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THESIS

**THE ISRAELI DEFENSE FORCES:
AN ORGANIZATIONAL PERSPECTIVE**

by

Matthew John Green

March 1990

Thesis Co-Advisors:

Carl R. Jones
Ralph H. Magnus

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The Israeli Defense Forces: An Organizational Perspective

by

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Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE IN SYSTEMS TECHNOLOGY

from the

NAVAL POSTGRADUATE SCHOOL
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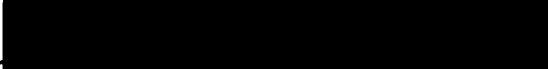
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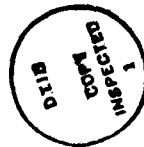
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ABSTRACT

The author traces the organizational growth and change within the Israeli Defense Forces (IDF) over its 40-year history. A model is offered which depicts a military organization as an open system embedded within a changing environment. Selected inputs to this organizational system are shown to affect organizational structure and, in turn, the combat capabilities of the force. The author uses the five major Arab-Israeli wars as critical junctures in examining the IDF's organizational history. The IDF is shown to have a willingness and ability to adapt to changing environmental factors. This capacity is determined to be a major reason for the IDF's long military dominance in the region. The author concludes with an analysis of the IDF's unique organizational adaptability.



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I. INTRODUCTION

A. PURPOSE

The purpose of this thesis is to give the reader an understanding of the organizational development of the Israeli Defense Force (IDF) and some of its contributions to the study of the military art. This will be accomplished by modeling the organizational structure of the IDF at various points in its short history as well as by analyzing the wars it has fought and the lessons and principles which can be extracted from these conflicts. The organizational changes which have occurred within the IDF over time will be explored. It will be shown that the IDF has operated in concert with a changing environment and that its adaptability has been a major organizational strength.

This thesis is not intended to provide a detailed tactical battle analysis of any particular action. Instead, its focus is on identifying broad organizational trends and identifying appropriate military lessons from each of the IDF's wars. The Israeli Defense Forces are the world's most experienced practitioners of mechanized combat. Since winning its independence in 1948, Israel has fought six major wars against either one Arab enemy or a coalition of them. Despite staggering inequalities in terms of men and equipment, Israel has managed to prevail in each of these conflicts, in large measure because of the excellence of its defense forces. The willingness of the military and civilian leadership to realistically assess the threat, coupled with an ability to structure and train

their force to meet a given enemy, has proven to be a winning formula for the Israelis.

B. BACKGROUND

The situation in the Middle East is extremely complex and explosive due to a myriad of difficult and conflicting issues. These issues include, but are not limited to, diverse political objectives, social and cultural differences, boundary disputes, religious ideologies, and terrorist activities. Further complicating this region is extensive involvement of the superpowers (the United States and the Soviet Union) and global interest in maintaining a free flow of oil. Thus, there exists a situation characterized by profound instability coupled with relatively large, well-equipped, standing military forces in a constant state of alert.

C. WHY ISRAEL AND THE IDF?

Anyone seriously interested in the study and furtherance of U.S. national security interests and policy should have a solid understanding of the importance of Israel and the IDF. This contention will be supported in the text of this thesis. The U.S. was the first nation [Ref. 1:p. 7] to formally recognize the fledgling state on May 14, 1948; since then, successive administrations have clearly demonstrated a willingness to defend the right of Israel to exist. U.S. national security policy has been committed to achieving lasting peace and stability in the region, a policy which has been largely ineffective to date.

U.S. support of Israel is based on several factors. Prominent among these is the tremendous sympathy many Americans feel for the plight of

the Jewish people. The sheer magnitude of the horror which came to be known as the Holocaust inextricably linked the Jew with the American consciousness. Secondly, there is a strong political interest group operating within the United States from an actively partisan constituency of American Jews. Objectively, however, U.S. support of Israel is largely based upon self-interest. Israel is solidly democratic and western in its orientation. It is a crossroads between Asia, Africa, and the western world. Strategically, [Ref. 2:p. 20] Israel is vulnerable because of lack of space to trade for time, lack of depth to maneuver, encirclement by hostile nations (most sworn to destroy it), and little geographic buffer for strategic warning.

The U.S. has long seen Israel as a strong ally in its attempt to prevent the spread of communism in the strategically important Middle East. Containment of Soviet expansionism has been seen as the key to insuring that oil supplies from the region flow freely to the United States and her allies in Europe and Asia. Although the relationship between the U.S. and Israel has been strained at times, it is in the vital interests of both nations to maintain mutually supportive postures.

With this in mind, and with the stated intentions of the Arab nations surrounding Israel to "...push the Jews into the sea," it becomes clear why a knowledge of the strengths and weaknesses of the Israeli defense forces is crucial [Ref. 3:p. 48]. Most obviously, if the existence of the state of Israel was ever seriously called in to question, it is difficult to believe, in the author's opinion, that the United States would not respond militarily in support. Despite a lack of formal security agreements, U.S.

presidents from Truman through Bush have strongly supported the territorial integrity and national security interests of the state of Israel.

Secondly, it is important to study the IDF from a purely professional military standpoint. This force has repeatedly defeated well-equipped armies many times its size and has established a reputation as one of the finest fighting forces in the world. In large measure, the United States has built this force through its support of equipment and money. Yet, interestingly, the IDF operates quite differently from her American benefactors, for reasons which will be discussed.

D. THESIS ORGANIZATION

A brief description of each chapter follows which will guide the reader through the organization of the thesis.

1. Chapter I

This chapter offers a brief background and purpose of the thesis and addresses the topic's importance.

2. Chapter II

The second chapter establishes a framework from which the IDF can be systematically analyzed. A model of a combat organization such as the IDF is offered, suggesting inputs, organizational response, and system outputs. The Principles of War are defined as a means to analyze combat actions of the IDF. The Mintzberg model is offered as the standard measure for capturing the various components of the IDF at key historical junctures.

3. Chapters III through VII

In this section of the thesis, the IDF will be studied at critical junctures in its history. Using the framework established in the second chapter, the IDF will be examined in terms of organizational structure as well as its particular contributions to the study of the military art. Each conflict will be summarized using a modified version of the U.S. Army's five-paragraph field order, thus providing the reader a format which is easily understandable. The IDF's extraordinary adaptability and willingness to change because of previous lessons learned will be examined in detail.

4. Chapter VIII

The focus of this chapter is upon the Israeli Defense Forces of today. Particular attention will be devoted to their disposition, training techniques, command and control, and reserve system.

5. Chapter IX

This chapter will draw from the study of the IDF lessons in the art of warfare which appear to be constant over time. The IDF, while changing significantly as technology and the threat have changed, has held constant certain inviolate principles. Of particular interest are the unique yet proven methods of Israeli command and control. Although technology has enhanced greatly the ability of commanders to gather and process large amounts of information, the role of the leader in the IDF has remained essentially unchanged since 1948.

II. FRAMEWORK

A. INTRODUCTION

This chapter establishes the framework for the subsequent analysis of the Israeli Defense Forces (IDF). In the author's opinion, a combat organization such as the IDF is analogous to an open system embedded in a changing environment. As such, the combat organization is subject to various inputs from the environment. These inputs cause change within the organization and affect the outputs of the system as a whole.

This perspective is the basic frame of reference which will be used in analyzing the IDF at various key junctures in its history. Each of the major Arab-Israeli wars will be analyzed to determine what some of the key inputs to the system were, how and whether these inputs caused organizational change within the IDF, and whether these changes resulted in an alteration of system outputs. This organizational model is depicted graphically in Figure 1.

In order to approach this analysis in a systematic manner, this chapter will establish the terms and definitions which will be used subsequently. This framework will help to codify in the reader's mind the approach taken in chapters to follow.

