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COMMAND AND CONTROL IN NORTH AFRICAN BATTLES
WORLD WAR II, 1941-1943

An Individual Study Project
Intended for Publication

by

Colonel Eyal Ben-Reuven, AR

Professor Michael I. Handel
Project Adviser

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The North African Battles in World War II raised tremendous command and control problems which were very influential on battlefield results. This paper reviews two different styles of command: The German, as represented by General Rommel; and the British, as represented by Generals Cunningham, Ritchie, and Auchinlick. The paper concentrates on three topics: ◦ The preparation of commanders for war. ◦ The senior leader's place in the battlefield. ◦ The commander's relationship with his subordinates and his staff. The paper examines how the selected German and British generals prepared for and conducted the war in North Africa. This historical analysis remains relevant today because, despite enormous technological developments aimed at solving the problems of command and control, we are still dealing with the same basic issues in a more complex battlefield environment.			
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- o The preparation of commanders for war;
- o The senior leader's place in the battlefield; *and*
- o The commander's relationship with his subordinates and his staff.

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COMMAND AND CONTROL IN THE NORTH AFRICAN
DESERT BATTLES - 1941-1942

INTRODUCTION

When we analyze the command and control capability of the commander in the field, many components should be taken into account.

To begin with, his personal capability, experience, and training. The quality of his subordinate units which is based upon their training, motivation, effectiveness and intelligence capability, communication, and logistical support.

All these elements combined are brought to the resolution of the battle.

The personal influence that the commander can exert and maintain upon those in his command is, in my opinion, the most important element in the end result of the battle.

Accordingly, the commander must be personally connected to all the basic components of his command.

This connection can be direct or indirect. The ability to see the complete and accurate picture of the battle, to assimilate and analyze the situation and to give the right order at the right time demonstrates the personal and direct influence of the command and control structure. The influence of the army commander on Battalion "X", though not a direct command, is still his responsibility, even though he has no direct influence on their training and morale.

It must be noted that in spite of the fact that the principles¹ of command and control are similar on the army and battalion level, there is a big difference in execution at the battalion level. If, for example, we consider the positioning of the commander in a battle at battalion level, without question he must (in my opinion) be at the front.

On a higher level (division and above) this question raises some dilemmas. Because I am dealing in my paper at army level, I will discuss this later on.

I will deal in this paper with the battlefields of North Africa in the years 1941-1942. I chose this setting because it contained many components that have been evident in modern day warfare, even though there has been obvious advances in technology.

Very large armored battles took place in which the main element was the maneuvering and movement. In modern war it is firepower that is gradually becoming decisive. However, in my opinion, firepower will open the space for maneuver, and this is what makes the armored battles in North Africa relevant.

The influence of the commanders upon the outcome of these battles can be equated with a modern day commander's influence in the same way.

The dilemma that a commander faces in positioning himself on the battlefield is the same today as it was then. It was and still is part of the art of war.

The amount of data that reaches headquarters because of technological advancement has greatly increased. In the past even though there was less data, it was still a major problem to implement this data in battle. There is still much to be learned from their experience.

The North African desert stands as an autonomous arena of war. It was a war in which the commanders had a lot of independence--more on the German side than on the English. This was because of the different attitudes of the political leaders of both sides.

Churchill saw the war in North Africa as the first step toward the defeat of the axis. Hitler saw this arena as a secondary effort and as a burden on the war effort. This difference in strategic importance of course had an

influence upon what took place on the operational level. This will be the subject of this work.

In this era there were a few outstanding military leaders. Rommel on the German side and on the English side, Wavele, Auchinleck, Ritchie, and Cunningham. Each commanded in a different style. Each one according to his attitude, influence, ability, success or failure.

These were battlefields which enabled unlimited maneuverability and firepower according to the means that were available. This war was almost completely isolated from the real world--isolated from civil populations, cities, guerilla warfare, local objections and refugees.²

BACKGROUND

After the Italian invasion of Egypt in 1940 the British attacked with the Middle East Commander Wavele and Western Desert Commander O'Connor. The British defeated the Italians and captured Tobruk on 21 January 1941 and continued to capture Benghazi. The result of this British move was very significant.

- o On 4 January 1941 Hitler decided to send German forces to Libya to support his Italian ally because he was concerned that they would be taken out of the war.

- o Churchill, in a decision that in retrospect was a serious mistake, decided to shift British forces from North Africa to Greece.³ That outcome was:

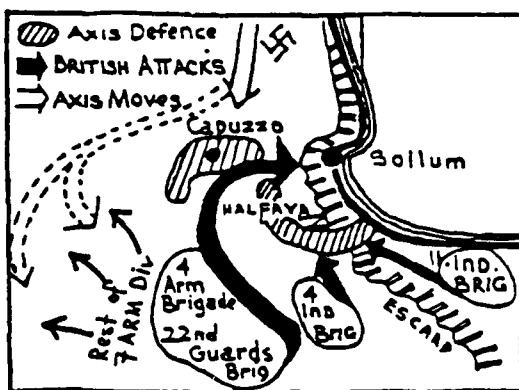
oo Significant weakening of North African British forces.

oo Weakened naval ability to attack German forces on their way to Tripoli.

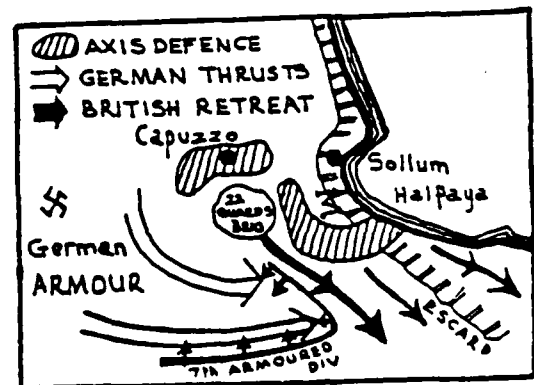
oo Tripoli wasn't captured by the British. Rommel, who was appointed by Hitler to command the African Corps, arrived in Tripoli on 12 February 1941.

Contrary to orders that Rommel had received not to attack the British until the arrival of the 15th Armored Division and contrary to what the British expected, he attacked on 31 March 1941 with the 5th Light Division, which later was called 21st Armored Division (see Map, Page 7).

Most of Cyrenaica up to the Egyptian border fell into German hands within twelve days (see Map, Page 7). At the end of May Wavle attacked the Germans near Capuzzo and withdrew. In the middle of June, under pressure from Churchill, Wavle initiated the "Battleaxe" (see Maps 6 and 7) campaign which resulted in heavy armored battles near Capuzzo and Sidi Omar. The Germans crushed the British 7th Armored Division and the operation failed. As a result of the British failure, Churchill replaced Wavle with General Auchinleck as Middle East commander.



MAP 6. BATTLEAXE
Phase A



MAP 7. BATTLEAXE
Phase B

General Auchinleck appointed General Alan Cunningham to command the North African forces, which became the British Eighth Army.

On 18 November 1941 the British took the Germans by surprise in a heavy attack and Operation Crusader began. Their mission was to first destroy the German armor and then link up with the besieged forces in Tobruk and then to drive the German forces out of Libya.

The operation that began with a British failure ended with a deep German retreat from Benghazi and Tobruk up to Marsa-el-Brega, which is west of Cyrenaica.

It was General Auchinleck who turned the tide of battle and then replaced Cunningham with General Ritchie. General Ritchie was General Auchinleck's Chief of Staff at Mid-East Headquarters in Cairo.

Both forces dug in and prepared for continued fighting. Auchinleck hoped to attack in mid May. Rommel had suffered a temporary setback, but it was not the decisive defeat that the British thought it was. He misled the British into thinking that he was going to withdraw further.⁴ On 20 January 1942 the Germans started fires in Marsa-el-Brega and tricked the British into believing that they were withdrawing. The following day Rommel began his advance into Cyrenaica.

Auchinleck decided to fortify Gazala and prepare for its defense. The battle for Gazala began on 26 May 1942 and was led by General Ritchie. The British Army was defeated and retreated to Marsa-el-Matruh. Tobruk was also lost in this campaign.

General Ritchie decided to end his retreat, but failed to prevent a severe defeat. He was soundly beaten when Rommel penetrated his line at Marsa-el-Matruh. In this desperate situation, Auchinleck assumed direct command of the Eighth Army.

