli strength centered upon air power, as the means for achieving air superiority and as half of the Israeli preferred method of operation: rapid-paced, offensive, tank with air, combined-arms maneuver warfare. Arab forces took advantage of the Israeli's extremely aggressive doctrine and tactics and neutralized their firepower at the same time. Since the Arabs could not compete with Israeli air, they saw their counter as air defense. The Arab forces devised and employed a plan that combined SA-2, SA-3, SA-6, and SA-7 surface to air missiles (SAMs), with ZSU-23 four-barrelled anti-air artillery (AAA), into an air defense package that provided air neutrality. Once under their air umbrella, the Arab forces took advantage of the Israeli propensity to conduct armor charges, tactics learned in the 1967 war. As the Israeli tanks counterattacked, Arab infantry forces armed with *Sagger* and RPG-7 anti-tank guided missiles (ATGM) launched salvos of tank-

killing missiles. Egypt's combination of maneuver and firepower enhanced their operations and enabled them to achieve their initial strategic aims.

Intelligence and Force Protection:

The Arab forces believed that by achieving strategic and tactical surprise they could counter Israeli firepower and maneuver by quickly seizing their operational objectives before the IDF could fully mobilize. The Arab forces employed an elaborate deception plan that convinced senior Israeli officers, including Major General Eliyahu Zeira, the chief of Israeli Intelligence, that Egypt and Syria would not attack and were only conducting routine defensive training and saber rattling. Despite Israel's sophisticated and renowned intelligence gathering apparatus, the Arabs achieved total surprise on the Suez front and near complete surprise on the Golan front, directly contributing to their initial successes.

The success of the Arab deception plan was due in large measure to incorrect analysis, and not failure in gathering intelligence. Israeli intelligence gathered many indications in the spring of 1973 that in May convinced some junior intelligence officers that war was probable. These included, for example, brigade-size movements up to the canal and extensive modification and improvements to defensive works and roads on the west bank.[54] Major General Zeira disagreed with the analysis, but briefed Lieutenant General Elazar, nonetheless. Elazar concurred with the assessment of war and recommended preparatory measures to the Meir government, which, in turn, ordered mobilization. The judgment was incorrect. The false alarm cost the Israelis millions of dollars, and, with an election upcoming, possibly political capital. The Arabs stepped up their deception plan and the Israelis watched the monthly movements of men, equipment, and supplies up to the borders, in combat formations, in elements as large as divisions. In September alone, the Egyptian formations moved up to the canal six times and then withdrew. The Egyptian navy made open arrangements for two submarines to receive repairs in

[54] Elizabeth Monroe & A. H. Farrah-Hockley, *The Arab-Israeli War, October 1973: Background and Events*, 17.

Pakistan, to deceive the Israelis into believing they were operationally unready. Instead, these subs assumed posts in the Egyptian blockade off the Israeli coast. Egypt made public announcements that naval forces had performed poorly during exercises and would undergo further mine-laying training. The mines laid during this subsequent exercise were real and part of the blockade. The Arabs planted articles in newspapers quoting Sadat and Assad making public pronouncements, alternating between strong condemnation and conciliatory speeches, to keep the Israelis off balance. Both Arab nations actively engaged in many other deceptive measures right up until the attack. In fact, the morning of the attack, Egyptian forces lounged and sunned themselves along the canal. The Arab deception plan was so successful, that as late as the morning of 5 October 1973, Zeira advised Elazar that the risk of attack was low. Not until 0700 on 6 October 1973, the day of the attack, did Israeli GHQ inform their reserve commanders that war was imminent and give orders to begin mobilization.[55]

Additionally, Israeli operational security apparently was poor following the 1967 war. The Egyptians prepared their cross-canal attack based upon an accurate portrayal of Israeli Sinai defenses, to include a detailed Israeli counterattack plan prepared by Southern Command in May 1973. Further, the Egyptians captured a detailed Israeli map depicting the Israeli plan for an assault crossing of the Suez that contained all the code names referred to in Israeli radio traffic.[56]

The Arabs clearly won the initial battle of intelligence services. Their deception plan, a shrewd combination of political and military maneuvering, was a major aspect of Arab force protection and directly contributed to the early Arab successes. Arab deception, and perhaps the Israeli belief that their military was invincible, lulled the Israelis into complacency. Though Israeli troops were belatedly placed on high alert, Prime Minister Meir made the political decisions neither to preemptively attack the Arab forces nor to mobilize Israeli reserves until the morning of the attack.

[55] Ibid., 18.

## The Significant Role of the Egyptian Corps of Engineers

For Egypt to gain any military or political success against Israel in the 1973 War depended on the Egyptian Armed Forces first crossing the Suez Canal, then assaulting the Bar Lev Line, and finally establishing secure bridgeheads on the eastern bank. These challenges were essentially engineering problems, and therefore, the achievement of the operation is, in many respects, a saga of the perseverance and ingenuity of the Egyptian Corps of Engineers.

Designed as early-warning observation posts along the Suez Canal, the Bar Lev Line also served as an elaborate system of fortifications to deter the Egyptians from launching a major amphibious operation. The Bar Lev Line presented a formidable barrier. Consequently, the Egyptian General Staff devoted a great deal of time, effort, and resources to developing a plan for overcoming the line, and the Egyptian Corps of Engineers played a key role.[57]

The first major obstacle in the Israeli defenses was the Suez Canal. Constructed in the desert, the canal is an artificial waterway 180 to 220 meters wide and 16 to 18 meters deep. To prevent sand erosion, the canal's banks are lined with concrete that rises above the water line. At high tide, the water flows a meter below the top of the concrete wall; at low tide, the water runs three meters below the top (four meters below in the southern part of the canal).[58]

The Israeli General Staff incorporated the Suez Canal into its defensive plan for the Sinai. At the water's edge of the canal, the Israelis constructed vertical sand ramparts that rose at an angle of 45 to 65 degrees and to a height of 20 to 25 meters to prevent the Egyptian from landing tanks and heavy equipment without prior engineering preparations on the east bank. Israeli military planners expected that the Egyptians would need from 24 to 48 hours to establish viable bridgeheads.

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[56] Chaim Herzog, *The war of Atonement* (Boston: Little, Brown, and Company, 1973), 275.