B. INPUTS TO THE SYSTEM

In any open organization subject to a changing environment, the inputs which have impact are multiple and varied. No claim is made in

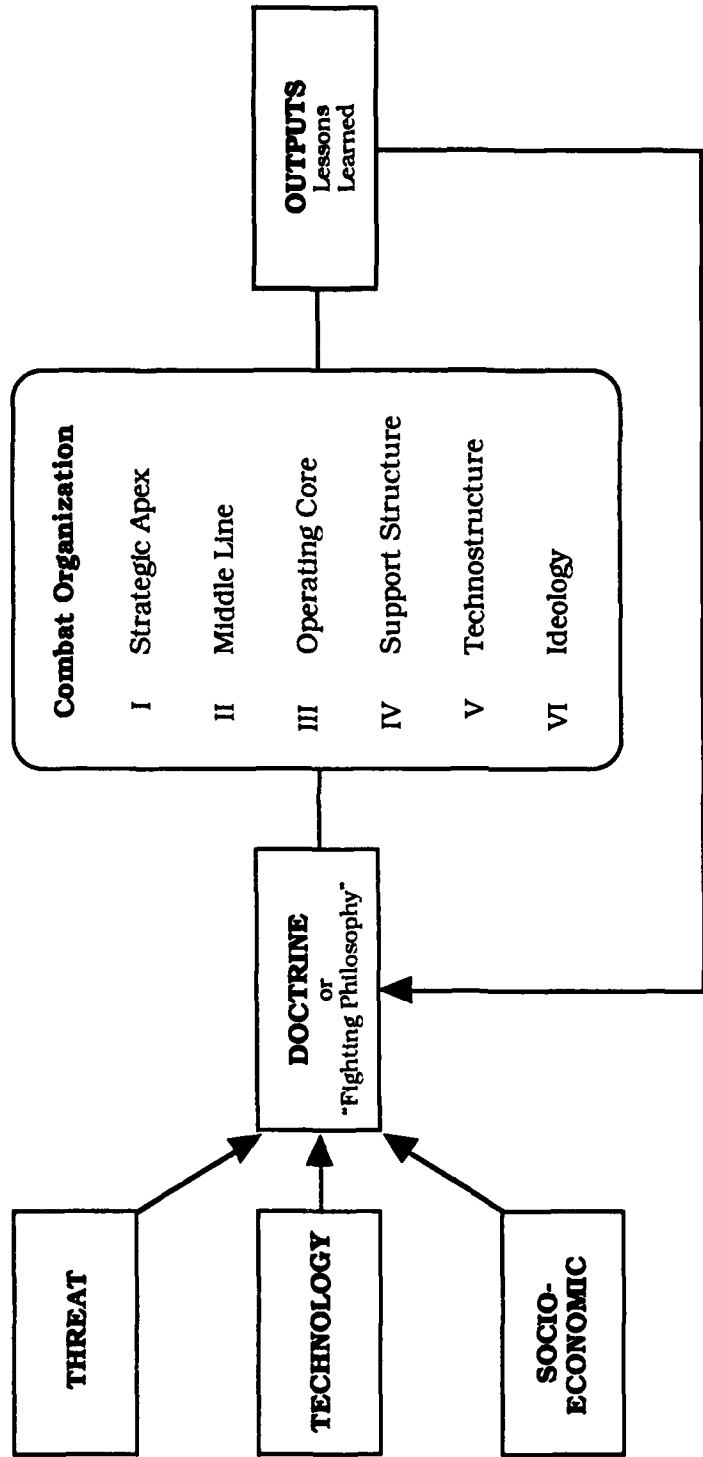


Figure 1. Combat Organization—A Model

this thesis that all inputs pertinent to a combat organization such as the IDF have been identified and gauged for relative importance. Instead, the author has selected inputs that have, in the course of his research, appeared to dominate the environment in which the IDF has existed.

1. Threat

In any functioning professional military force, the nature of the threat is a predominant input to the organizational structure. The threat is, after all, the major reason for the existence of a nation's military forces. As the threat changes, so must the military organization adapt to meet it. Stagnation in the face of threat evolution, in the author's opinion, is cause for deep concern. It will be shown that the IDF has adapted to the changing nature of the real and perceived threat to Israel's national security.

2. Technology

The technological capabilities of weapons and command and control systems have been important inputs to the structure of the IDF. Since 1948, technology has allowed for tremendous changes in combat capability and has fundamentally altered the IDF's approach to accomplishing its mission. Technology cannot be viewed in isolation, however, because it has worked to increase threat capabilities as well.

3. Socio-Economic Factors

This is an admittedly broad category which can be used to summarize the overall national will and ability to support its military organization. In Israel, the need for a strong military has never been in doubt, but (particularly in recent years) the willingness of the citizens to

sacrifice and serve has somewhat diminished. In part, this may be based upon a general war weariness among the population [Ref. 4:p. 29]. This has caused fundamental structural changes in the IDF which will be explored.

4. Doctrinal Changes

The previously discussed inputs are all pieces of a larger input which will be referred to as the combat organization's fighting doctrine. How the organization decides to fight will affect the allocation of scarce resources such as money, training time, and manpower. These decisions and resultant resource allocations have a direct impact upon the organizational structure of an entity such as the IDF.

C. ORGANIZATIONAL STRUCTURE

Thus far in establishing the framework, selected inputs to the combat organization have been established. Now, a model will be offered which will be used to show how the IDF has changed structurally over time. The model to be used identifies six basic parts of any functional organization. [Ref. 5:pp. 114-116]

1. Strategic Apex

The strategic apex is where the organization is managed or led from a general perspective. In the military, the commander and his personal staff are the strategic apex and the position from which orders and guidance are issued.

2. Middle Line

The middle line are those leaders in a direct line relationship between the strategic apex and the operating core. This is the chain of

command—those officers and non-commissioned officers crucial in any military organization as a means to link plans and policy with output and mission accomplishment.

3. Operating Core

The operating core is where the basic work of producing the organization's products is accomplished. In the military, the operating core is essentially the line unit and individual soldier—the fighting men who close with and destroy the enemy.

4. Technostructure

The technostructure is the analysts who concern themselves with advising and designing the systems by which outputs of others in the organization are controlled. The technostructure in the military is normally comprised of the planning staffs who work in support of line unit operations.

5. Support Staff

The support staff provides advice and runs the various support functions. These are the specialists who provide support to the organization in conjunction with its normal combat operations.

6. Ideology

Ideology is the final part of any functioning organization. It surrounds the entire organization and influences each of the other parts. It is simply the set of beliefs and traditions which permeate the whole organization. Military units use ideology as a means to rally morale and esprit in difficult situations.

A schematic representation of the Mintzberg model is shown in Figure 2. [Ref. 5:p. 116]