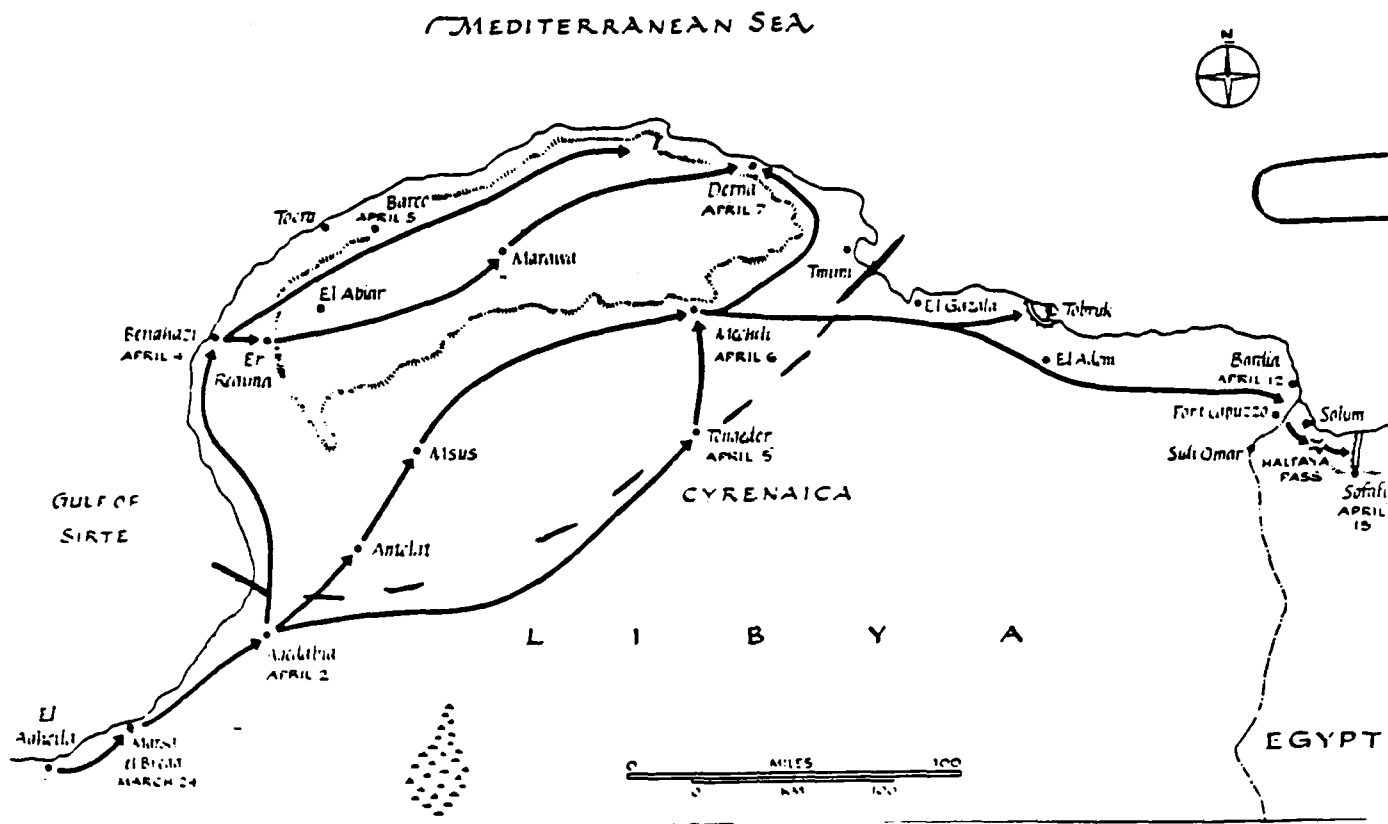
Auchinleck ordered a withdrawal to El-Alamein. In a series of counterattacks Auchinleck caused Rommel to drop his plans for attack even at a heavy price in casualties to the Eighth Army.

In August General Auchinleck was replaced as Mid-East Commander by General Alexander, and General Montgomery assumed command of the Eighth Army. This entire campaign produced very large battles with decisive victories or defeats. The battles took place over very large areas and involved hundreds of kilometers of advance or retreat. This was because:

- o Both sides avoided operating in the Cyrenaica area because it was too easy to be caught in the open and surrounded (see Map, Page 7).

- o The need of the retreating forces to stay linked with their supply lines and not to stretch them to the breaking point produced a pendulum effect in these battles. Each side experienced this break and suffered the consequences of it. In such seesaw battles, the quality of the command and control exercised by the commander and his subordinates, each at his own level, has a decisive effect on the outcome.

The need for understanding desert warfare, the need for understanding armored fighting, the importance of the correct positioning of the field commander according to the changing circumstances, the understanding of the situation according to his own point of view and the reports by his subordinates, absorbing and analyzing intelligence up to the point of decision making--all of these considerations and more have a decisive effect on the battle's outcome.



CYRENAICA

STABILITY AND CONTINUITY IN COMMAND LEARNING BY EXPERIENCE

The most important factor in command structure is the commander, his image, his personality and qualifications.

Rommel, the Commander of the German Forces, was opposed by several British commanders, who were replaced every few months: Wavell and O'Connor and then Auchinleck, who then appointed Cunningham and later replaced Cunningham with Ritchie.

After the Battle of Gazala, Auchinleck personally took command of the Eighth Army - replacing Ritchie. Auchinleck was later replaced by Alexander as Mid-East Commander, then Montgomery replaced him as Commander of the Eighth Army after the First Battle of El-Alamein.

The only name on this respected list that was replaced because of circumstances due to battle was O'Connor, who got lost in the desert and was captured behind German lines. All the others were replaced because of their failures in command, which required the generals who appointed them to admit their mistakes.

The chief of the Israeli Army, General Sagi, said recently in a conversation with Brigade Commanders "I have poor capability for personal influence upon the quality of the individual soldier, company and battalion but my real influence is in my appointments at top command levels." There is no doubt that the British failed at their selections of top commanders of the Eighth Army and at their preparations. The results were at first devastating.

General Cunningham, appointed by Auchinleck in August 1941, had served previously in Kenya. He had never commanded more than four infantry brigades. In the Eighth Army, he had under his command two corps--the 30th, which consisted of three armored brigades within the framework of the Seventh Division and the First South African Infantry Division; and the 13th Corps, which consisted of two infantry divisions and an armored brigade.

Cunningham's knowledge of armored fighting was very limited and his experience was nil. He had never dealt with desert warfare. All the organization and staff work was unfamiliar to him. As if that weren't enough, the command structure under him was unstable.

Creagh, his Seventh Division Commander, returned to England and the Armored Corps' designated Commander, General Pope, who had much desert experience, was killed in an airplane crash.

He was replaced by General Norie, who previously commanded an army division in England. The 13th Infantry Corp. Commander, General Godwinausten, arrived new from East Africa.

Cunningham had only two months after his arrival to launch the Crusader Campaign. He found himself in a confusing situation when had to both learn from his staff and subordinates and to give them orders at the same time.

The Crusader Operation ended with a significant German retreat, in spite of severe command and control problems, mismanagement and the mental breakdown of General Cunningham, who had been appointed only four months previously.

Auchinleck decided to replace Cunningham on 26 February when he realized that Crusader was on the verge of failure. The armored brigades was scattered over the area and badly demoralized. The Garrison in Tobruk tried to break out, but were repulsed by the Germans.

In a daring move, which in retrospect was reckless, Rommel decided to leave a small unit to block any British effort to break out of Tobruk and at the same time moved his armored forces toward Egypt.⁵ Despite having won a major battle at Sidi-Rezegh, he had taken heavy losses in men and material.

Cunningham received news of the defeat at Sidi-Rezegh and of the German advance toward Egypt. He then ordered a general retreat. This decision was taken without examining the entire picture and taking into account all the factors involved: the small German force at Tobruk, the weakened condition of Rommel's attacking army, and the possibility of exploiting these conditions to his advantage. In addition to this, Cunningham's mental stability was deteriorating. Auchinleck arrived personally from Cairo and countermanded Cunningham's order to retreat; instead he ordered an attack toward Tobruk.

Auchinleck had correctly seen the situation of the German forces. They were scattered and worn out, which Cunningham failed to observe and act upon. He understood the importance of Tobruk to the German forces and directed his

forces to attack toward Tobruk; this forced the Germans to retreat toward Sidi-Rezegh in order to block the British advance toward Tobruk.