[57] Saad el-Shazly, *The Crossing of the Suez*, 53.

[58] Ibid., 34.

To help to overcome the Israeli defenses in the Sinai, the Egyptian General Command assigned six major tasks to the Corps of Engineers: to open some 70 passages through the sand barrier. They were asked to build 10 heavy bridges for tanks and other heavy equipment; to construct five light bridges, each with a capacity of 4 tons; to erect 10 pontoon bridges for the infantry; to operate 50 or so ferries; and to pilot close to 1,000 rubber boats for the initial assaults. Of the six tasks, the first was by far the most critical.

In fact, the success of the crossing operation hinged on the Egyptians' ability to breach the earthen embankments before the Israeli Army could react with sufficient force to repel them. The Egyptians needed to clear passages seven meters in width. This project alone would involve 1,500 cubic meters of sand. Even with the attainment of strategic surprise at the outset of the war, the Egyptian's worst-case scenario expected Israeli tank companies and battalions to counterattack within 15 to 30 minutes—with an armored brigade on the scene in two hours. The Egyptians could ill afford to expend 24 hours creating breaches in the sand barrier for the passage of armor and heavy equipment while Israeli reserves react to the canal.

Breaching methods involving explosives, artillery, and bulldozers were too costly in time or required near-ideal conditions. For example, 60 men, 600 pounds of explosives, and one bulldozer required 5 to 6 hours, uninterrupted by enemy fire, to clear 1,500 cubic meters of sand. But getting a bulldozer on the east bank while protecting the congested landing site from Israeli artillery would be nearly impossible during the initial hours of the assault phase. Construction of the much-needed bridges would consequently begin much too late.[59]

The solution to the engineering dilemma proved simple but ingenious: a water pump. The Corps of Engineers would use high-pressure pumps as water guns to blast open passages in the sand. Previous pumps for such a project had been too heavy and depended on electric power. But by the end of 1971, an Egyptian officer had suggested a small, light, gasoline-fueled pump as the

[59] Ibid., 55.

answer to the crossing problem. In response, the Egyptian military purchased 300 British-made pumps and found that five pumps could blast 1,500 cubic meters of sand in three hours. In 1972, the Corps of Engineers acquired 150 more powerful German pumps. Now a combination of two German and three British pumps cut the time down to only two hours.[60] The Israelis apparently failed to appreciate the significance of these pumps, which were in effect water cannon, and expected a much longer completion time for any such effort.

The success of the crossing operation also depended on the detailed planning and timely transportation of five infantry divisions, each reinforced with an armored brigade. To get across the canal as fast as possible, each piece of equipment, bridge, unit, and headquarters moved according to a fixed timetable and specified destination. To facilitate efficient movement of these units, the Corps of Engineers constructed an elaborate road system—some 2,000 kilometers of roads and tracks—to move troops rapidly to the canal with the maximum of protection and minimum of congestion. Extensive field exercises and rehearsals removed glitches and limited friction. Military police, in cooperation with engineers, worked to keep timetables on schedule.[61]

The Corps of Engineers also participated in the deception plan to surprise the Israeli Defense Forces. The Corps, for example, failed to complete certain projects to give the appearance of unpreparedness for offensive operations. Meanwhile, the engineers worked to ensure secrecy in approach areas to the canal and hide troop dispositions. A sand rampart was constructed on the western side of the canal to conceal final Egyptian troop movements. To prevent the compromise of the date and time of the offensive, the Egyptian General Command told the troops the night before the attack that they were to conduct an exercise the next day to help the Corps of Engineers strengthen defensive positions near the Suez Canal.[62]

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[60] Ibid., 56.

[61] Ibid., 64.

[62] Ibid., 65.

Reviewing this 1973 experience, military analysts have tended to focus on how Egypt achieved strategic deception and surprise, or they have concentrated on the Egyptian employment of SAM (surface-to-air missile) systems and antitank weapons to neutralize the Israeli Air Force and Armor Corps respectively. Despite the significance of these accomplishments already mentioned, the Egyptian Armed forces still faced the obstacles of the Suez Canal and the Bar Lev Line, and surmounting this challenge was essentially an engineering problem. The Egyptian Corps of Engineers accomplished its mission in part because of meticulous planning, elaborate preparation, vigorous training, and commendable execution according to a set-piece battle plan. The use of water cannons and the BMP bridges enabled the Egyptians to establish their bridgeheads before the Israelis could organize a large-scale counterattack.

## Valuable Lessons Learned

Several aspects of the Egyptian “game-plan” are particularly worthy of mention. Aside from the interesting and significant historical details of the 1967 and 1973 wars, and the period between the two conflicts, there are some significant lessons, which are important to any student of the military arts.

The very first lesson is the value of critical, constructive analysis. The first step on the road to Egypt's recovery from the debacle of 1967 was to honestly examine the reasons for its dismal performance. The Arabs admitted their shortcomings and addressed them. Further, the conflict demonstrates perhaps the only consolation of a military defeat: it makes the analysis of "why" and "how" defeat occurred a simpler task. The approach that Egypt was forced to adopt, to bluntly admit its mistakes and to move to correct them, was unavoidable. No amount of posturing or blame could hide the requirement to fix what was wrong.

The second lesson is what is possible when military capabilities and national objectives are properly coordinated. Before the 1973 October War, Egypt's stated objectives with regard to Israel were completely out of step with the military capabilities, which it (or its Arab allies)

possessed. The real genius of President Sadat's approach to the upcoming conflict was found in his ability to synchronize his objectives, which were to regain the Suez Canal, regain a foothold in the Sinai again, and to begin a serious peace process with Israel, with the military capabilities at his disposal. His vision of a "limited" conflict with Israel waged for "limited" objectives completely broke all conventional paradigms for the Middle East. Israel was completely unprepared to wage such a campaign. This provided Egypt with a unique strategic initiative, which paved the way for its success.

Third, the lessons of the 1973 war provide an outstanding example of the potential, which exists if one can "shape" his enemy's preconceived views and assumptions. The single greatest reason for the success of the October offensive on Egypt's part was its ability to shift gears, changing its strategy and altering its objectives. Israel was caught off guard for the Egyptian vision of the war, and paid a heavy price. This lesson is applicable from both ends of the spectrum. While we must continue to appreciate the value of "shaping" the thoughts and impressions of an adversary, we must also consider our own vulnerability to faulty or deceptive assumptions.