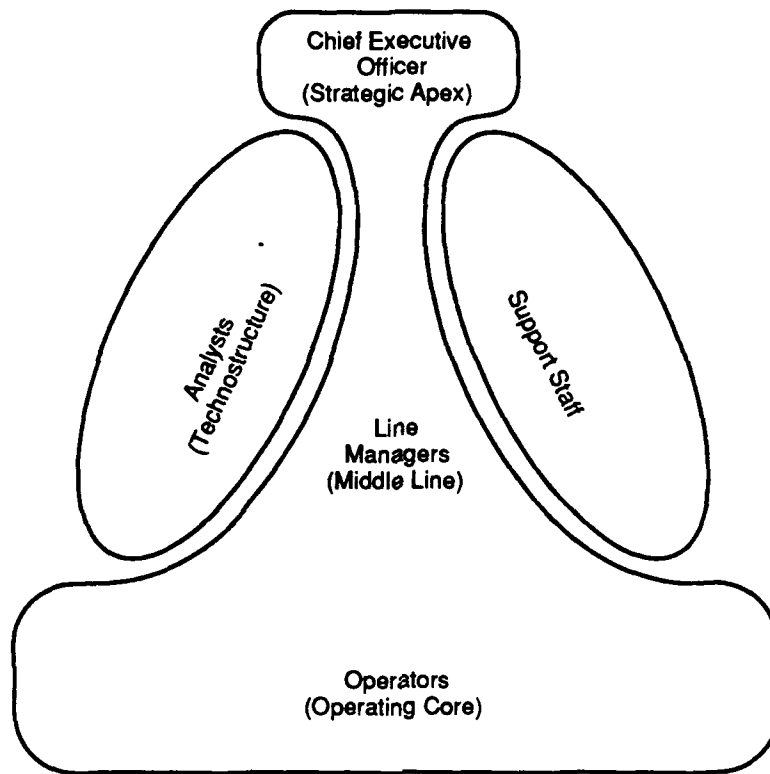


Figure 2. **The Mintzberg Organizational Model**

D. OUTPUTS OF THE SYSTEM

In the framework which has been established to this point, the combat organization is an entity which is changing based upon a set of broad system inputs. As a result of these changes, the outputs of the system vary. For a military organization such as the IDF, system outputs are its warfighting capabilities. In analyzing the accomplishments of the IDF, outputs will be analyzed using the Principles of War. As shown on the schematic (Figure 1), these lessons learned flow back into the system and

become inputs. This is because the IDF has shown a particular willingness over time to examine lessons learned from previous wars and apply them in making any structural organizational changes aimed at correcting perceived weaknesses. This willingness to be self-critical, it will be shown, has proven to be extremely beneficial to the IDF.

There are nine recognized principles of war. These principles have withstood the test of time and will prove adequate to capture the lessons learned from the wars of the IDF. In the analysis of each of the Arab-Israeli conflicts, those principles most affirmed or violated will be discussed.

1. Objective

"Direct every military operation towards a clearly defined, decisive, and attainable objective." [Ref.6:p. B-1] Military forces are extremely mission oriented. The lack of clearly defined mission orders and attainable objectives causes confusion and disorder to the structure of any military organization.

2. Offensive

"Seize, retain, and exploit the initiative." [Ref.6:p. B-2] A military force which has lost the initiative has become decisively engaged. When this happens, the engaged unit must react to the moves of the enemy rather than seizing control of the situation.

3. Mass

"Concentrate combat power at the decisive place and time." [Ref. 6:p. B-2] Historically, smaller armies have been able to defeat forces

many times their size by the massing of forces at the key point in the battle.

4. Economy of Force

"Allocate minimum essential combat power to secondary efforts." [Ref. 6:pp. B-2-B-3] This principle is the corollary to the principle of mass. Military leaders must sometimes accept risks in areas not part of the main effort. This principle simply calls for the proper allocation of limited valuable resources.

5. Maneuver

"Place the enemy in a position of disadvantage through the flexible application of combat power." [Ref. 6:p. B-3] The freedom of a military force to maneuver is simply the means of achieving mass and economy of force as the commander determines. This principle calls for flexibility of thoughts, plans, and operations. Maneuver is most often accomplished by a commander who has the freedom of thought to take advantage of an enemy weakness.

6. Unity of Command

"For every objective, insure unity of effort under one responsible commander." [Ref. 6:pp. B-3-B-4] This principle is the essence of command and control. The commander must have the authority to assign and direct his forces to the accomplishment of a given mission.

7. Security

"Never permit the enemy to acquire an unexpected advantage." [Ref. 6:p. B-4] Without proper security, a military force will not remain effective in combat for long. Security is needed in all actions. Without it,

compromise is assured along with an inability to achieve any given objective.

8. Surprise

"Strike the enemy at a time and/or place and in [a] manner for which he is unprepared." [Ref. 6:p. B-4] The reciprocal of security, a military force should seek to exploit the enemy's lack of preparedness to compromise his plans and destroy his forces.

9. Simplicity

"Prepare clear, uncomplicated plans and clear, concise orders to insure thorough understanding." [Ref. 6:p. B-5] Plans must be understood down to the level of the soldier. Then, when the fog of war becomes thickest, well-trained units can execute their orders based upon each individual soldier's understanding of the mission and the commander's intent.

E. THE ENVIRONMENT

Permeating the entire system which has been established to this point is the environment, an admittedly broad term [Ref. 7:p. 294] used to describe the general conditions that surround an organization. The degree to which the system's environment is complex or simple will greatly influence organizational structure. In extremely complex environments, the organization will tend to standardize more functions while decentralizing authority for making decisions. In a similar fashion, whether the environment is stable or dynamic will have an impact. A dynamic (rapidly changing) environment may move an organization away

from reliance on standardization and toward mutual adjustment between forces and leaders on the ground.

The term "variety" will be used to represent the possible states of nature in which the organization must function. It will be shown that in its early history the IDF operated in an environment almost entirely devoid of variety. As time went on, the factors figuring into the organizational equation of the IDF became more complex. The tendency toward increased environmental variety resulted in predictable responses on the part of the IDF, particularly a noticeable move toward standardization of process with a concurrent tendency toward decentralization of execution. In some respects, the IDF chose to hold constant the dynamic nature of its region and its place within it. The IDF's organizational reactions to its environment will be fully explored in this thesis.

F. SUMMARY

This chapter has established the framework for subsequent analysis of the IDF. The combat organization, it has been shown, cannot be viewed in isolation. Instead, it must be analyzed in terms of an open system with inputs and outputs that change within an environment.

Resistance to change is, in the author's opinion, a problem in many organizations. The IDF, it will be shown, has not only accepted change but has actively sought to analyze and critique itself to correct perceived shortcomings. This admirable trait has resulted in qualitative advantages over quantitatively superior Arab forces.

III. WAR OF INDEPENDENCE

A. SITUATION

The United Nations General Assembly voted on November 29, 1947 to end the British Mandate over Palestine and to divide this disputed territory into a Jewish state, an Arab state, and an international zone [Ref. 8:p. 27] which included the holy city of Jerusalem. This action at the UN triggered the Israeli War of Independence, a bloody struggle for the existence of a Jewish homeland that would be a precursor of conflicts to follow.

The Jewish defense forces which existed in Palestine at the conclusion of the Second World War were factionalized and lacking in central authority. The largest of the factions, the Haganah, would ultimately provide the framework for the Israeli Defense Forces of today. Born out of the conclusion of WW I in 1920, the Haganah was a clandestine organization throughout its existence. This force was an acknowledgement by the Jewish leadership in Palestine at the time that conflict with the Arabs was inevitable and must be prepared for. Thus, the Haganah spent much of its time in the 1920s and 1930s seeking the assistance of Jews abroad, recruiting men, raising funds, and obtaining weapons. [Ref. 9:p. 8]

Arab terrorist attacks in 1929 led the Haganah leadership to establish defensive plans on a national scale. This was accomplished by

designating each isolated Jewish settlement as a defensive stronghold.
[Ref. 10:p. 21]

In 1943, the charter of the Haganah was changed, "...speaking not of a popular militia, but of an organization that was a stage in the development of a national defense force." [Ref. 9: p. 9] This new charter established the structure of today's IDF, calling for men and women aged 17 and older to serve in the military for a period of two years.

Additional factions included the Palmach, organized in 1941 and originally meant to be a defense force against the Germans while so many of the Jewish youth were away from the homeland fighting for the British. Described as a youth movement in arms, the Palmach sought to make full use of group cohesion and combat leadership at all levels. They compensated for small size and lack of heavy weapons [Ref. 8:p. 21] with highly trained individual soldiers and daring small-unit tactics. Smaller but extremely powerful factions included the ETZEL and LEHI. These two organizations were opposed to the Haganah's stated policy of restraint. They were vehemently opposed to British occupation of Palestine and carried out brutal terrorist missions aimed at driving them out.