Rommel retreated from Tobruk, ElGazala, Benghazi, Agdabya and in the end to Marsa el Braga, where his campaign had begun eight months before.

Cunningham was then replaced by General Ritchie--a decision of General Auchinleck's Deputy Chief of Staff in Cairo. Ritchie lacked field experience and furthermore had no armor experience in open desert. His last field experience was at battalion level in France during World War I.

Auchinleck returned on 25 January from Cairo; Ritchie seemed at the time the best choice to replace Cunningham. Ritchie had less battle experience than the two corps commanders, but Auchinleck decided not to replace Cunningham with any of these corps commanders. He felt that replacing a corps commander would have a very bad effect on the fighting units.

Auchinleck decided to make Ritchie's appointment temporary and to be personally involved in the fighting according to the circumstances. These critical personnel decisions were happening while the British were under heavy counterattack and needed strong leadership at that time.

Auchinleck wrote later, Ritchie was perforce "pitchforked into a command at a desperate moment (really desperate)." He knew little or nothing of his subordinates commanders or troops, and he was assigned to retrieve an apparently lost battle. So Auchinleck thought it only right to "hold his hands and make myself very readily available for consultation at short notice."⁶ Auchinleck, because of his desire to be personally involved on the battlefield, chose a chief of staff that would allow him to be involved. In fact, he joined Eighth Army Headquarters at Madalena and he personally commanded the Eighth Army for ten days. He saved the Crusader Campaign from

complete disaster. No doubt Auchinleck's actions did not add any strength to Ritchie's command position.

Ritchie became a hero in the British press and was hailed as the one who turned tide in North Africa against the Germans. His staff knew differently and understood very well that it was Auchinleck who deserved the praise. On 20 January 1942, Rommel attacked toward Benghazi and nine days later he captured it. The British withdrew to Gazala. It was Ritchie's first defeat. This was the first time he had to cope by himself against his brilliant adversary, Rommel.

Ritchie was not ready for this mission. Auchinleck sent his friend, Dorman Smith, to give his opinion on the command situation of the Eighth Army. His recommendation was to relieve Ritchie.⁷

Auchinleck now had to face some hard questions and decisions:

- o How far should he support a commander who failed in battle? In peacetime there is time to teach, train and improve. In wartime, there is no such time available. You have to be sure that your commander is the best possible.

- o What effect would change of command have on the forces below?

- o Would Auchinleck's reliability as commander be questioned because Ritchie's removal from command would be the second within six months?

Auchinleck decided not to relieve Ritchie. But later the failure at the Gazala battle and the command and control problem which I will analyze led to Ritchie's removal by Auchinleck, who then assumed direct command of the Eighth Army.

Auchinleck had failed for the second time in choosing a field commander. This failure impacted on thousands of lives and had dramatic political and strategic consequences.

Some analysts ask if enough time had been given to these generals to prepare for their battles? But we have the luxury in wartime to allow commanders to learn by their mistakes.

Rommel has written in his memoir that the British had made enormous mistakes by continually changing their top commanders. He believed that each commander had to learn the same bitter lessons over and over. Rommel said that the British high command was made up of talented and qualified men, but like some of the German commanders, they brought prejudices with them.

Rommel also states that they would have shaken off these prejudices had they been given a chance to learn from their first defeat. Instead, they were relieved of their command. They were given no chance to change.⁸

Rommel's observations have considerable merit. But the question remains, would it have been possible to correct the decision to remove them in the given time? In Cunningham's case, he was unable to function because of his personal mental condition.

In Ritchie's case, Auchinleck's mistake was evident from the beginning. Ritchie lacked experience, especially in scope of command. It's hard to assume that corps commanders such as Norrie and Austen would receive with respect a commander with experience only at battalion level. However, it should be said, in Auchinleck's favor, that each time he replaced his subordinates, the battle was hanging in the balance. The Germans were on the attack, but they were near exhaustion. The British, on the other hand, were in retreat; their morale was low, but they were closer to their supply. Their

equipment situation was similar to that of the Germans. In this situation both forces were on the verge of breaking. Thus a commander's leadership could give that extra push to create the sharp turning point in the result of the battle.

In the two times that Auchinleck replaced his commanders personally, he personally provided the leadership and found the "point" at which to apply the pressure to break the enemy. The first time, in the "Crusader" Campaign, the Germans retreated from 15 December 1941 till they arrived at Marsa-el-Brega on 5 January 1942. The second time was after the Gazala Battle, where the British were defeated and retreated to Marsa-Matruh and then to El-Alamein. Then Auchinleck succeeded in balancing the situation and gaining the initiative. He delivered the army to Montgomery in good shape. The Germans were scattered over hundreds of kilometers. This was the turning point of the war and the beginning of the end of the German Army in North Africa. In contrast to these British generals, Rommel had commanded an armored division in the invasion of France with enormous success. He was gifted with natural leadership virtues and instilled loyalty and obedience throughout his command. In all of these campaigns, even after his defeat in the Crusader Campaign, there was never any thought of relieving Rommel.

THE RELATIONSHIP OF COMMANDERS, SUBORDINATES AND STAFF

The next point I want to deal with is the relationship between commanders, subordinates and staff and the interdependence of different branches of the services.

In general the German command structure was much more stable than the British. There were a few reasons for this:

The British forces came from commonwealth nations. There were Australians, British, New Zealand, Indian and South Africa.

The German forces included some Italians, but there was one big difference. The Italian's were only used in support, supply and deception roles.

The structure of the British forces required more effort on the part of the top command to resolve their differences. Another element was the trust between commander and subordinate. To build up a network of trust takes time to build or destroy. This time was lacking in the British command because of the frequent replacement of commanders. This required selections of the best quality. The case of Ritchie was a good example of poor selection.

The two subordinates corps commanders who actually fought under Auchinleck's Command, in the last stages of the victory in Crusader, when they fought the Gazala Battle under Ritchie Command, thought that Ritchie was too much affected by his loyalty and obligations towards Auchinleck. Frequently they thought that the orders which they got in the battlefield arrived directly from Cairo and were not suitable to the situation and their needs in the battle. Obviously those feelings were not contained at this level of command; instead, they influenced all the lower levels of the command. However in May 1942 there was lack of trust and mutual confidence among the British high level command. For example, we can note the lack of communications among commanders at the beginning of the Crusader battle. Already in the planning stages Norie, the 30th Corp Commander, expressed lack of trust in the plan.⁹ The plan called for taking Gaber Saleh; the premise was that after Rommel identified this effort, he would arrive there with his main armor forces. The plan was to destroy the main German armor forces at this point. Subsequently, one British would continue toward Sidi-Rezegh and

create the key point to break through the siege and conquest Tobruk. Norie advocated conquering Sidi-Rezegh, because he believed it possible that Rommel would chose not to get into this trap.