Thus, the 1973 October War provides us with a wide array of lessons, which are just as pertinent today as they were more than 30 years ago. Egypt's success in initiating the conflict, and in securing a true peace process as a result of the war, leaves both political and military leaderships with much to reflect upon. The lessons learned are more meaningful because what was planned and executed in 1973 built upon ancient experience and the Islamic way of war (chapters 1 and 2): choose the time, place, and manner of battle, use trickery, and be able to maneuver and improvise.

## Conclusion

As the Chinese military sage Sun Tzu said, "What is of supreme importance in war is to attack the enemy's strategy. Next best is to disrupt his alliances. The next best is to attack his armies. The worst policy is to attack cities. Attack cities only when there is no alternative."[63] While it is unknown whether Egyptian President Anwar el-Sadat or his advisors read Sun Tzu, the national security policy that Sadat adopted leading up to the 1973 October War with Israel clearly followed this prescription. As the chapter discussed, Sadat, after carefully considering what he felt were Egypt's national interests – territorial and psychological security, economic prosperity, and the survival of the regime – developed a comprehensive strategy that attempted to make use of all of the instruments of power at his disposal to advance those interests.

Just as the Arab alliance planned, the return to Middle East hostilities broke the political impasse, refocused world attention on the Arab question, and forced international negotiations concerning the occupied territories. These negotiations ultimately resulted in the return of the Suez Canal and land in the western Sinai to Egypt, and more Golan Heights territory to Syria than it had lost during the fighting.[64] Further, the war shocked and embarrassed Israel internationally. The Arab's military successes, particularly the deception campaign resulting in strategic surprise, shattered the twin myths of Israeli invincibility and Arab incompetence. This restored Arab confidence and morale, a psychological victory for them, while, conversely, Israel was downcast and very paranoid about its future.

Egyptian ingenuity and Soviet weapons thus combined to undermine Israeli military strategy. The accomplishments by the Egyptian Corps of Engineers in particular stand as a lesson of what a Third World army can achieve if its political and military leaders devise a war strategy that cleverly balances their military's capabilities with those of their adversary.

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[63] Sun Tzy, *The Art of War,* Trans. Samuel B. Griffith (London: Oxford University Press, 1971), 78.

The 1973 War provides a unique example of how an army can be recovered and successfully transformed in an unusually short period. After the decisive defeat in 1967, the Egyptian Army learned the lesson well, successfully recovered, transformed itself, and in six years was ready for a war that changed the military balance in the Middle East. It also surprised the world's military analysts and had a great implication for United States army doctrine. After 19 years of fighting, multiple ceasefires, superpower intervention, and tremendous Israeli and Egyptian losses, the 1973 October War was only the tactical phase of a strategic engagement that ended with signing of the Egypt-Israel Peace Agreement, March 26, 1979 in Washington D.C.

[64] Elizabeth Monroe & A. H. Farrah-Hockley, *The Arab-Israeli War, October 1973: Background and Events*, 2, note 1.

# CHAPTER 4: Conclusion and Recommendations

## Conclusion

The summary discussion of the next two chapters focuses on how Pharaonic and Islamic ways of war, and some of the more contemporary ways were applied to the benefit of Egyptian military operations.

Over an astonishing history dating back more than seven thousand years, Egypt maintained an advanced and relevant military force. In different historical stages, Egypt always came to prove itself as a dominant military force in the region that acquired all the characteristics of a great military power. This history has given lessons for military leaders to learn from and to apply in modern warfare. The one cardinal fact of early Egyptian history is that the birth of Egyptian civilization on the Nile was fashioned in war, and the kingdom of the Pharaohs was maintained by military force. The evidence of archaeological, artistic, and literary records of the first dynasties testify to the importance of land armies.

King Namer unified Egypt in 3100 BCE and laid the foundation of the first Pharaonic Dynasty. In the unifying process of Upper and Lower Egypt, it was necessary to establish a strong army and the first naval fleet at the beginning of the third Pharaonic Dynasty. Being exposed to many raids, Egyptian King Zosar in 2686 BCE had to establish a regular army with a distinctive military tradition and banners. This is considered the first regular army in history.

Egypt not only established an army with a complex and sophisticated economic system, but also its own grand strategy long before theoreticians had even developed the concept of "grand strategy." The military grand strategy of ancient Egypt is particularly interesting. Over the centuries, it changed from defensive militarism in the Old Kingdom to offensive imperialism in the New Kingdom. The significant, enduring, essential, persistent characteristics of military history of ancient Egypt demonstrate that even before the days of Carl von Clausewitz having a

grand strategy was essential for all aspect of military science and practice. These military considerations were an important aspect of establishing the Egyptian civilization.

Throughout the ancient Egyptian history, the army fought many battles. The most prominent was the liberation from the Hyksos, who occupied the country for almost 150 years (1725-1575 B.C.), until King Ahmos defeated them, expelled them from the country, and started the era of the modern Pharaonic state. Afterwards, in 1468 BCE, the Egyptian army, under the command of Thutmose III, fought the battle of Megiddo against a coalition of Asian princes to the north of present-day Palestine. Thutmose III is considered one of the greatest commanders of ancient history. He conducted sixteen military campaigns to the east and south of the country, thereby establishing the first empire in human history. In 1285 B.C. Ramses II fought the famous battle of Kadesh in northern Syria against the Hittites and managed to establish the second Egyptian empire.

The strategic and tactical significance of these New Kingdom battles is staggering, especially if they are considered to be representative of the warfare of their period. The size of the armies, their tactical organization, the use of chariots and other specialized units, and the quality of generalship all show a degree of military sophistication that is largely unmatched in many later historical periods.

At Megiddo the Egyptians were able to march an army very quickly into hostile territory (150 miles from the Nile delta border to Gaza in nine days) and to keep themselves supplied throughout a seven-month siege. This implies a manner of speed and mobility as well as a sophisticated logistical system, supplemented probably from local sources. The army consisted of an estimated 1000 chariots (2000 horses minimum) and a contingent of infantry that must have carried out the siege. The existence of so many chariots would require an advanced industry for making them, plus a system for obtaining and training horses. The deployment and attack of chariots required training in battlefield maneuvers.