At the time of the UN resolution, intermittent small-scale conflicts had been the norm between the Arabs and the Jews of Palestine. The new order, as expressed through this resolution, led to full-scale war.

B. ENEMY FORCES

The enemy which faced the Jews at the start of the War of Independence was significantly different than the enemy they would face by its conclusion. At the start, the Arabs were a loose collection of factions

which operated on an *ad hoc* basis. Included among their factions were 6,000 local Arabs who had acquired training in the British Army, 3,000 Arabs who had been members of the British Palestinian police, and some 6,000 volunteer soldiers from surrounding Arab nations. The Arab forces, although poorly organized, were well equipped with weaponry from Britain and France. [Ref. 11:p. 50]

By the end of the War of Independence, the IDF would face the combined standing armies of five Arab nations: Syria, Egypt, Lebanon, Jordan, and Iraq. Well armed, these forces were trained and sometimes led by British [Ref. 12:p. 23] professionals.

C. FRIENDLY FORCES

At the start of the war, the Jewish forces were somewhat comparable in numbers to their Arab counterparts. The Haganah [Ref. 9:p. 22] consisted of 9,500 men, the Palmach 2,100, the ETZEL and LEHI 4,000. What the Israelis lacked in sheer numbers they made up for in terms of leadership, organization, and iron resolve to fight to the death.

A severe disadvantage at the start of the war was the lack of modern, functional weapons. Indeed, the strikingly low quantities of weapons [Ref. 11:p. 58] included 17,000 rifles, 3,500 submachine guns, 160 medium machine guns, 670 light mortars, and nine light aircraft with only 40 trained pilots. Israel's lack of allies in the world was a handicap because no nation seemed willing to support what looked in 1947 to be a losing cause.

As the war proceeded, however, a rather strange relationship developed between Israel and Czechoslovakia. The Czechs [Ref. 9:p. 27] began

to supply the Israelis with modern weaponry, apparently with the approval of Stalin. This arms pipeline significantly enhanced the IDF's fighting capability and may well have turned the war in its favor.

D. OPERATIONS

The War of Independence [Ref. 9:pp. 24-31] was fought in three stages. Stage one occurred between December 1947 and March 1948. This phase was largely an intensification of the sniping and sabotage which had been occurring between the Arabs and the Jews for decades. This part of the war became known as the "battle of the roads" due to the Arab tactic of isolating Jewish settlements and cutting off attempts at resupply. [Ref. 11:p. 41]

The initial response of the Jewish leadership was to assume a defensive orientation within the settlements. Above all, there would be no withdrawal. The leadership felt that any hint of capitulation from the settlements could seriously, maybe fatally, injure the efforts of holding the spirit of the new nation together. The Jews attempted to regain contact with the isolated villages through the use of convoys. Bloody ambushes were [Ref. 9:p. 25] often the result and the Jews suffered losses approaching 1,200 dead. This phase of the war ended with the Jews acknowledging the need to take the offensive, a lesson they would recall often.

Stage two of the war began with the first large-scale offensive by the Jews. On April 5, 1948, Operation Nahshon was undertaken with the main objective to secure the road to Jerusalem. This operation marked the first mission of greater than company size and was partially

successful in freeing the road, although the Arabs countered with large-scale operations of their own. [Ref. 12:pp. 30-31]

The Haganah's establishment of strategic depth through the use of the settlements was tested during this phase. The settlements fought valiantly and affirmed the willingness of the Israeli people to fight in defense of their territory. The price paid in blood was high, however, with another 1,253 killed and several settlements destroyed. [Ref. 9:p. 28]

The declaration on May 14, 1948 by Prime Minister Ben-Gurion calling for the establishment of the State of Israel brought the second stage of the war to an end. It was the beginning of the unified Israeli Defense Force, however, as Ben-Gurion moved to unite the various factions into one coherent fighting force under one general headquarters and staff. The Palmach command and staff were integrated into the structure of the Haganah but the three Palmach brigades were left intact. The ETZEL and the LEHI would follow, although not without considerable resistance. All soldiers took an oath of allegiance to the state, an official uniform was created, and for the first time ranks were established for the NCOs and officers. [Ref. 9: p. 30]

Stage three of the war began with the simultaneous invasion [Ref. 3:p. 49] of the Arab armies, as depicted in Figure 3. The declaration of Ben-Gurion, coupled with the humiliating failures of the Arab irregulars, led to the invasion. The Arab armies, although intent on destroying Israel, lacked coordinated action. Indeed, conflicts internal to the Arabs caused mistrust and suspicion among their alliance.

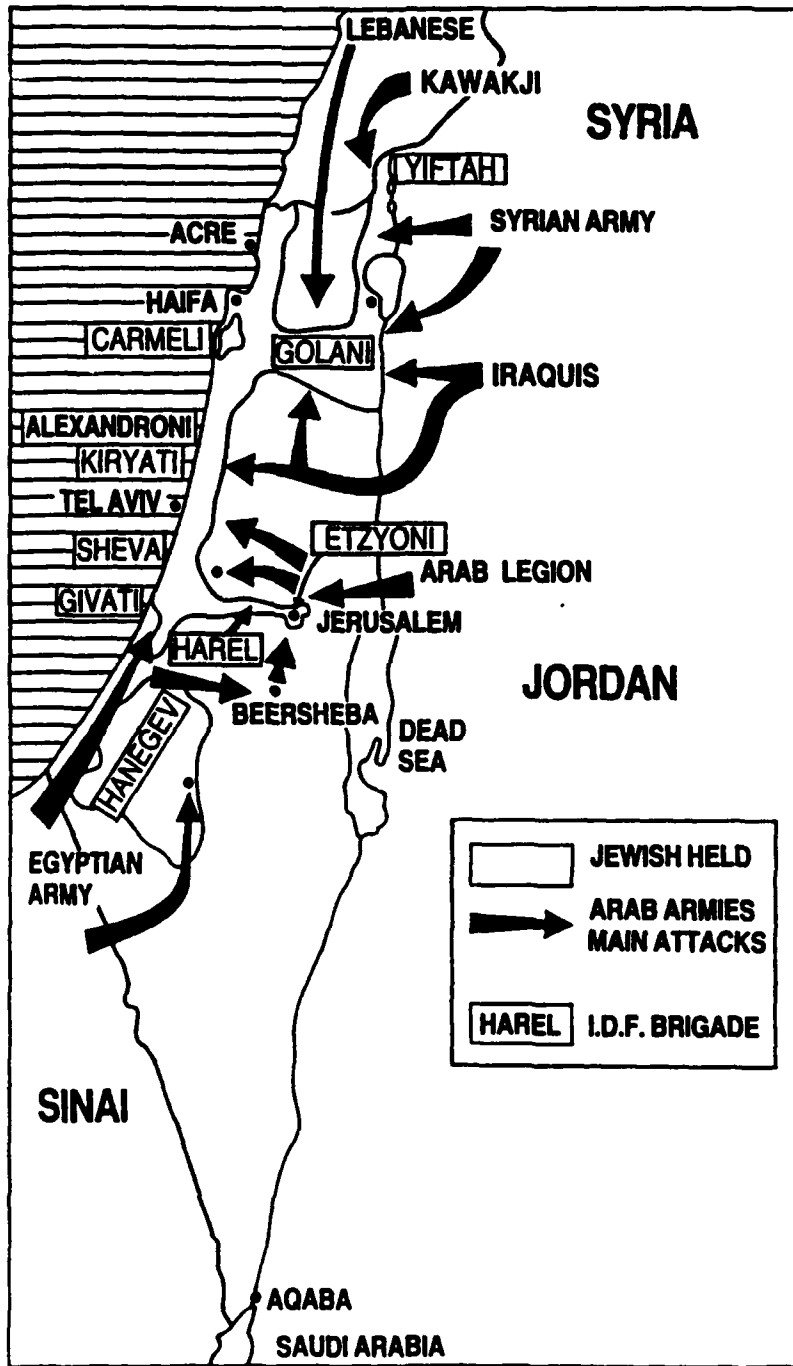


Figure 3. The Arab Invasion, 15 May 1948

Upon the invasion, the Israelis mobilized another 30,000 [Ref. 11:p. 51] reservists and called for foreign volunteers to assist. These volunteers, many of whom had fought for the Allies in WW II, were assigned to the MAHAL. They provided a wealth of professional and technical assistance to the fledgling army. The spirit of the Israelis was called upon by Ben-Gurion, who said,

We will not win by military might alone. Even if we could field a larger army, we could not stand. The most important thing is moral and intellectual strength. [Ref. 9: p. 32]

Once again, Israel relied upon the strength of the settlements to delay the advancing armies. The settlements proved to be extremely effective. The delaying action gave the IDF enough time to consolidate, plan, and launch operations to drive the invaders back.