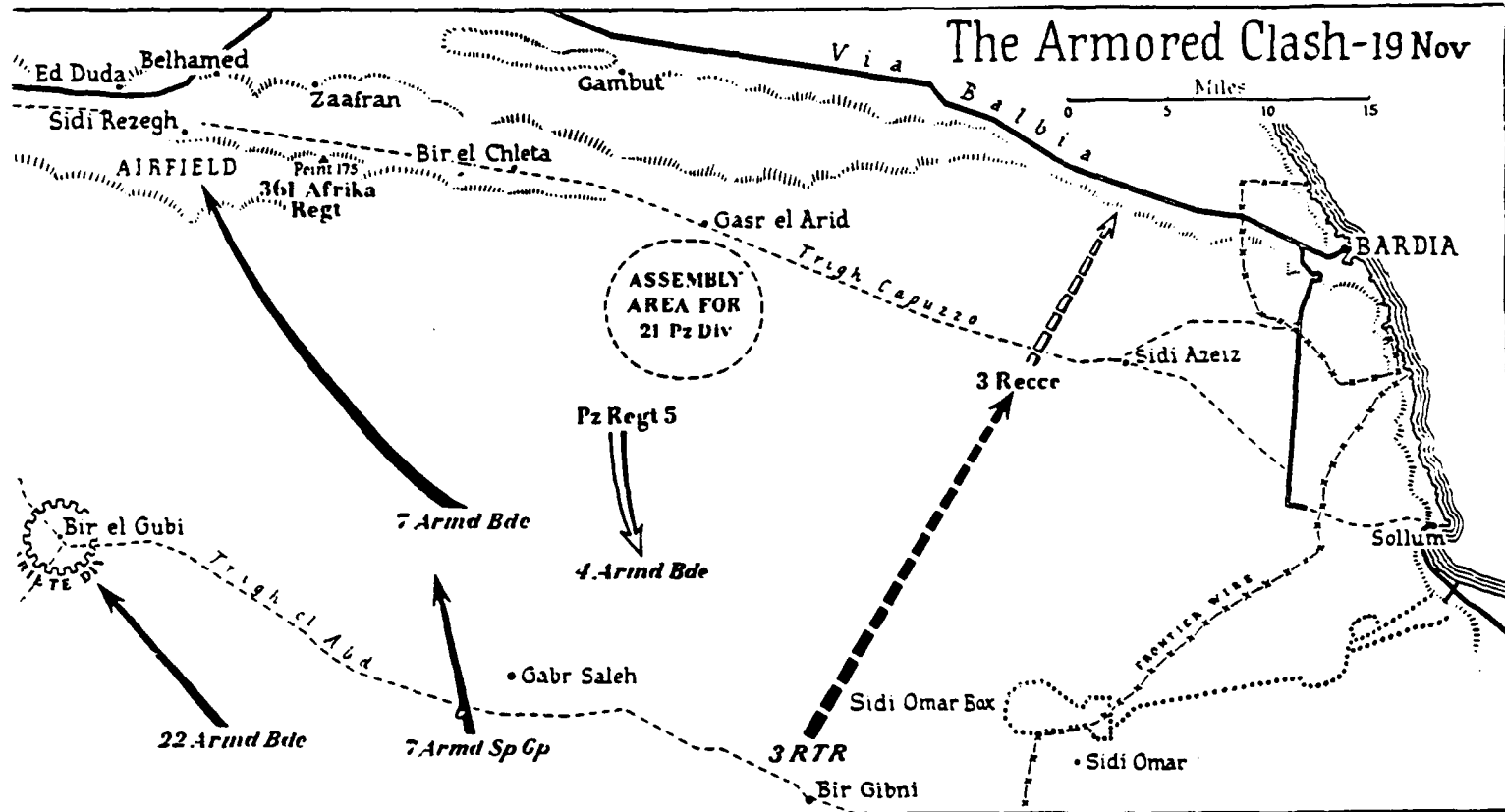
Cunningham began to have some doubts about the plan, but by 9 May it was too late to change the concept. He decided to execute the operation according to the plan. Norie was right. Rommel didn't fall into the trap in Gaber Saleh because he didn't read correctly that British effort but as a reinforce violence reconnaissance. The result for the British was disastrous. On the left wing of the 30th Corp, 22nd Brigade encountered Italian tanks while obviously their main force located in Bir Gubi Gott. The Seventh Division Commander decided of his own accord and without Cunningham's approval to deviate from the original planning, which called for concentration of forces in Gaber Saleh. He ordered 22nd Brigade to turn toward Bir Gubi and to destroy the Italian position.¹⁰ The battle took place on 19 November at noon. Cunningham and Norie, the Corps Commander, heard about it only at night. The results were destructive. The 22nd Brigade lost 52 tanks. More critically, that was the beginning of scattering the British armored forces across the surface of the desert. This led later to a certain priority of the German centralized divisions against the divided British armor brigades (see Map, Page 17).

There is no doubt that lack of communication, mutual conversations, and definition of authorities led to nonperformance of orders that the commander would have wished. It led to wrong decisions as well. We have to remember that a commander's initiative is a subject that we have to encourage and develop. Likewise, we need to allow freedom of action for subordinates. During the preparation, there is a need to define for any level subordinate the exact boundaries wherein he is authorized to operate on his own

considerations. It is advisable that the boundaries be widened as much as possible in the framework plan. This freedom of action is determined by the subordinate's capability and the trust between the commander and his subordinate. Obviously at the Army level, freedom of action of the corps and division commanders should be enlarged. They must make decisive decisions. But, while a subordinate is making a move that can change the general plan of the Army, in this case the concentration of the forces toward the main armor battle against the German armor intensity, this demands the approval at the highest level--Cunningham the Army Commander.

Another type of gloomy relationship which vitiates the senior command capability to coordinate the forces is lack of trust among the ground forces. An infantry brigadier general wrote after the war that in the Eighth Army profound distrust was the rule.

At that time the British doctrine was based on WWI the armor fighting, as though, wrong conclusions of the German "Blitzkrieg" which reinforce this doctrine. I'll call it calvary doctrine. It envisioned the armor as an independent formation. Accordingly, the British tanks quality in 1941 which based on concept of priorities to velocity as against the canon which placed in third place, which give us typical British tank. For example, the Crusader went 40 kms; but its poor gun didn't penetrate the German armor.¹¹ The British tanks failed when they had to cope against the joint sophisticated German doctrine. The German tried to prevent the tank-against-tank battle. Rather, they wanted to draw the British tanks into a trap of 88mm guns, which originally were antiaircraft but which operated as an antitank weapon with a great success. With the artillery, they execute the first annihilation. Then assaulting tanks ended the destruction.



In contrast to German tactics, the British armor most of time fought without a real infantry and artillery support. Likewise, the British did not use their antiaircraft gun, which had similar characteristics to the Germans. But the British didn't realize the opportunity to use it both ways. Low technological capability characterized the British command in this period.

However, Rommel claimed that all the arms and the branches depend mutually on each other. This partially explains the British defeats.

There was also a noteworthy lack of cooperation among the different branches of the British Army, mainly because of the gloomy relationship between commanders. This frequently led to contradictory decisions of commanders in any different levels.

This factor directly influenced the command and control ability of commanders. This lack of mutual trust was frequently evident in the battlefield.

On the German side, the commander-subordinates relationship were different. I'll begin with Rommel/staff relationship. General Von Mallenthin, who was the intelligence officer in Rommel's Headquarters, observes that it was not easy to serve under Rommel Command.¹² Frequently when he was present in the headquarters, he intervened on details under the chief-of-staff's responsibility. He always requested his chief of staff to escort him in his visits on the front. That was against German command principles, which dictated that the chief of staff should conduct the headquarters and classify important data for the commander, as well as plan his recommendations for the next battle.

But Rommel believed that the real estimate of the situation had to be taken at the front itself. Accordingly he regarded his chief of staff as his successor, as the one who should read the situation from the best position.

On the other hand, Rommel had full trust in his staff, even though sometimes he ignored their advice. At the peak of the Crusader Battle, he departed with the armor force toward the Egyptian border. In fact, there was no way to contact him for few days. When the siege around Tobruk broke out, Vestafel, his G3, took the initiative and changed Rommel's order by ordering the 21st Division to return to Tobruk. When Rommel came back, he affirmed his G3's decision and gave him his full support. In spite of his trust in his staff, he arrived at most of his decision by himself, without consulting and sometime ignoring his staff's information. Definitely we can say that his successes were derived from his tactical ability and fast reaction of his forces. On the other hand, some of his offensive operations were derived from his enthusiasm and will to push forward--despite supply shortfalls, abrasion of people, and even lack of air support.

On 21 June after the conquest of Tobruk, because of his desire to keep continuity of attack and sustain pressure on the British, which were retreating, Rommel ignored the necessity to stop and let the air force support his Malta conquest.¹³ That's why his forces on the way towards El Alamein were without efficient air force umbrella. They were under tremendous pressure from the British air force, and they took a lot of casualties. His supply lines collapsed, in contrast with the strengthening of the British logistical situation. On 4 July Rommel's armor army had 36 tanks, a few hundred infantry soldiers, and artillery almost without shells. But General Auchinleck didn't succeed in moving his subordinates to a decisive action; thus they postponed this stage of the German defeat. There is no doubt

that a strong staff, which enjoys cooperation with their commander, avoids such situations. The staff has to keep balance among the fighting and sustainment forces, which will allow ongoing success and mission accomplishment.

The German system under Rommel Command has an essential defect. In my view, Rommel did not consider his staff's information when it was not in accord with his operational plans.