The battle itself was a chariot engagement. All of the captured war booty was chariot equipment. The chariots were probably used as mobile platforms for composite bow archers. The composite bow was more powerful than the simple bow but much more difficult to construct. Use of the composite bow was an additional indication of an advanced weapons manufacturing capability. It is clear from the pharaoh's accounts that military affairs had advanced significantly by the time of this first recorded battle. We see already evidence of logistics, leadership, strategy, battle tactics, the military-industrial complex, and weapons technology as well as a military lesson to take that British Field Marshall Edmund Allenby had in mind when he led Australian cavalry and Indian infantry up the Aruna Pass, surprising and defeating Turks on the *tel* (mound) of ancient Megiddo. Recent scholarship has proven that the twentieth century British warrior had very much in mind the tactics of Thutmose III, over 3,000 years earlier.

At Kadesh, the Egyptian army maneuvers were of strategic and tactical significance. Once again, the size of the armies, their tactical organization, the use of chariots and other specialized units, and the quality of generalship all show a degree of military sophistication mostly unequaled in many later historical periods. If one allows for the technological limitations of the Bronze Age, it is not difficult to recognize that the quality of generalship found in some Egyptian pharaohs was comparable to that of the best generalship of any period down to modern times. Ramses demonstrated the significance of having the commander present on the battlefield. He rallied his troops with the lighter Egyptian chariots, regrouped more quickly than the Hittites expected, and launched a counterattack that drove the Hittites from the Egyptian camp into the river. Kadesh was a tactical victory and a strategic stalemate for Ramses. Meanwhile, the Battle of Kadesh demonstrated the significance of sophisticated generalship, the size of the armies, and complicated strategy and tactics, proving that principles of organized warfare already existed as early as 1285 BCE.

With the emergence of Islam early in the seventh century, a political and military empire was organized in the space of a few decades based on a religion with a universal message. In less

than half of a dozen years, after the death of the Prophet, the mobile and highly motivated armies of the Muslims had defeated the two greatest empires in the world, and the Arab conquest proved durable. Islam provided the believers with strong motivation, from fighting as soldiers of God and for the cause of the faith, to understanding the full implications of the concept of *jihad.* The Muslims then established their highest civilization, which included all aspects of science, architecture, social development, and a great military institution, one of the most advanced at the time.

At the beginning of Islam, the Arabs fought their battles in close formation, although they knew only the technique of attack and withdrawal. The Muslim army was distinguished by its mastery of quantitative factors, such as the number of soldiers, the perfection and good quality of weapons, the number of brave men, skillful arrangement of the line formation, the proper tactics, and similar considerations. They also made use of "hidden techniques," such as trickery, deception and concealment.

The Battle of Hattin (3-4 July 1187) was one of the most decisive battles of the Middle Ages fought by the Islamic Egyptian Army. The battle was waged between the combined Crusader armies and the Muslim army, led by Saladin, Sultan of Egypt. The Crusader army was virtually eliminated. In Hattin, Saladin was able to utilize his vast manpower resources for the sole purpose of destroying the Crusader army. The Muslims were no longer divided. Muslim troops, their equipment, and tactics were similar to the armies that had fought the Crusaders for the previous fifty years. Nevertheless, the difference at the Battle of Hattin was the composition of the army and its unified leadership under Saladin.

The Muslim field army consisted of all four types of Muslim cavalry. The Bedouins or Turkomans would be used as the advance guard and scouts. Turkomans would also form the wings of the army and were used to weaken and divide the opposing army. The Mamluks and non-nomadic Arab cavalry were held in reserve to deliver the final or decisive blow. While the bulk of the army was cavalry, there were also professional Egyptian infantry units. Infantry was

used to conduct sieges and to defend fortified positions. Because Muslim tactics relied on mobility, infantry were either not included or formed a small portion of the field army. Saladin's army included a core of 12,000 professional cavalry and a large number of auxiliaries and local Syrians. The army was organized into three larger divisions.

Muslim strategy focused on two possible centers of gravity: the Crusader army and fortification that supported the army to force the opponent to come to terms. To achieve his strategy, Saladin's plan was focused on that the enemy must still not reach water, his infantry must be separated from his cavalry, and none must escape. In this campaign, things turned out almost exactly as Saladin hoped, although more Latin troops did escape from the battle than is generally acknowledged.

The Battle of Hattin was a typical encounter of its kind in which Saladin relied on varied and long-established tactics. Muslim morale may have been superior as a result of the Latin leaders' decision to lead their men on an exhausting march. Although the Christians blundered, Saladin also showed obvious tactical superiority. To shape the Battle of Hattin, he had taken into account the characteristics of the terrain and climate and used them to full advantage. Saladin also made sure that his troops were well supplied and that morale remained high. Muslim leadership, both prior to and during the Battle of Hattin, was superior to the Crusader leadership in every respect.

In the end, the battle was won by the superior military capabilities of the Muslim troops in the situation in which the two armies fought. With better logistical support, superior speed of maneuver, greater ability to change positions while retaining cohesion, and probably better battlefield communications, one might think that the Muslims were bound to win. But in many other clashes they had not. The difference that made a difference was the understanding and the use of a grand strategy. Hattin was fought over eight hundred years ago, but it still provides useful lessons in military strategy and decision-making. The battle of Hattin shows the twelfth century Muslims' unique understanding of the importance of terrain, climate, logistic, and morale

domain of the battlefield on the out come of a battle. Overall, Hattin was won because Saladin figured out, six and half centuries before Napoleon Bonaparte, how to get his enemies to fight in a battle that he designed and shaped: where he wanted, when he wanted and how he wanted them to fight.

War, as preeminent military theorist Carl von Clausewitz stated, is an instrument of policy--a means by which nations may achieve political ends. In October 1973, the significance and the value of the ancient and Islamic way of war were reborn, when Egypt led the Arabic nation and chose war as the instrument of policy. Their primary policy objective in waging war was to recover Arab lands occupied by Israel since the 1967 Six Days' War. Arab leaders, under President Sadat's direction, translated their policy objective to recover the occupied territories into a grand strategy designed to achieve that objective. The Arab grand strategy contemplated limited military action followed by political pressure to compel recovery of all the occupied territories.