The Egyptian army of 2,750 men, (some five battalions) was the largest [Ref. 9:p. 35] of the invading forces. They attacked on two prongs, toward Tel Aviv on one and toward Beershaba in the Negev desert on the other. The settlements fought valiantly and caused the Egyptians to expend a great deal of their fighting strength in advancing. Their attack was halted only 20 miles from Tel Aviv.

A one-month truce [Ref. 9:p. 39] was called on June 11, 1948 by the United Nations. During this month, the IDF planned, rearmed, and reorganized. The Arabs did not make such effective use of this time. [Ref. 8:p. 38]

At the conclusion of the cease-fire, the IDF began Operation DONI, consisting of a four-brigade offensive to drive the Egyptians from Tel Aviv. This was the IDF's largest offensive operation and led to the taking of

Lydda airport. A second truce was called on July 19 at the height of the offensive. By this time, the Israelis knew that the Arab alliance had dissolved; when one of the Arab armies was attacked, no one came to its assistance. [Ref. 9: p. 40]

E. RESULTS

The final period of the war began on October 10, 1948. No longer was Israel outnumbered. At the peak of its fighting, Israel had mobilized an army of 120,000. Weapons were available and the IDF could count some 60,000 rifles, 220 artillery pieces, and 7,000 vehicles of various types. [Ref. 9: p. 40]

The IDF had evolved throughout the war. It had begun to look like a seasoned army with ranks and clearly defined command structure. In contrast, the Arabs had degenerated into peasant armies, poorly led and barely resupplied. The IDF sensed this disarray and mounted three major operations, two in the south and one in the north. The objective of each was to drive the invaders out from the established boundaries of Israel. [Ref. 11:p. 54]

The major thrust and arguably the finest operation conducted by the IDF in the war was Operation Yoav. This operation began with armed attacks by Israeli fighters on Egyptian planes stationed at airfields. Three brigades opened the offensive and were later joined by a fourth and a battalion of armor. Planning was done with the assumption that no other Arab armies would move to assist the Egyptians. During this operation, the IDF conducted diversionary action such as having forces from the

settlements, long cut off from resupply, attack the Egyptian supply lines from the rear. [Ref. 11:p. 54]

The War of Independence ended with a political settlement rather than a military one. Great Britain had threatened to invoke a long-standing defense pact with Egypt if Israel did not stay within its borders and allow the Egyptian army to retreat. The United States strongly encouraged Israel to heed the warnings of the British. [Ref. 11:p. 56]

Israel did comply, much to the consternation of the leadership of the IDF. Chief of Staff Allon sent a strong message to the General Headquarters: "I am shocked by the withdrawal order! This is the second time that we are throwing away a certain chance of inflicting a final defeat on the Egyptian enemy." [Ref. 9:p. 42]

This was the first opportunity for the Israelis to learn that in order to achieve victory in the political arena, they must succeed *militarily*. Never again would they be in a position to admit, as Allon had in 1948, "...we won the war, but lost the peace." [Ref. 9:p. 44]

F. ANALYSIS

1. Inputs to the System

The emergence of the IDF as an organization took place amidst the turmoil of a new nation in danger of being decimated by well-armed neighbors. Interestingly, the leadership at the time in Israel, although under enormous pressures and imminent danger, was able to establish a framework for national defense which still exists today. The environmental factors most responsible for influencing the original organizational structure of the IDF included the threat faced and the social and

economic factors in Israel. The doctrine which the IDF adopted at the time was driven largely by the urgency of the moment, lack of adequate weaponry, and insufficient resources (including manpower).

a. *The Threat*

Although there was little disagreement among the senior leadership of Israel that the survival of the state was in danger, the nature of the threat was in question. While some felt that massive invasion by regular Arab armies was possible, it was equally likely that internal problems from local Palestinians were the real threat. The primacy of Ben-Gurion was evident in this debate, however, and it was his feeling that a clash with the Arab regulars was inevitable. Thus, he insisted on structuring the IDF along conventional military lines. [Ref. 11:p. 37]

b. *Socio-Economic Factors*

One of the most pressing concerns of Ben-Gurion was finding a means by which to subordinate the various factions of the military prior to statehood into one centrally controlled force. More specifically, the problem was in establishing a political structure which would convince the factions to subordinate their own interests for the greater good of the state. It was these concerns that were the genesis of the integrated nature [Ref. 4:p. 6] of the IDF. There is no truly separate air force, navy, or army. Instead, one military chief of staff was designated to oversee the operational and planning responsibilities for the entire IDF. As one author points out, "[T]he integrated services in the IDF are a reflection of its history, of the need to bring under political control competing military forces whose conflicts reach back to pre-independence days." [Ref. 4:p. 8]

c. IDF Fighting Doctrine

While the initial disposition taken by the Israelis was defensive in orientation, a doctrine relying on mobility was clearly a desire of doctrinal planners. Indeed, Israel's lack of strategic depth precluded any thought of fighting a protracted defensive struggle. When the IDF armored corps was not ready to assume a dominant role in taking the offensive against the Arabs, the emphasis shifted to the infantry soldier. The early IDF focused on training its ground forces to negate the firepower advantage of the enemy [Ref. 13:p. 23] through the use of stealth and darkness, concentrating on taking objectives with superior close-fighting skills. It was believed that this approach would negate the enemy's inherent qualitative material advantages.

2. Organizational Structure

The IDF in its infancy in 1948 was nonetheless a functioning, viable organization. Applying the Mintzberg model in a retrospective fashion to the force structure begins to reveal the framework of the modern IDF.

a. Strategic Apex

In the author's opinion, the strategic apex of the IDF during the War of Independence consisted of one man, Prime Minister David Ben-Gurion. The dual challenge and inherent power of being the individual charged with forming a coherent defense force and a national government resulted in his predominance.

Ben-Gurion was not a professional military officer. He centered his strategy of fighting the Arab invaders and preserving Israel's

territorial integrity around a policy of allowing no retreat in any of the settlements. Largely successful, his tone of defiance and strength was adopted in the IDF as well as in the civilian population. The Prime Minister was aided, upon consolidation of the factionalized defense forces, by the newly created General Staff and Headquarters, which helped to set overall strategic objectives.

b. Middle Line

The officer corps of the IDF adopted the method of command that it has retained to the present. They chose to lead their soldiers from the front—pulling their soldiers as opposed to pushing them into battle. The price of this command philosophy is steep. Officer casualties were disproportionately high in the IDF then and are so now. [Ref. 4:p. 28]

A story told in all Israeli officer courses recounts a battle which occurred during Operation Nahshon (April 1948). A Jewish company forced to withdraw from the hilltop village Kastel was about to be overrun. The commander knew that the only chance of saving at least a portion of his unit was to leave a rear guard to allow the others to withdraw. He issued what has become a legendary order in the IDF: "All privates will retreat, all commanders will cover their withdrawal." [Ref. 8:p. 61] The commander was killed along with his platoon leaders. [Ref. 8:p. 61]

c. Operating Core

The undeniable strength of the IDF during the War of Independence lay in the strength and courage of the individual fighting

soldier. Although heavily outgunned and outnumbered, these soldiers were able to consistently defeat their Arab enemies. Use of stealth, night-fighting skills, and hand-to-hand combat allowed the IDF to overcome numerical advantages.