In Rommel's relationship with his subordinates, I distinguish two basic positions:

- o When Rommel as an Army commander lead personally the African Corp in Gazala Battle to bypass Bir Hackim disposition, he expressed lack of confidence in the corps commander and his subordinates regarding their ability to perform the mission. Thus there was dissension, mainly by Cravel the Corp Commander because of Rommel's interference with details under Cravel's and his subordinates responsibility.

- o The second situation is Rommel's intervention in crisis situation. When he reached the conclusion that in view of operational needs and lack of capability of his subordinate to solve the problem, this situation required his interference, he intervened. A good example to his leadership we can see on April 1941, when Rommel insisted on attacking Tobruk while his force composed the Fifth Light Division under General Shtrich Command. The German forces had just enjoyed great success in Mekili, but they were very short of ammunition and fuel and the soldiers were exhausted. Rommel attempted to use his major and important source: which was "The readiness of his people to go after him, with close eyes to fight and to die in this foreign and hostile land."¹⁴ Despite the collapse of the British disposition in Mekili, their defense still didn't break down.

Tobruk was surrounded except from the sea. The Germans identified large ship movement from the Delta in Egypt and Alexandria towards Tobruk. Rommel was convinced that the ships' mission was to evacuate the British forces. Actually the ships reinforced the Australian General Morsehad and his forces. The Australian general clarified to his people that the sea is not a way for retreat but the way for manpower, ammunition and supply reinforcement. On this stage Tobruk's role was to be an Achilles' heel for the Germans. The British forces numbered 25,000 soldiers. The battle started on 11 April 1941. The German force attacked without artillery and withdrew. The day after the German force attacked again and was repulsed. The Division Commander, General Shtrich, informed Rommel that there was no chance for more attacks. In addition, they debated about the role of the ships convoys towards Tobruk. Rommel continued believing that British are going to evacuate the fortress. In fact the British continued to reinforce their forces and for the first time in the history of the wars, tanks landed from the sea by special landing craft. Thereafter we continue to hear about their landing in Salerno, Anzio, and Normandy. According Shtrich, because of his position, Rommel took the command of the operation and prepared its details.¹⁵ The attack continued under Rommel's Command as a division commander and he returned the command to Shtrich a day after. The battle was a complete failure. Actually Rommel was wrong in his estimation of the relative power and with the interpretation of the intelligence. But he threw the blame of the failure on Shtrich. He even explained it to the division's officer, ignoring the rule which states that you don't discuss senior commander problems in front of their subordinates. Rommel dismissed General Shtrich. Without relating to the absolute justice in this issue, I think that Rommel provides an example of how to act in such a case. In a crisis situation, when the senior commander thinks that

he must intervene personally to solve the problem, his duty is to perform the mission. Since Rommel took over the command because of his lack of appreciation of the ability of his subordinate, so he has to dismiss him. Obviously to perform such a step at a senior leader's level requires real leadership characteristics that Rommel had to be blessed with. Even so, under Rommel's Command, there were some differences of opinion about whether orders were always completely performed according to the commander's intention.

COMMANDER'S PLACE IN THE BATTLEFIELD

Because of the tremendous personal influence of the commander on the end result of the battle, I regard this point as one of the important component in art of war. The commander's location influences directly the process of creating the real picture of situation. It's essential for reaching the right decision.

Commander's location constitute the main factor in the commander personal influence on the battlefield events.

In this period (1941-1943) we can review some interesting phenomena. On the German side there is one commander--Rommel with a very clear concept of his location in the battlefield. He located himself forward to the extent of personally leading the units. Later on, we will review his tremendous influence upon the assault and support echelon. Obviously this way of command influenced his subordinates. We see the divisions and brigades commanders locate forward in the leading units. On the other hand, in the British Army we cannot remark a clear and comprehensive system. During this period, there were different types of command, and every commander located himself according his system. O'Connor drove away the Italians from Cyrenaica before the Crusader Battle. He located himself forward by following the main effort from his car.

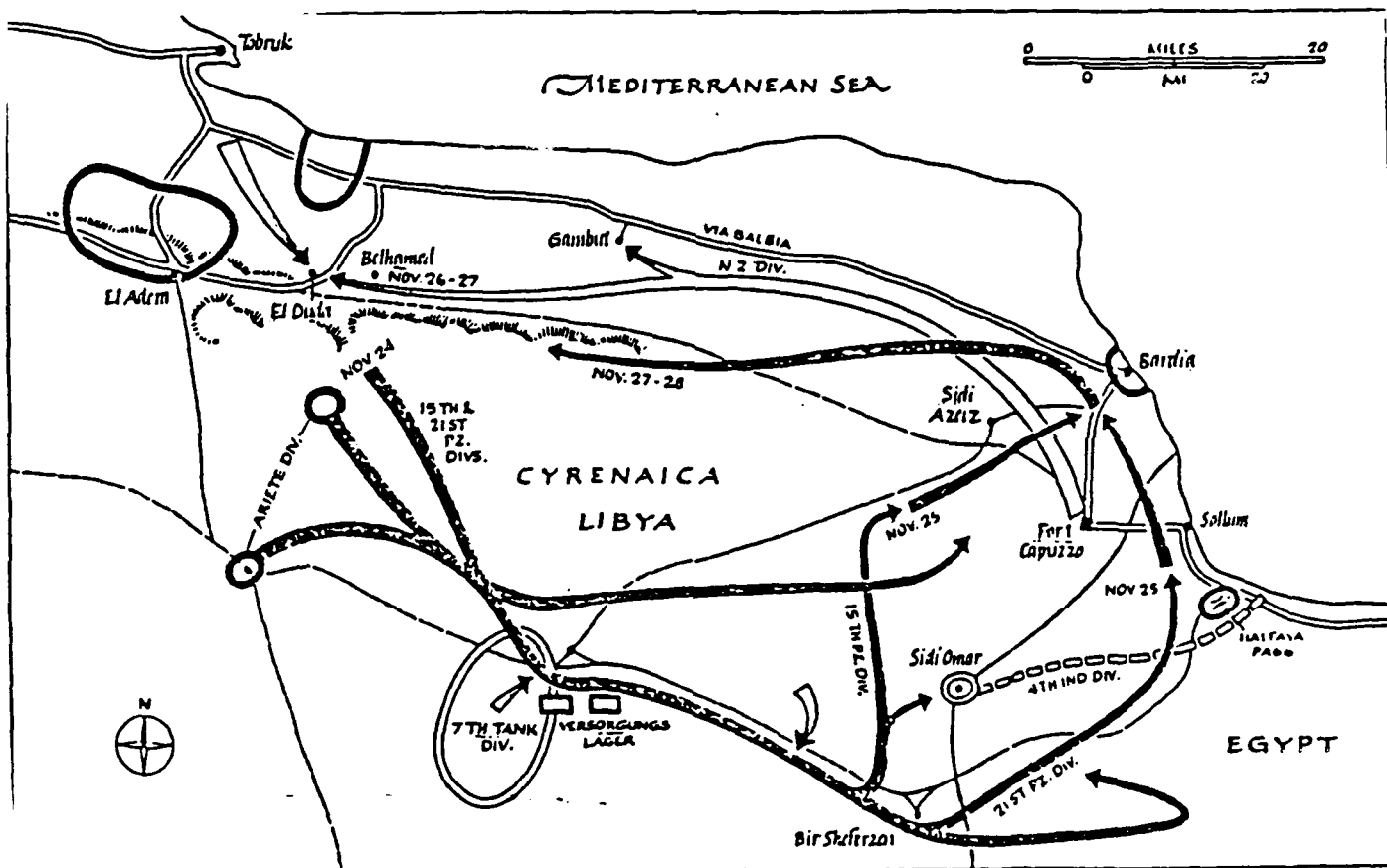
Cunningham and Ritchie commanded in the rear. But Auchinleck was forward, but not so much so as Rommel. When we review the German side, we find Rommel controlling his forces from a limited battle headquarters or sometimes from one armored vehicle. When his forces concentrate on one main effort, Rommel has full control. He meets his subordinate and usually he has a complete picture of the battle. If we observe the conquest of Tobruk in 20 June 1942, here is Rommel initiating the battle from a controlling position on cliffs north east of El-Adam. When the German forces attack the antitank ditch, the African Corp Commander, General Gering, maneuvers with the 15th Armor Division and General Bismark's 21st Division directly, without intermediaries. His decisions could have been made in seconds, and his orders came out within minutes. He could change all the moves of battle before the British information was on its way back to the headquarters. The British communication slowed down because of the need to keep radio silence and because of lost time from enciphering and infiltration throughout the headquarters.¹⁶ The problems which involve in this type of control, while it tends to extreme according to Rommel, we can clearly understand by the same commander, Rommel, when he face the need to control more than one main effort. In Crusader Battle on 22 November, the Germans broke the British attack in Sidi Rezegh. We could say that the Germans won the battle. The Seventh British Armor Division was almost destroyed. The Fifth South African Brigade was destroyed and the breakthrough from Tobruk had been pushed back. The German as well suffered heavy casualties this day. On the night of 23rd, with the battlefield wrapped with dust, smoke and fire, it was difficult to get accurate information about the unit's situation, and their readiness for continuing the fight. Rommel was not in his headquarters at that day because he was involved in the Sixth New Zealand Brigade fighting; therefore, his