Arab military strategy designed to force partial withdrawal from the occupied territories envisioned a sophisticated and brilliant strategic deception operation, followed by separate, but strategically integrated Egyptian and Syrian offensive campaigns. The Arab campaign plans reflected critical lessons learned from previous wars, maximized Arab capabilities, and minimized Israeli strengths. The central operational focus of both Arab campaigns was quickly to seize limited military objectives before Israelis could fully mobilize. Egypt planned to cross and seize a perimeter along the eastern shore of the Suez Canal, defeating Israeli defensive positions there, and then prepare to advance further to seize strategic passes, if circumstances permitted. Egypt's plans and training completed, the Arab forces would undertake to achieve their purposes through the instrument of war, shocking Israel and the world in the process.

Surprise was particularly critical to initial success, as they crossed the Suez Canal and attacked the Israeli strongholds on both fronts. Equally important, surprise would prevent a preemptive air attack like that Israel conducted in 1967, which effectively won the war in a matter

of mere hours. To achieve surprise, the Arabs devised a sophisticated and brilliant strategic deception plan, employing both political and military means of deception, on-going as part of Sadat's two-pronged strategy since late 1972. The Arab military strategy and campaign plans were in large measure built around this elaborate deception plan.

Israeli strength centered upon air power, as the means for achieving air superiority. The Israelis preferred these methods of operation: rapid-paced, offensive, tanks with air, combined-arms maneuver warfare. Arab forces took advantage of the Israeli's extremely aggressive doctrine and tactics and neutralized their firepower at the same time. Since the Arabs could not compete with Israeli air, they believed their counter measures should be air defense. Once under their air umbrella, the Arab forces took advantage of the Israeli propensity to conduct armor charges, tactics learned in the 1967 war. As the Israeli tanks counterattacked, Arab infantry forces launched salvos of tank-killing missiles. Egypt's combination of maneuver and firepower enhanced their operations and enabled them to achieve their initial strategic aims.

The Arab forces believed that by achieving strategic and tactical surprise they could counter Israeli firepower and maneuver by quickly seizing their operational objectives before the IDF could fully mobilize. The Arabs designed an elaborate deception plan that convinced senior Israeli officers, including Major General Eliyahu Zeira, the chief of Israeli Intelligence, that Egypt and Syria would not attack and were only conducting routine defensive training and saber rattling. Despite Israel's sophisticated and renowned intelligence gathering apparatus, the Arabs achieved total surprise on the Suez front and near complete surprise on the Golan front, directly contributing to their initial successes. The success of the Arab deception plan was due in large measure to the Israelis' incorrect analysis, and not a failure in gathering intelligence. Israeli intelligence gathered many indications in the spring of 1973 that in May convinced some junior intelligence officers that war was probable. The Arabs had clearly won the initial battle of intelligence services. Their deception plan, a shrewd combination of political and military maneuvering, was a major aspect of Arab force protection and directly contributed to the early

Arab successes. Arab deception, and perhaps the Israeli belief that their military was invincible, lulled the Israelis into complacency.

For Egypt to gain any military or political success against Israel in the 1973 War depended on the Egyptian Armed Forces first crossing the Suez Canal, then assaulting the Bar Lev Line, and finally establishing secure bridgeheads on the eastern bank. These challenges were essentially engineering problems, and therefore, the achievement of the operation is, in many respects, a saga of the perseverance and ingenuity of the Egyptian Corps of Engineers. To help to overcome the Israeli defenses in the Sinai, the Egyptian General Command assigned six major tasks to the Corps of Engineers: to open some 70 passages through the sand barrier. They were asked to build 10 heavy bridges for tanks and other heavy equipment; to construct 5 light bridges, each with a capacity of 4 tons; to erect 10 pontoon bridges for the infantry; to operate 50 or so ferries; and to pilot close to 1,000 rubber boats for the initial assaults. Of the six tasks, the first was by far the most critical. The solution for the first engineering dilemma proved simple but ingenious: a water pump. The Corps of Engineers would use high-pressure pumps as water guns to blast open passages in the sand.

The 1973 Arab-Israeli War provides a significantly wide array of lessons that are important to all students of military art, such as the value of critical, constructive analysis, the proper coordination of military capabilities and national objectives, and the outstanding example of the potential, which exists if one can “shape” his enemy’s preconceived views and assumptions. Those lessons are just as pertinent today as they were more than 30 years ago. Egypt's success in initiating the conflict, and in securing a true peace process as a result of the war, leaves both political and military leaderships with much to reflect upon.

Egyptian ingenuity and Soviet weapons thus combined to undermine Israeli military strategy. The accomplishments by the Egyptian Corps of Engineers in particular show a lesson of what a Third World army can achieve if its political and military leaders devise a war strategy that cleverly balances its military’s capabilities against those of the adversary.

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## Recommendations

> "Progress, far from consisting in change, depends on retentiveness…Those who cannot remember the past are condemned to repeat it."
>
> - George Santayana,
> The Life of Reason

Previous chapters have outlined significant experiences in the long history of success in Egyptian military performance. This study has identified the most significant aspects of that experience for today from the Pharaonic, Islamic, and Modern eras. This final chapter will use this historical analysis as a foundation for determining how to include the study of military history as a resource for meeting the challenges confronting the Egyptian military in this complex era. This analysis also provides a basis for some recommendations for change in the role of historical studies within the curriculum of Egyptian military education.

### Designing the Future

At the beginning of the 21st century, tactical and operational military planners will encounter a number of unprecedented conditions: the rapidly changing operational environment, the military services' attempts to transform to adapt to the new realities of the evolving operational environment, and the foreseeable future when the force will demand that staff officers be increasingly well versed in joint operations, because operational maneuver is a joint activity.

The Egyptian military today faces challenges that are more complex and daunting than those of previous wars. In order to understand the politics in obscure corners of the world, to integrate new technologies, and to create new systems of organization and discipline, the military will require first-rate thinkers to create a successful military education system and operating performance.