The IDF of 1948 was like no other army in the world. Individual soldier discipline was poor, there was no standardized uniform, and rank structure was informal at best. One source stated that "[O]rders were commonly formulated after open debate in which rank carried less weight than sound arguments, and could rarely be imposed by the sheer authority of superior rank." [Ref. 8:p. 54] Yet, as a fighter, the IDF soldier proved extremely efficient. In large measure, this could be attributed to the leadership's belief that the smallest unit is the single man with his rifle. The fact that these soldiers were fighting, quite literally, for their families' and nation's survival surely affected their performance.

d. Supporting Structure

As with the combat units, the supporting structure of the IDF evolved throughout the War of Independence. At the start of the war, soldiers carried all necessary supplies literally on their backs. By the war's conclusion, mechanized warfare on a national scale resulted in the development of an embryonic logistical support system.

Similarly, as the IDF became more organized, the mobilization system began to take shape. No nation in the world can claim a higher per capita involvement of its citizens in the military. During the War of Independence, the IDF was able to mobilize 120,000 soldiers at

the peak of the fighting. Conscription was extended to the middle aged as well as to young men and women. Initially, women participated in combat, but they were eventually withdrawn to perform vital support roles. This reserve system was institutionalized in the Israeli way of life during and after the war. [Ref. 9:p. 48]

e. Technostructure

This is the most difficult part of the 1948 IDF to identify and analyze. The technostructure was an informal entity at the time as, by necessity, the task of designing the organization's structure and outputs was accomplished by commanders on the ground adapting to the rapidly changing situation. A prime example would be the brigade commanders' complaint to the General Headquarters about a lack of responsiveness that was hampering their ability to exploit tactical opportunities. These complaints led to the establishment of a new echelon of command – the front commanders – as a means of addressing the concerns of the brigade commanders. [Ref. 11:p. 67]

f. Ideology

Having just survived the devastating effects of the Holocaust, the Jewish people understood the consequences of defeat. One facet of the ideology which pervades the IDF is a phenomenon known as "Jewish memory," which is sometimes used to explain the intense feelings that Jews can muster for atrocities and transgressions against them and their ancestors. Ideology was born of memory, as expressed in the following dialogue from a book by Leon Uris (a well-known author of the Jewish experience):

I think this time they are not going to forget. Jews have a long memory. They weep for temples lost two thousand years and they repeat old wives' stories of liberations and rituals from the dawn of time. Do you know what an old Jew rabbi told me once when I asked him about Jewish memory? What? The words "I believe" mean "I remember." Even Nietzsche is puzzled over their ability to outlive everyone who has tried to destroy them. I believe...I remember. So you see, Alfred, a thousand years from now old Jews will wail in remembrance of the Nazi pharaoh who held them in bondage in Warsaw. [Ref. 14:pp. 457-458]

In the author's opinion, it might prove worthy for the Arab nations to remember that the Jews never forget.

3. Outputs of the System

a. Unity of Command

The command and control capabilities of the IDF improved as the war continued. The unification by Ben-Gurion of the various Jewish defense factions was a necessary and important step. The General Headquarters (GHQ) became the "...source of all strategic direction with a full complement of Intelligence, Logistic, and Operational staffs." [Ref. 8:p. 53] Initially, the GHQ proved to be somewhat unresponsive to the needs of the various brigade commanders. This led to the establishment of front commanders who were responsible for routine decisions, freeing GHQ to focus on strategic planning and national issues. The addition of the various front commanders allowed for greater flexibility and exploited the tendency for Israeli commanders to take the initiative. [Ref. 11:p. 67]

While the IDF of 1948 defies easy categorization, a method of command and control began to emerge. Based upon the principle of maintenance of the objective, this C² method called for maximum flexibility and authority at the junior leader level. It is a system that

acknowledges that the commander most able to make the correct tactical decisions is the one on the ground, closest to the action. This decentralization of decision making allows for rapid response on the battlefield, allowing the IDF leadership to get inside the decision cycle of the enemy.

Emerging in the aftermath of the War of Independence was a willingness for introspection by Israeli leaders. Ariel Sharon, then a young commander, summarized this tendency to be self-critical: "...I could not get out of my mind the conviction that these operations could have been handled differently...." [Ref. 3:p. 67] The IDF established early in its history this pattern of analyzing actions and making changes as necessary.

b. *Offensive*

The initial period of the war, the "Battle of the Roads," did not go well for the Israelis, primarily due to the defensive orientation they had assumed. While their settlements fought valiantly, there was little chance of winning by maintaining this defensive posture.

The war turned with the start of large-scale offensive operations such as Nahshon. This was the first time Jewish forces actually took the offensive and moved to seize territory. This operation succeeded in securing the road to Jerusalem, if only temporarily. More lasting was the fact that this minor success helped transform the basic orientation of the IDF from a purely defensive force to one that sought to exploit offensive opportunities.

c. *Economy of Force*

The ability of the isolated Jewish settlements to delay the advancing Arab armies was an excellent example of economy of force. Only limited resources were devoted to the settlements, allowing the IDF time to consolidate and organize its valuable manpower and equipment.

d. *Mass*

During Operation Yoav, the Israelis exploited this principle. By massing four infantry brigades and a battalion of armor, the IDF was able to penetrate the Egyptian lines and break into the Negev desert. This action, a coordinated combined arms operation, was significant in that it succeeded as a result of centralized planning combined with aggressive, decentralized execution.

e. *Maneuver*

From a strategic perspective, the IDF was able to win its War of Independence because of its ability to create defense in depth where none existed geographically. By using each of the Jewish settlements as defensive positions, the IDF forced the advancing Arab armies to expend valuable time and resources. Its use of civilians as soldiers was a piece of the framework which would help establish the IDF as one of the world's most ready and capable fighting forces.

On a tactical level, this war reaffirmed B. H. Liddell Hart's concept [Ref. 8:p. 64] of the indirect approach. Despite being outnumbered and outgunned, the Israeli infantry soldier was able to defeat his Arab counterpart. The IDF took maximum advantage of terrain, night operations, and surprise to close with and fight the Arabs in close

combat, negating their enemy's firepower superiority. Armor forces, in contrast, had an insignificant role in this war. What armor was available was obsolete and poorly employed. In essence, when used, the tanks acted as infantry support vehicles, not as a separate combat arm.

The introduction of the Israeli Air Force was a morale boost, if not a tactically significant event. The IAF was able to fend off Egyptian air raids against Tel Aviv and inflict some minor damage on Arab capitals. [Ref. 11:p. 66]

G. THE ENVIRONMENT

The environment which existed around the IDF as an organization during the War of Independence was, in the author's opinion, simple but dynamic. Events in the region were changing rapidly. This conclusion is based upon evaluating the level of variety, or possible states of nature, existing within system inputs such as the threat, technology, and socio-economic factors. The simplicity of the system is reflected in the extreme centralization which was implemented at the strategic apex in the form of one man, Prime Minister David Ben-Gurion. It can also be seen in the almost complete lack of standardization within the IDF at the time. Incidents such as the brigade commanders getting together and demanding a front commander to coordinate their actions are vivid examples of the search for some basic level of standardization. While the environment was simple, it was also quite dynamic in nature. This was a period of tremendous uncertainty in Israeli political, economic, social, and military institutions. This dynamism led the IDF to achieve flexibility of

operations through mutual adjustment among commanders on the ground as well as rigid, direct supervision within the chain of command.