knowledge about his forces real situation was very limited.¹⁷ Consequently, he over-estimated his success without accurate data and came to the conclusion that this was the moment to start a daring move to by pass the British forces towards Egypt (see Map, Page 25). In spite of his G3 and intelligence officer's estimation that it would be dangerous to go far from Tobruk, Rommel in his typical process of decision making--based on personal estimation and feeling--decided to move toward Egyptian border. On the 24th Rommel with his chief of staff lead the 21st Division and they reached the Egyptian border by afternoon at a great speed. The African Corp was scattered behind along 65km.

The Seventh Indian Brigade, which was located in Sulum front on the Egyptian border, contested Sidi Omar. The Fifth Armored German Regiment lost half of his force in vain attacking.

In the night of 25th and 26th Rommel and his chief of staff lost their way among the wires, British gun positions, and British columns. All through this night they were cut off from their forces. The result was that Rommel made his decisions on 25 November very hastily and without enough information on the enemy disposition.

Rommel continued to move back and forth in attempting to organize his forces. This style of command recalls the commander-subordinate relationship when the senior leader doesn't trust his subordinates and tries to control and perform everything by himself. In this stage Rommel was away from his communication vehicle.¹⁸ As a result, he lost his communication with his other main effort in Tobruk; furthermore, he was not communicating with his headquarters under his G3 Command. The chief of staff, who really at this time should command the other effort, was with him.



On 26th the New Zealand's forces succeeded in breaking through the siege around Tobruk; they advanced towards the El Duda Cliff, after having captured Belhamed the night before.

Rommel had no idea of what was happening. His G3 made a big effort to locate him, including sending two reconnaissance aircraft. At this time, the Germans tried to penetrate the Solum disposition without success because of their vulnerability to the British air force and Rommel's lack of supply. In fact, they lacked ability to concentrate their forces. The forces around Tobruk were in very hard situation, again because lack of supply. Rommel controlled one effort and his G3 controlled the second effort without any connection between. In this stage the G3 took independent action and ordered the 21st Division to stop moving South and to turn toward Tobruk to attack the New Zealanders from the rear.¹⁹ In this uncontrolled situation, Rommel didn't know this decision and couldn't change it. Only on 27th was the communication between Rommel and his headquarters reconnected. After one more Rommel attempt to move south with the 15th Division within captured the 5th New Zealand's Brigade Headquarters, Rommel decided to stop his southern efforts and ordered 15th Division to go west toward Tobruk. This is how the Sidi Rezegh Battle renewed with worse conditions for the German. On one hand, the British forces were recovering their 4th and 22nd Armored Brigades, which were on verge of annihilation. They returned to be fighting forces. On the other hand, the German forces continued their battle movement without stopping. Rommel returned to his headquarters in El Adam on 28th after he had been cut off since the 23rd November.

Among the British Command, there is no constant doctrine about commander location. Each commander chose his location in the battle according to his considerations. There is no harm if it is a reasonable location and

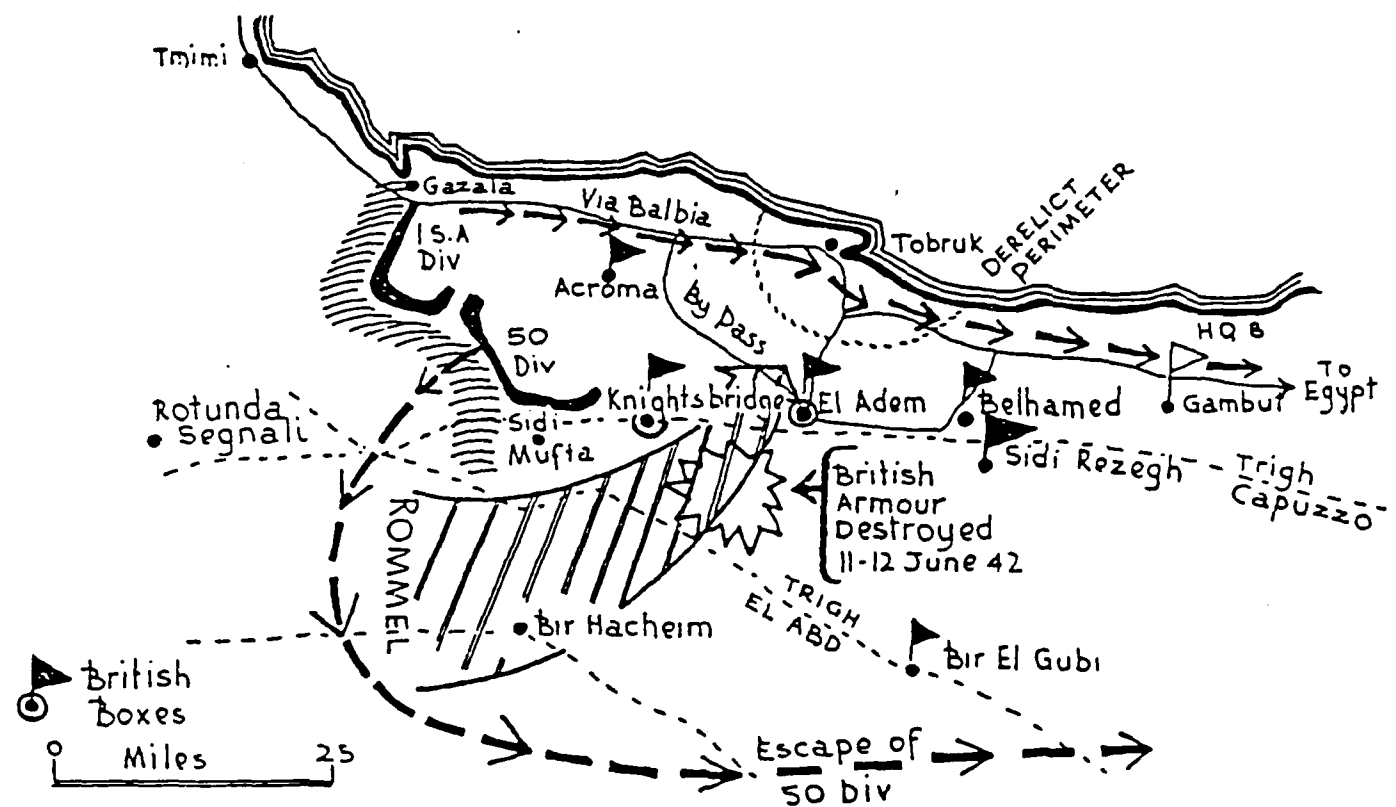
contribute to the success. We have to remember that if it is not so, the prospect for failure is very big.

I must remark that the British communication capability in the field level was not well-developed prior to the British involvement in the war. This problem became more weighty when commanders like Cunningham, who was only an experienced brigade commander, and then Ritchie, who was only an experienced battalion commander, had to conduct the area of Army. There is no doubt that part of the British control problem arose because the senior commander did not have the experience and the ability to get himself to the most important place at the right time, and that place could be the front fighting force or the headquarters in the rear.

At the beginning of the Crusader operation, Cunningham decided to go personally in his car with the 30th Corp in order to be able to maneuver the armor force quickly according to his considerations, in case Rommel could not operate his armor toward Gaber Saleh, as predicted.²⁰ The result was that the 8th Division's communication system didn't mutually function because there was no commander or senior officer to control it. Cunningham didn't receive intelligence data or any information from his headquarters. He was not able to give orders to his forces and decided to fly to his headquarters in the morning. His presence in the 30th Corp Headquarters did not prevent the armor force from scattering from the planned mission while the 22nd Brigade got involved in unnecessary battle in Bir-Gubi and the 7th Brigade was moving forward toward Sidi-Rezegh's airport. So only the 4th Armor Brigade functioned as planned in Gaber-Saleh. The important and basic principle of concentrating the forces broke down from the beginning. The result was encountering of armor British forces at brigade level against the armor concentrated German divisions.