Egypt not only plays a prominent role in the region, as a cornerstone for its security and stability, but it also wields a significant influence within the United Nations, in assuring international security. The next few decades may well bring unforeseen threats requiring Egyptian military intervention in unstable environments.

All military forces confront uncertainties and ambiguities as to where, when, and for what reasons they will fight. The American Army has recognized for a decade the need to change in order to respond to the changed strategic environment. The U.S. Army Training and Leadership Development Panel (ATLDP) has acknowledged that today's and tomorrow's operational environment has changed faster than the army has been able to adapt its training and leader development program.[65]

To address a similar dilemma, the Egyptian Army is already implementing changes to the Officer Education System to improve the preparation of field grade officers (Majors and Lieutenant Colonels) in planning and executing full spectrum operations at the tactical and operational levels.

The new security environment has also changed the relationship between the levels of war in ways that must be considered when determining an effective way to educate officers for the future. Today's young officer is much more likely to be confronted by decisions that may have operational or even strategic consequences than were his Cold War predecessors. Missions in places such as Bosnia, Kosovo or Iraq are more politically and culturally complex than were most

[65] United States Army, The Army Training and Leadership Development Panel Officer Study Report to the Army (Fort Leavenworth, KS, 25 May 2001: OS-6.

Cold War missions. Consequently, these new conditions and requirements must be considered in developing military leadership capable of dealing with the growing levels of complexity on the battlefield. To accommodate uncertainty, education and training must be designed to foster institutional initiative and self-reliance.[66] In short, current and foreseeable conditions require that joint staff officers be more knowledgeable and innovative, as well as more joint force commanders who are better prepared for correspondingly expanded duties and responsibilities.[67]

## The Importance of History for Field Grade Officer Education System

It has often been said that armies study only the last war, resulting in poor performance in the next conflict. In Eliot Cohen's and John Gooch's *Military Misfortunes, The Anatomy of Failure in Warfare*, the institutional and catastrophic failure of four nations' militaries over a period of sixty years is attributed to failing to learn from past experience, failing to anticipate the future, and failing to adapt to the future.[68] There is a consistent historical pattern of military organizations attempting to impose their prewar concepts of future combat on the actual conditions of war instead of adapting to those conditions. The story of France's failure in World War II illustrates the complexity and difficulty of formulating an effective doctrine. Leading up to the war, the French army trained, organized and equipped essentially for another World War I. This was derived from their past experiences with emphasis on the destructiveness of firepower, the strength of the defense, the ascendancy of the methodical battle, and the unifying power of the commander.[69]

The increased complexity of military missions today with increased reliance on information and advanced technology places greater reliance on leaders' intellectual skills.

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[66] Ibid., OS-11.

[67] Lieutenant General Leonard D. Holder Jr. and Williamson Murray, "Prospects for Military Education," *Joint Forces Quarterly*, no.18 (Spring 1998) 9.

[68] Eliot A. Cohen and John Gooch, *Military Misfortunes: The Anatomy of Failure in War* (New York: The Free Press, 1990) 1-23.

[69] Robert Allan Doughty, *The Seeds of Disaster* (Connecticut: The Shoe String Press, 1985) 186.

However, deference to officers oriented to action rather than contemplation, and lack of time, interest or capacity to broaden the base of knowledge of history, theory, or doctrine all threaten the intellectual condition of tactical and operational planners.

Of all the world's military organizations during the interwar period, the German Army took professional military education the most seriously. One gained entrance to the *Kriegsakademie*[70] only by passing a rigorous examination of sixteen hours and very few met the standard. Of those who were admitted to the *Kriegsakademie,* only a portion completed the two-year course.

In the process of educating its officers, the German general staff stressed careful, thorough study not only of the recent past, but also of military history in general. The study of military history was heavily emphasized to acquire the theoretical foundations of military science and to gain an appreciation for human performance under the stresses of combat. By a process of continual renewal, adequate resourcing, and adherence to high academic and performance standards, the advanced military educational institution of Germany set the conditions for the General Staff to inculcate the culture and institutionalize excellence. As a result, the *Kriegsakademie* and the German General Staff became the world's model for advanced military learning and staff organization.

## The Importance of Military History in the U.S. Military Education

> "Today and the future leadership will depend on its educational and intellectual foundation more than ever before."
>
> James Schneider, Ph.D.,
> Professor of Theory at SAMS

U.S. military schools have always strongly emphasized the study of military history in educating their officers. As a part of a military commander's training, the study of military

[70]*Kriegsakademie* is the German Military School for Officers. It was established by the Prussian reform movement in 1810. Its objective was to reorganize the Prussian professional military education system following the army's defeats by Napoleon Bonaparte. It is an equivalent of what is known now internationally as Command and General Staff College (CGSC).

history is unquestionably an asset and a method of acquiring the knowledge of "how to act" and "how to be." It expands critical thought models used in the decision-making processes at all levels of war. It also plays a valuable role in forming the image, identity, and values of the armed forces.

U.S. military schools use an approach in which the officers confront the same dilemmas faced by current military leaders of the time. They study campaigns with widely varied dates and locations. Military history provides officers with concrete case studies, which cannot be fabricated, since only real events fully account for complexity and enable students to relate to it after the fact. The study of military history as a learning tool enriches leadership training, the elaboration of doctrine, and the understanding of an army's tradition. It enables one to appreciate the complexity of military operations and the friction of war, in shaping judgments, and capitalizing on experience.