IV. THE 1956 SINAI CAMPAIGN

A. SITUATION

The Sinai campaign, known in Israel as Operation Kadesh, began on October 29, 1956. Since the end of the 1948 war, Egypt had adopted a policy of supporting *fedayeen* (self-sacrificers) raids against civilian targets inside of Israel. These raids had been met by IDF reprisals conducted by the paratroop brigade of Ariel Sharon. While largely successful, these reprisals did little to alter or diminish the raids of the *fedayeen*. This background of conflict was coupled with two other significant events which would lead Israel to war with Egypt. The first event came on October 27, 1955, when Egypt's President Nasser announced a huge arms transaction with the communist bloc. This massive transfusion of Soviet weapons not only upset the precarious regional balance of power, it also looked like the beginning of increased communist influence in the region. [Ref. 15:p. 132]

Secondly, Nasser decided on July 27, 1956 to nationalize the Suez canal, a major source of trade [Ref. 12:p. 113] and transport in the Middle East as well as for the world. This action resulted in the military coalition of the French and the British, who, along with Israel, were determined to protect their national interests in the region.

B. ENEMY FORCES

Prior to the aforementioned communist arms shipments to Egypt, there had existed a rough balance of power between Israel and Egypt.

Both, for example, had maintained approximately 200 tanks. The infusion of arms from the Czechoslovakians (the Soviets did not want to be directly linked) significantly changed this balance. Sent to Egypt were 530 armored vehicles, 500 heavy guns, 150 MiG fighter planes, 50 Iluyshin-28 bombers, submarines, and naval craft. Along with the hardware came Soviet technicians and instructors into Egypt. The sudden buildup of capability caused Israel to consider a preemptive strike, attacking before all the new equipment could be fully integrated into the Egyptian forces. [Ref. 9:pp. 88-89]

C. FRIENDLY FORCES

The strange alliance which evolved between Israel, France, and the British is beyond the scope of this thesis to detail. It is sufficient to point out, however, that each nation joined the alliance out of pure self-interest, and a great deal of mutual distrust and suspicion haunted them throughout the campaign. [Ref. 15:pp. 140-141]

France agreed to supply Israel with some desperately needed arms [Ref. 11:p. 100], including 100 AMX-13 light mobile tanks with a medium velocity 75 mm cannon, 150 heavy guns, 150 renovated U.S. half-tracks, 60 French M-50 howitzers, and approximately 60 M4A3 modified Sherman tanks. These weapons, while not matching the Egyptians in sheer numbers, at least gave the IDF increased firepower and allowed it to fit two reserve brigades with armor.

The IDF at this point consisted of 45,000 men and women formed into 16 brigades, broken down as follows: one paratroop brigade, three armor brigades, and 13 infantry brigades. Although it had established an

Armor Corps Headquarters in 1953, the IDF remained an infantry-centered force. The typical infantry brigade was triangularly constructed with three rifle battalions, a heavy mortar company, a reconnaissance company, a signal platoon, an engineer platoon, and an anti-tank platoon. [Ref. 11:p. 102]

D. OPERATIONS

Operation Kadesh, in the author's opinion, was well planned and executed by the IDF. The plan centered on the use of the indirect approach, avoiding frontal attacks against the Egyptians and relying on maneuver to confuse the enemy and drive him from established positions in the Sinai. The concept of the operation is depicted in Figure 4. [Ref. 3:p. 152]

The operation began on 29 October with a battalion of paratroopers dropped just 45 miles from the canal zone. While this force dug in, the remainder of the paratroop brigade led by Sharon crossed the Sinai to effect a link-up. Dayan adopted this risky plan because he felt it suited the character of the IDF and its officers:

To a commander of an Israeli unit I can point to a map of the Suez Canal and say "There is your target and this is your axis of advance. Don't signal me during the fighting for more men, arms or vehicles. All that we could allocate you've already got, and there isn't any more." [Ref. 16:p. 259]

Meanwhile, Israeli fighter aircraft used their propellers to cut telephone lines in the Sinai and effectively disrupted Egyptian command and

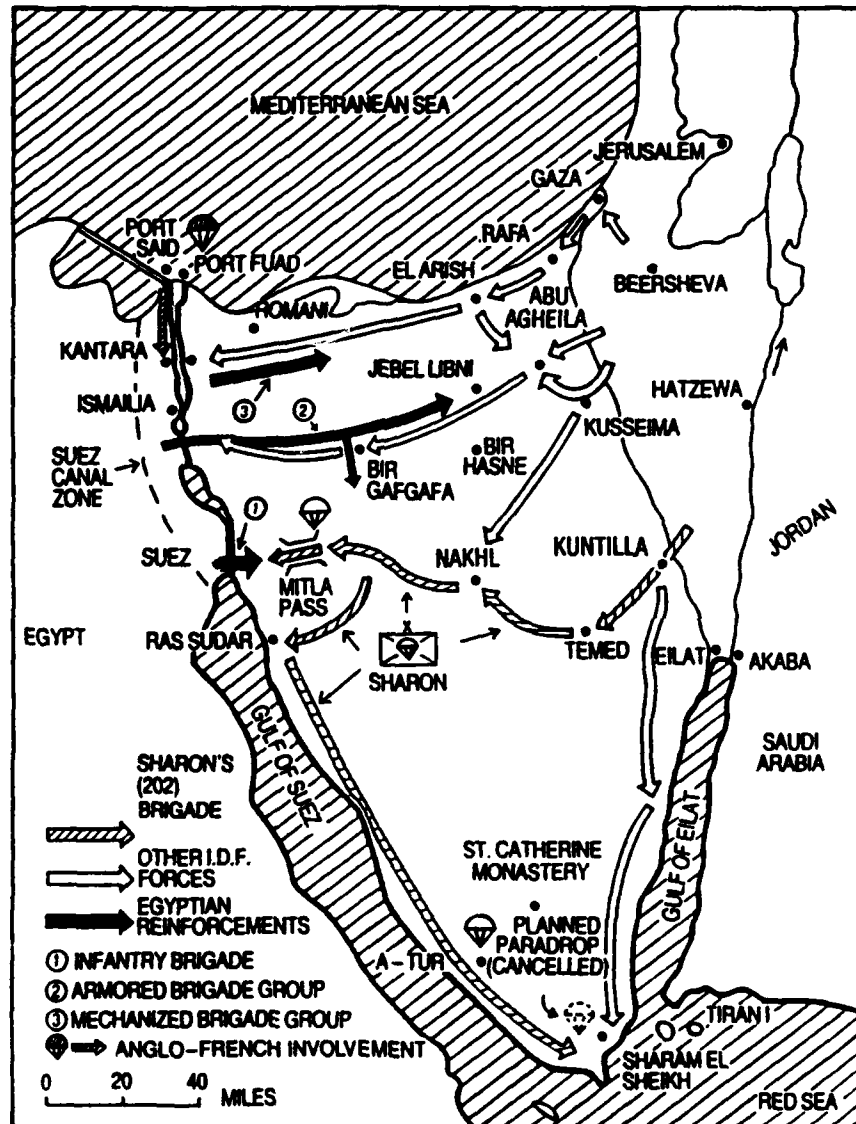


Figure 4. The 1956 Sinai Campaign

control. Confusion [Ref. 9:p. 95] in the Egyptian high command was such that almost a full day passed before they were aware of the scope of the Israeli attack.

The IDF had deployed nine brigades on the Egyptian front [Ref. 9:p. 95]. The remaining brigades were deployed against Syria and Jordan should either decide to enter the war. Each brigade was given mission orders and objectives to take and was given only minimal guidance from General Headquarters. Most accomplished their missions with ease. The 7th Armored Brigade [Ref. 8:p. 151] was particularly effective and caused the key penetrations into the Egyptian lines.