Cunningham, who returned back to his headquarters located in Madelena about 60km from Gaber Saleh, lost control of the battle and received information too late. He made plans to pursue the German armor as a result of the 7th Armor Brigade arriving without resistance. But the plan was not realistic anymore because Rommel had already started attacking Gaber Saleh. The 15th German Armor Brigade attacked on the 20th, five days later, as was predicted by the British in their original plan. At this stage the 30th Corps, which was supposed to absorb the attack and to destroy the German armor forces, was scattering over 10km. Actually the 4th Brigade, which was the only one which acted according to the original plan, absorbed the attack by itself and therefore suffered a lot of casualties. To add to the British lack of control and flexibility, when the 4th Brigade suffered heavy casualties, the 1st New Zealand Division, which consisted of tank battalion in addition to heavy artillery, was doing nothing 12km from the battlefield. The New Zealanders offered aid, but there was no commander to make decisions and to give orders for coordination among the units. This case reflected the British point of view at this period that the infantry had no part in armor combats.

Ritchie, who was Cunningham's successor, located himself from the beginning in rear headquarters away from the battlefield. In Gazala Battle he conducted the battle from Gambut (see Map, Page 29). Actually, he often got the battle's information very late. From the beginning when the German attacked south of Bir Hackim in a concentrated effort under Rommel's Command, they were convinced that the British were completely surprised. Today we know that forward South African Battalion reported clearly to the 7th Brigade, then afterwards to the 7th Armored Division. Those intelligence reports didn't get to the Army's headquarters.²¹



Map 15. GAZALA BATTLES, LAST STAGE
11 June-14 June 1942

At noon 26 May Ritchie concluded the Germans had attacked, but he had no information of direction or any other basic intelligence data which would enable him to make critical decisions and to perform effectively. Also the lower level under his command actually collapsed. The 4th Armor Brigade were caught up by the 15th German Division during their preparation for movement and suffered heavy casualties. All the 7th Division Headquarters were captured. On the morning of 27th May, the British no longer had an effective fighting force.²² Norie, the Corp Commander, ordered the 22nd Armor Brigade to go south to help the 4th Brigade, but he didn't know that the 4th Brigade was already scattered in the battlefield. The 22nd Brigade was also surprised

and suffered heavy casualties. Even in this situation Ritchie continued to be located in Gambut and made no serious attempt to clarify the real picture.

The British fighting at this stage was based on commanders and soldiers in the lower levels who continued to fight against an identified German enemy. In fact, the British lost all command and control of the battle.

Even so, Rommel didn't achieve his objective to break through Tobruk. On 28 May his forces found themselves with a critical lack of fuel and supply. In addition, from his back he was pressed to the mine field which he bypassed during his attack. There is no doubt that a concentrated British attacking at this stage would have been too decisive. But Ritchie was far away behind and often got the reports twenty-four hours late. He couldn't read his forces' situation nor the German's. At this stage the British still had fresh forces, including an armor brigade which didn't participate in the battle. But they had no commander with the capability to make decisions based on up-to-date data and then give orders. The British ability to perform decisively at the army level and to coordinate the major forces to the right place at the right time didn't exist.

Then Auchinleck, the Middle East commander, replaced Ritchie as the army commander. He left his Chief of Staff Corbett in his headquarters in Cairo. He arrived to the army headquarters and got immediate warning of a German attack on Marsa Matruh the day after. It was clear to him that his ability to influence this battle is slim. But his first step was to attempt to face the problems of the army's command level. He expressed his view on commander location in battle few hours after his arrival and still before the battle.

As essential part of my method of defense is the close control and coordination of the action of battle groups by divisional commanders who must make their presence felt on the battlefield. It is their duty to supply the driver

power. The corps commanders must be in the closest possible touch so as to ensure that if one corps or part of it has to give ground the other is immediately able to take advantage of the situation by rapidly and boldly attacking the enemy in the flank.

Auchinleck personally applied his concept at the El-Alamein Battle.²³

He located his headquarters in Ruweisat Ridge, half mile behind Norie's 30th Corp. This headquarters included only the operation and communication staff. From this location he had close contact with his subordinates, which kept him up-to-date in every stage in El-Alamein Battles. Because of some differences of opinions among his staff about his headquarters location, he expressed his opinion once more: "It seemed to me essential that the commander should be as close behind the line as he could be without risking dislocation by capture or bombardment. Ruweisat Ridge was in my opinion the key to the whole position."²⁴

Auchinleck attacked the Germans in their weak spots. He pinpointed those weaknesses by meeting his subordinates often by Ultra system and accurate estimate of the situation. He attacked first the Italian disposition and forced Rommel to send German units to try to recover the damage.

In El-Alamein's Battle, Auchinleck, by keeping the initiative with daily attacks on the Germans from different directions, achieved his objectives to stop Rommel in his way toward Egypt. The Germans found themselves in a desperate situation because of lack of essential supply for continuing the fighting. The British continued to reinforce their forces. This was the turning point of the battle in the west desert. It would be exploited by Auchinleck's successor, Montgomery.

CONCLUSION

To summarize battles of World War II, I have to ask if I can derive conclusions for the present and the future. I must acknowledge enormous development regarding technology, equipment, new doctrines, etc. But in the issues that I have chosen to deal with, my answer is yes: Those battles are relevant, because my issues deal with the commander. He is always the only one that eventually must make the decision and be responsible for the performance. The issues that I addressed:

- o The commander's quality and their preparation for fighting.
- o Commander-subordinates relationships.
- o The commander's location in the battlefield.

We continue to struggle with these issues day-by-day, particularly after wars. We lack clear answers to these issues because the answers depend on common sense. No technology can replace mankind in a system which deal with estimate of situation and eventually calls for a decision. In war as Clausewitz tells us, we deal with uncertainty and variable data. Thus decision-making is always very difficult.

The quality of the commanders and their control in the battlefield exerts enormous influence on the battles results. The British finally won the west desert battles, but it's amazing how during almost three years relatively small German forces maintained parity against bigger British forces. Sometimes the small German force defeated the British forces and almost achieved enormous strategic advantages.

We can see Rommel succeeded in defeating larger British forces when they are under low quality command, unprepared for their mission (Cunningham and Ritchie). When Auchinleck himself commanded the British forces, the battle's

results were shifted, and the quantity began to be decisive. The quality of the commanders must be major role in preparation for war. The question is, then, how to prepare commanders and give them the right qualifications that enable them to get the peak point, where they make the right decision at the right time and then to carry it out effectively with the forces at hand.

The British Command at this time poorly prepared their field commanders. The British Command appeared to be more ready for the previous war, World War I. They lacked doctrine and knowledge of the future battlefield. Armor fighting, which demanded blinding changes of perception and doctrine of operation infantry and artillery that have to support and fit themselves to the tank's pace, had not been assimilated in the British Command System. Unfortunately, their enemy prepared himself for this kind of war. The Germans developed new armor fighting doctrine, combining infantry and artillery. They developed higher communication capabilities for this kind of fighting. They developed as well their commander's thinking capabilities to deal with fast moving battle with a lot of quick changes, requiring different command and control capability at a faster pace than in previous wars. Even the communication technology did not provide all the required equipment for completely controlling this kind of battle. We can see that the German commanders were looking for the answer and finding it through their presence with the lead forces and making decisions based on data that he sees by himself. When the British commander faced a control problem, actually with the exception of Auchinleck, he did not have an answer. In other words their ability to find solutions and extemporize on the battlefield was very low. The German improvising ability at all levels was very high. This was the result of education, battle experience and preparation of commanders. They had the capability to delegate authority, initiate and to act in every

level according to up-to-date data. Further, commander's initiative is directly related to the relationship between commanders and their subordinates. This issue which existed in the 40th getting more severe followed by the development of technology which give the possibility for the senior commander to be involved in the battle sometimes on the lowest level. The danger in this phenomenon that the senior commanders try to be involved in everything, and that's why they don't concentrate on important issues which demand senior commander decision. Another danger is great dependency of the low level commanders, who wait for solutions from the high level command. The development of communications technology, increased range and accuracy of weapons, increased range capability of the vehicles--all of these enlarge the commander's control span, increase the quantity of data which arrive at the headquarters and require clear distribution of authorities, among commander/his staff, and his subordinates. In an effective system which has basic trust among the commander-subordinates, you have to encourage and support free action from your subordinates in the frame which was identified in the plan. The plan should give the whole picture, explain the coordination problems among the units, and give the predicable mission. If we must prepare and train the system prior to the war so it will function in the war itself. I want to emphasize that such methods of preparation should allow for risk by enabling commanders to make mistakes and correct themselves among the wars for prevent it in the wartime.