At the CGSC (U.S. Army Command and General Staff College, Fort Leavenworth) and SAMS (U.S. Army School of Advanced Military Studies), it is obvious that the study of military history comprises approximately one fifth of the total curriculum (see figures 1and 2).

| Course | Lesson no. | Lesson Title | Course Total Hours |
|---|---|---|---|
| **H100 "Transformation in the Shadow of Global Conflict 1918-1942"** | H101 | Course Introduction | 12 lessons * 2 hours = 24 Hours |
| | H102 | Impetus of Stalemate (WW I) | |
| | H103 | Building the Mechanized Beast (Tanks) | |
| | H104 | Victory From the Air? | |
| | H105 | Battleship vs. Flattop | |
| | H106 | U-Boat Revisited | |
| | H107 | Dirty jobs and Doctrinal Development (USMC Between the Wars) | |
| | H108 | Blitzkrieg (1939-1940) | |
| | H109 | Decision on Two Oceans (U-Boats and Carrier Warfare) | |
| | H110 | Island Hopping | |
| | H111 | Combined Bomber Offensive | |
| | H112 | Special Operations in WWII | |
| **H 200 "Military Revolution: From Pike-Square to PGM's"** | H201 | The Structure of Military Revolutions | 21 lessons * 2 Hours = 42 Hours |
| | H202 | The Dawn of Modern Warfare, The Rise of the State | |
| | H203 | Frederick and the Paradigm Army | |
| | H204 | Armies of the People | |
| | H205 | Backlash to Revolution: The Decline of Napoleon | |
| | H206 | Explaining the Revolution: Clausewitz | |
| | H207 | Explaining the Revolution: Jomini | |
| | H208 | Ironclads, Rifles, and Railroads: The American Civil War | |
| | H209 | The Brain of a Modern Army: Moltke and the German General Staff | |
| | H210 | Building the Dreadnought Navy | |
| | H211 | Restoring Mobility to the Battlefield: 1914-1918 | |
| | H212 | The Just-in-Time Air Force: Dowding and RAF Fighter Command | |
| | H213 | Blitzkrieg Revisited: The Russian Front, 1941-1945 | |
| | H214 | Global Coalition Warfare | |
| | H215 | Coalition Warfare-ETO: Normandy to the Elbe | |
| | H216 | Joint Warfare in the Pacific | |
| | H217 | Revolutionary Warfare | |
| | H218 | Cold War and Korea | |
| | H219 | Vietnam War/Afghan War | |
| | H220 | Beating the Unbeatable Enemy: '73 War | |
| | H221 | From Active Defense to AirLand Battle/Past as Prologue | |
| **The CGSC curriculum includes five case studies. Each has two lessons of two hours each.**<br>- 1918 (Strategic block)<br>- Okinawa (Army/corps level)<br>- Battle of Hue (Brigade level)<br>- Guadalcanal (operational block)<br>- Meuse River Crossing (Division level) | | | **20 hours** |
| **Total hours of the US Army CGSC Military History Curriculum** | | | **86 hours** |

(Figure 1: U.S. Army Command and General Staff College History Curriculum)[71]

[71] Figure created by the author according the CGSC, ILE AY 2003-2004 curriculum.

| No. | MOD II – " Evolution of Operational Art" History Lessons | Total Hours |
|---|---|---|
| H-1 | The Foundation Of Modern War: Napoleonic Wars | 35 Lesson * 4 Hours = 140 History Hours |
| H-2 | * The Model for Clausewitz and Jomini, Ulm-Austerlitz and the Decisive Campaign and Battle (3 days lesson) | |
| H-3 | * Introduction to Irregular Warfare: Napoleonic Guerilla and Counter-Guerilla Wars in Spain and Naples | |
| H-4 | Moltke and the Austro-Prussian War | |
| H-5 | * Opening Gambit 1914 | |
| H-6 | * Total War 1918 | |
| H-7 | * The Russian-Polish War | |
| H-8 | The Interwar Years-United States | |
| H-9 | The Interwar Years- France | |
| H-10 | The Interwar Years-Germany | |
| H-11 | Norway | |
| H-12 | France 1940, The Plans | |
| H-13 | France 1940, The Campaign | |
| H-14 | Midway | |
| H-15 | Normandy, The Plans | |
| H-16 | Normandy, The Operation | |
| H-17 | Korea | |
| H-18 | Vietnam 1-The Strategic Context | |
| H-19 | * Vietnam 2-The Conduct of the War | |
| H-20 | The Falklands/ Malvinas Campaign | |
| H-21 | Haiti | |
| H-22 | The Six-Day War, The Strategic Background and Planning | |
| H-23 | The Six-Day War, The Campaign | |
| H-24 | The Coup in Iran 1953 | |
| H-25 | The Arab-Israeli War 1973, The Plans | |
| H-26 | * The Arab-Israeli War 1973, The Campaigns | |
| • In addition to 9 days for the study of the U.S. Civil War and Vicksburg Staff Ride.<br>• The SAMS curriculum devotes a total of 35 days to military history comprises approximately 1/5 of the overall SAMS program.<br>• History is routinely discussed in many of the non-History classes as background to theory, operations, and practical exercises that are based on an actual battles or present historical settings. | | |
| * History lessons used as the bases for SAMS practical and simulations exercises. | | |

(Figure 2: U.S. Army School of Advanced Military Studies History Curriculum)[72]

[72] Figure created by the author according the SAMS' history curriculum AY 2003-2004.

## The Rebirth of Military History

Now this monograph comes to a crucially important issue: the study of military history in the Egyptian Military education. One must ask the question: does the Egyptian field grade officer education system assure the ability to adapt rapidly to our increasingly complex world?

The foregoing review of military history suggests the need for review of the current officers' education system of the Egyptian Army. Such a review would give special attention to the role of military history, especially at the field grade level. Such a focus could constitute a rebirth of the Egyptian military history in the officers' education. Egypt's military history of more than seven thousand years is unique and significant. The Egyptian and Islamic way of war, as described in this monograph, and its tradition of excellence, can be used to deal more effectively with the challenges of the twenty-first century.

The field grade officers' education system, especially at the Command and General Staff College (CGSC) level and above, should rely heavily on the military history and be made relevant to current military doctrine. The officer-planners can assess the relevance of this history to today's battlefield, with its uncertain challenges, bearing in mind that, in many respects, history can repeat itself. Military theories and doctrine will not become truly relevant unless related to the rich historical precedents in the Egyptian history of war.

## Refocusing Military Education

To achieve the goal and the desired end state of the educational program system, the process should have three main stages: company grade officer system (lieutenant-captain), the field grade officer system (major-lieutenant colonel), and a possible additional year after the CGSC.

The program for company grade officers should involve considerable attention to the tactical aspect of military history. The objective at this level would be to increase the company grade officer's knowledge of military history and its relevance for current doctrine and practice at

the tactical level of war. This would provide a foundation for addressing potential challenges at the next level.

The field grade officer, at the CGSC and above, should focus upon the relevance of history for planning: to increase competence by studying of tactical and operational lessons from history, including introduction of some case studies that would integrate history with doctrine, as well as current and probable future operational requirements.

An additional year of study after the CGSC should be arranged for the most outstanding CGSC graduates (equivalent to the US Army's SAMS, School for Advanced Military Studies). In this additional year the curriculum would focus on increasing the ability of planners and future senior leaders to solve complex problems in the tactical and especially the operational level of war.

The curriculum should be based on four primary themes: theory, history, campaign planning and exercises, and support taskings.[73] These four aspects are mutually reinforcing and thus provide a penetrating outlook toward the future by melding together the theoretical, the empirical, and the practical aspects of military education.[74] This will counterbalance the widely recognized propensity to use mainly experience of recent conflicts as the foundation for future operations – often resulting in less effective responses to new challenges.

Besides Egypt's military history, the revised curriculum should also pay attention to the significant Napoleonic wars, the nineteenth century European wars, some of the main and decisive campaigns from the two world wars, the second Gulf War, Operation Iraqi Freedom, and guerrilla warfare in general.

Benefiting from the study of that history, the officer-student should undertake tactical and operational exercises and staff rides based on real historical settings. Military planners and

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[73] James J. Schneider, Ph.D., "*What if we Fight Tonight?* Advanced Military Education for the XXIst Century," *Army Magazine* (November 1996) 10.

[74] Ibid.

leaders of today and tomorrow should be equipped to identify tactical and operational flaws in past campaigns. By doing so, they should be able to provide better answers to classic military dilemmas.

An important step in revising the curriculum will be for some of the main military analysts in Egypt to rewrite the curriculum by a military analysis of past campaigns. This analysis would concentrate on identifying the tactical and operational aspects of these campaigns, such as the centers of gravity, decisive points, lines of operations, force formations, logistical problems, and the like.

To meet that requirement a new generation of military historians would have to be created. Future military historians should be retired military officers with comprehensive knowledge and experience in military history, theories, and operations. Their main role would be to incorporate operational analysis into the study of history. Resources for obtaining these qualifications could be provided by the History Department of Cairo University, London's International Institution for Strategic Studies, and other academic institutions.

One final recommendation for establishing and maintaining the role of historical studies in Egyptian military education: a panel could be created comprised of both senior military officers and academic specialists. This panel's ongoing responsibilities would include:

- Creation and adaptation of the appropriate military history studies
- Identification of qualified faculty for those aspects of the curriculum
- Continuing assessment of the program and its applicability to current and future military practice

## The Graduates of the History-Focused System

Today's operational environment and the increasing importance of joint operations demand more from commanders and their staffs than ever before. The military educational system must "enhance the ability of selected officers to think clearly, logically, and rapidly, to

conceptualize and innovate, to teach and develop subordinates, to integrate the work of specialists and to create high-performing staffs that would anticipate and adapt to change."[75] This demands a special focus on historical experience.

The graduates must view themselves as co-creators of a military organization culture that can provide the type of institutional leadership necessary to achieve efficient and effective changes. They must be capable of understanding the pace of change that the organization can tolerate. Upon defining what the problem is and identifying potential solutions, they must devise courses of action to convince decision-makers of the necessity of change. To have credibility with the decision-makers, a change agent must also demonstrate excellence in core competencies.

Self-awareness of the graduates, based on intensive study and reflection, should result in the ability to understand and confidently explain even the most complex issues. Another trait necessary to a change agent is adaptability. Adaptability is the ability to recognize changes in the environment, assess those changes, and determine what is new and what needs to be learned to be effective.[76] Self-awareness and adaptability are symbiotic. Adaptability without self-awareness is irrationally making changes for changes' sake, without fully understanding the relationships among abilities, duties, and the environment.[77]

This study shows how the history of Egyptian ways of war provides significant resources for current and future military planners and leaders. This analysis provides a basis for considering adaptations in Egyptian military education to use, not forget, history in the continuing effort to train, educate, and organize for the future.

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[75] Colonel Huba Wass de Czege, Army Staff College Level Training Study, (Carlisle Barracks, PA: U.S. Army War College, 1983) 11.

[76] United States Army. The Army Training and Leader Development Panel Officer Study Report to the Army

[77] Ibid.

# APPENDIX

| Map No. | Title |
|---|---|
| 1 | The Egyptian Empire under rule of Thutmose III and Ramses II |
| 2 | Thutmose III's approach to Megiddo |
| 3 | Thutmose III's three main routes to Megiddo |
| 4 | Ramses II's approach to Kadesh |
| 5 | The Battle of Kadesh (Maneuver 1) |
| 6 | The Battle of Kadesh (Maneuver 2) |
| 7 | Hattin (Campaigns of 1187) |
| 8 | Saladin's March to Hattin 1187 |
| 9 | The Battle of Hattin (Night and early morning, 4 July 1187) |
| 10 | The Battle of Hattin (Late morning to noon, 4 July 1187) |
| 11 | The Battle of Hattin (Afternoon, 4 July 1187) |
| 12 | UN 1947 Partition Plan For Palestine |
| 13 | Situation Before the Six Days War 1967 |
| 14 | Situation After the Six Days War 1067 |
| 15 | 1973, October War (The Egyptian crossing & securing the Operational Objectives) |

Map 1: The Egyptian Empire Under Thutmose III and Ramses II

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Map 2: Thutmose III's Approach to Megiddo

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Map 3: Thutmose III's Army Three Main Routes to Megiddo

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Map 4: Ramses II's Approach to Kadesh

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Map 5: The Battle Of Kadesh (Maneuver 1)

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Map 6: The Battle Of Kadesh (Maneuver 2)

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Map 7: Hattin “Campaigns of 1187”

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Map 8: Saladin's March to Hattin 1187

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Map 9: The Battle of Hattin (night and Early Morning, 4 July 1187)

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Map 10: The Battle of Hattin (Late Morning to Noon, 4 July 1187)

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Map 11: The Battle of Hattin (Afternoon, 4 July 1187)

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Map 12: UN 1947 Partition Plan For Palestine

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Map 13: Situation Before The 1967 Six Days War

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Map 14: Situation After The 1967 Six Days War

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Map 15: The 1973 October War, Sinai Campaign (The Egyptian Crossing and Securing the Operational Objectives)

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