Such a system will minimize the subordinate's dependence upon their commanders and decrease the risk of losing communication channels. We have to remember that today, as a result of increasing dependency of commanders n commanding control systems, those systems have become first priority targets by the enemy. As a result of their complexity, they have more vulnerability

than in the past. Therefore the excitement of efficient command and control systems and in contrast to denial the enemy commanding control capability constitute first degree consideration in combat conducting. Those actions of commanding control system include the intelligence efforts to get data from the commanding nets.

In this paper I have not addressed significantly the influence of intelligence data on the battle's results. I would like to mention that in this period, 1941-1943, this was a critical matter. Auchinleck made his two major decisions to continue the battles in Crusador and later on in Marsa Matruh inspite severe situation of his forces based on intelligence data from the Ultra system. It absorbed information by listening in on the German communication nets. Actually in the first El-Alamein Battle, during which the advantage passed over to the British side, he conducted the battle based on accurate data about the situation and planning of his adversary. Today, since command and control systems have become most important target, we must have alternate ways to secure message transfers. Complete coordination must be under the commander's control; he needs to neutralize the enemy's communications system and to absorb intelligence data out of it.

The last issue that I'd like to deal with is the question of commander location. When I analyze the four senior commanders, obviously the forward commander location of Rommel and Auchinleck achieved much more impressive results than commanding from the rear headquarters, as Cunningham and Ritchie did. Some of Rommel's failure came from his forward location and the issue of focus. We still have the same problem today. But new developments enabling us to enlarge the operational range, shooting range and velocity reaction make this problem more severe. The new technological development demands quicker decision making. But the decision itself, in spite of all the technological

qualifications, finally has to come from the same vital source--the commander who has to perform the mission. The need for silence to enable relevant and balanced thinking, the need for maximum security for the senior commander who is responsible for the mission, the attachment to the communication center and even subordinates freedom of act. All of this is one aspect which requires the commander to stay in the headquarters and to act from remote control. We cannot overlook the necessity of personal meetings with the commanders, data absorption and directly seeing the situation. These are inherently better than conversation through the communication system. In addition, we have the ability today to arrive quickly from the main effort to any problem in the battlefield, from a meeting with subordinate commander to rear headquarters. The answer is to balance location in the rear headquarter situation between location in the front headquarters according to the needs and data. I would like to emphasize that there is no substitute at any command level for the personal meeting among commanders and the senior commander's ability to influence greatly on the battlefield what happens at a given time and place. This requires the senior commander to arrive with the fighting forces and to make the right decision upon the field data in view of the headquarter staff's data, which are also undoubtedly very important.

The senior commander must remember that his presence with the fighting forces does not mean commanding this forces. Human nature sometimes leads to over-involvement. In order to maintain the freedom of act and the initiative among the subordinates, the senior commander's arrival to the fighting area must be both as an adviser and a student.

This command pattern was right and valid in 1940-1941. Auchinleck demonstrated it best, in a balanced way. As long as the human head continues to make decisions, the technology will assist in getting the data faster, in reaching more accuracy and helping to get the right decision. But the human component will continue to play the major role in the battlefield; it will demand the senior commands arrival on the battlefield for making his decisions in his level.

In the end I would like to say that the problems which I dealt with, in World War II, have showed up again in every succeeding war, in one way or another, especially during Lebanon War in 1982. Undoubtedly technological developments make it more difficult for the one who uses the technology to follow the opportunities and to develop different doctrines in the same pace. But eventually this is an important point in the art of war. "The history, knowledge, learning and preparing the future war based on the past data."

ENDNOTES

1. Delegation of Authority, Initiative of Commander Personal Example.
2. Field Marchal Sir Michael Carver, The War Lords-Land on 1976, p. 281.
3. Correlli Barnett, The Desert Generals, Indiana University, 1960, p. 61.
4. James Cary, Tanks and Armor in Modern Warfare, New York, F. Watts 1966, p. 135.
5. Michael Carver, Tobruk, B. T. Balsford Ltd., London, p. 84.
6. Correlli Barnett, The Desert Generals, Indiana University Press, Bloomington, 1960, p. 89.
7. Ibid., p. 135.
8. Douglas Orgill, The Tank, Studies in the Development and Use of a Weapon, p. 147.
9. Correlli Barnett, The Desert Generals, Indiana University Press, Bloomington, 1960, p. 89.
10. Ibid., p. 96.
11. Douglas Orgill, The Tank, Studies in the Development and Use of a Weapon, London, 1970, p. 143.
12. Von Mellenthin, Panzer Battles, University of Oklahoma Press, 1956, p. 45.
13. Ibid., p. 123.
14. Wolf Heckman, Rommel's War in Africa, New York, 1981, p. 64.
15. Wolf Heckman, Rommel's War in Africa, Garden City, New York, 1981, pp. 78-80.
16. Alexander Cliford, Three against Rommel, p. 255.
17. Von Mellethin, Panzer Battles, University of Oklahoma Press, 1956, p. 76.
18. Wolf Heckman, Rommel's War in Africa, Garden City, New York, 1981, p. 201.
19. Von Mellethin, Panzer Battles, Norman University of Oklahoma Press, 1956, p. 80.

20. Correlli Barnett, The Desert Generals, Indiana University Press, Bloomington, 1960, pp. 89-90.

21. Ibid., p. 145.

22. Ibid., p. 149.

23. Ibid., p. 187.

24. Ibid., p. 209.

EVENTS CALENDAR IN THE AFRICAN CAMPAIGN

1941

- January - The British conquered Bordia and Tubruk.
- February - The British conquered Bengazi and complete Kirinaika's conquest.
 - The Germans retreating up to Raas-Berga.
 - The British transferring forces to Greece area.
- March - Rommel attack El-Agilla position in Tripolitana Kirinaika border.
- April - The British retreating to the Egyptian border but holding Tubruk.
- May - The British reinforcing their units in Egypt.
 - The British attempt to conquer German positions without success in the Egyptian border.
- June - Battleaxe - the British counterattack in the Egyptian border failed.
- July - Auchinleck replace General Wavele as main commander in the Middle East.
- November - Tzelean operation - the 8th Army under Cunningham Command attack toward Tubruk.
 - Rommel attack toward the Egyptian border.
 - Auchinleck replacing Cunningham with General Ritchie and rescue the battle.
 - Rommel retreating west.
- December - Rommel complete his retreat up to El-Agila position.

1942

- January - Rommel's counterattack.
- February - The British retreating to Gazalla-Tubruk-Bir Hakim line.
- May - Gazalla Battle - the British defeated.
- June - Rommel conquer Tubruk.
 - Auchinleck replacing Ritchie in commanding personally on the 8th Army.
 - Marsa El-Matruch Battle.
 - The 8th Army retreat to the Egyptian border.
- July - The 1st El-Alamin Battle.
 - Rommel attempt to break through Egypt with no success.

- August
- General Alexander replacing Auchinleck as the main commander in the Middle East.
 - General Montgomery nominated the 8th Army commander.

BIBLIOGRAPHY

1. Barnett, Correlli. The Desert Generals. Indiana University Press. Bloomington 1960, 1982.
2. Carver, Michael. Tobruk, London: B. T. Bakford, c 1964.
3. Carver, Michael. The War Lords - Boston: Little, Brown, c 1976.
4. Cary, James. Tanks and Armor in Modern Warfare. New York, F. Watts, 1966.
5. Von Mellethin. Panzer Battles. Norman, University of Oklahoma Press, 1956.
6. Liddell, Hart. The Other Side of the Hill. London, Hamilton and Co., 1956.
7. Heckman, Wolf. Rommel's War in Africa. Garden City, N. Y., Doubleday, 1981.