The French and British portion of the Sinai campaign, Operation Musketeer, was largely ineffectual.

E. RESULTS

Upon realizing that he faced not only the IDF but French and British military forces as well, Nasser ordered the withdrawal of Egyptian forces from the Sinai. Thus, on November 2, Israeli forces were perched on the Suez canal in the north and in the center, their route complete. The cost to the IDF had been 172 killed. [Ref. 11:p. 109]

Superpower intervention was forthcoming as Moscow threatened to take steps if all forces did not withdraw from the Sinai immediately. The Israelis sought assurances from the United States that certain security concerns would be addressed upon their withdrawal, including elimination of military bases in the Gaza strip and access to shipping in the straits. The U.S. was upset at her allies [Ref. 17:p. 7] for undertaking this

operation but agreed with Israel's security concerns. Israel's forces withdrew, destroying Egyptian fortifications as they went.

F. ANALYSIS

1. Inputs to the System

The years following the War of Independence were a time of tremendous change within Israel and the IDF. The existence of the state was by no means assured at this point and the role of the IDF was evolving. The nature of the defense policy was based upon the ever-present threat, social and economic factors, and the doctrinal approach adopted by IDF senior leadership.

a. Socio-Economic Factors

The requirements inherent in nation building precluded Israel from maintaining a large standing force [Ref. 11:p. 71] and resulted in the 1949 passage of the Defence Service Law. The essence of this law called for

...the intensive exploitation of the entire national manpower pool through the universal conscription of men and women, coupled with a long reserve obligation, and utilization of almost all state-supported activities: transportation, hospitals, communications, and construction, for dual military-civilian functions. [Ref. 11:p. 71]

Additionally, this law called for soldiers, after completion of their basic training, to devote 12 months of their service time to agricultural endeavors. This soldier-farmer concept met with heated objections on the part of senior military leaders, who felt it would detract from the readiness of the IDF. [Ref. 9:pp. 58-59]

The first three years of Jewish statehood saw the population double, although most of the immigrants were penniless, uneducated, and unskilled. This caused a great strain on the Israeli economy and strict rationing ensued. The IDF did not escape the austerity. Low pay, inadequate housing, and lousy equipment combined to produce a defense force of extremely low morale. [Ref. 11:p. 76]

b. Threat

Although the War of Independence had been a clear victory for the Israelis, their precarious position among their Arab neighbors improved little. The threat faced by the IDF in the years immediately following the war changed from invasion by massed Arab armies to infiltration by bands of armed marauders. Israel shares borders [Ref. 11:p. 69] with four hostile neighbors: 330 miles with Jordan, 165 with Egypt, 47 with Syria, and 49 with Lebanon. The inability of Israel to protect its borders against incursion led to the establishment of the reprisal policy, which was aimed at "...detering Arab governments from allowing or encouraging attacks on Israeli territory." [Ref. 8:p. 106]

c. Doctrinal Approach

The military doctrine of the IDF in the years after the War of Independence was largely a reflection of Chief of Staff Moshe Dayan's predisposition towards infantry forces. It was said that "...he confused mere physical mobility with actual tactical mobility in the presence of enemy fire—he therefore regarded the slow and heavy tank as a hindrance." [Ref. 8:p. 118] Additionally, his almost total emphasis on the

fighting units led to a serious neglect of the combat support elements.
[Ref. 8 :p. 118]

Tactically, the IDF soldiers continued to hone their skills as night fighters and masters of stealth. They did learn the dangers of predictability, however, as Sharon's paratrooper tactics were routine and nearly cost them on more than one occasion. [Ref. 3:pp. 133-153]

2. Organizational Structure

a. Strategic Apex

Chief of Staff Moshe Dayan was a flamboyant, charismatic leader who had a tremendous influence on the IDF as an organization. His focus was always on the primacy of the combat mission of the IDF—on the product, not the process. Dayan was not concerned with what might be called soldier disciplines. Instead, he sought to mold a tough and aggressive fighting machine. He strove to make the IDF flexible, swift, and unhampered by what he saw as rigid military routine. [Ref. 11:p. 91]

There is little evidence that Dayan worked within the structure of the GHQ. Instead, he seemed to believe that he could best influence the battle by being on the ground with his subordinates. [Ref. 18:p. 197]

b. Middle Line

The IDF was founded on the initiative and capabilities of its junior leaders. Decentralization of authority was the watchword of IDF command and control philosophy. Some actions during the Sinai cam-

paign signalled the need for a balance of a more centralized higher level of command. Dayan said that

...the heavy emphasis on improvisation and the absence of a strong controlling hand meant that "our capacity for misadventure is limitless," including several cases in which Israeli units fired at each other or were strafed by Israeli aircraft. [Ref. 18:p. 196]

Sharon, for example, engaged in a bloody, needless battle at the Mitla pass after having been specifically ordered to stay away. His insubordination was shrugged off by Dayan as aggressive leadership but led to an inquiry and a more active role by the GHQ in monitoring and influencing IDF tactical commanders. [Ref. 3:p. 151]

c. *Operating Core*

The Sinai campaign validated the IDF's reserve system. Men and women reservists were mobilized only days before the attack and performed well. There had been considerable concern that the reservists would be unable to make the transition from their civilian activities to a combat-ready status. These concerns proved unfounded. [Ref. 9:p. 94]

d. *Supporting Structure*

At this juncture, the supporting structure of the IDF was weak. Mobilization plans called for reservists to report with civilian vehicles to support the war effort. The problem was that many of these vehicles were hardly roadworthy, and as a result battlefield mobility was hindered. [Ref. 9:p. 98]

A workable system of maintenance had yet to be implemented. Spare parts were extremely difficult to find. Indeed, as Sharon

moved to link up with his battalion of paratroopers, no tools were available to repair flat tires. Thus, any disabled vehicles had to be abandoned. [Ref. 8:p. 147]

e. *Technostructure*

The technostructure of the IDF was still not formalized in 1956. The General Staff was in place but ineffectual once the war began. Left out of the picture by Dayan, the planning staffs were reduced to monitoring the battle through secondhand sources.

f. *Ideology*

The religious factor has played a significant part in the ideology which has permeated the IDF since its beginnings. While every warring faction would invoke the Deity, it is really only Israel which can point specifically to tactical instructions given as the Word of God to the people of Israel. Indeed the Bible acts as a sort of field manual in the IDF (many Army texts quote the Bible to make a point) and "...serves as a common point of reference." [Ref. 19:p. 36] These biblical roots are a fundamental aspect of Israel's sense of self-preservation.

3. *Organizational Outputs*

a. *Unity of Command*

While the results of the operation were largely what the IDF had planned, the command and control structure showed some serious deficiencies during the Sinai campaign. While it is difficult to argue against the concept of leading from the front, Dayan may have carried it to extremes during this war. He chose to fight the battle with forward units, putting himself effectively out of communications [Ref. 9:p. 98]

with GHQ and the Cabinet for long periods of time. Information was spotty at best at GHQ, and returning IAF pilots were often the only source of reports. Thus, the role of higher headquarters in this war was reduced to establishing objectives, targets, and timetables and then anticipating the results. In the author's opinion, while decentralization of command authority is a proper goal, it must be countered with a measure of control from higher headquarters. The IDF realized this after the war and took steps to solidify a workable command and control structure. What evolved was the concept of optional control which would work quite well in the 1967 Six-Day War.

b. *Maneuver*

Prior to the Sinai campaign, the IDF had attempted to define the role of the tank in its force structure. What evolved from those discussions was a feeling that the tank was best suited as a support vehicle for infantry forces. The feeling was that the tank was mechanically unreliable and was vulnerable if it fought massed as a separate combat arm.

Operationally, this war caused considerable reflection inside the IDF on how best to accomplish national strategic objectives. The result of this self-analysis was the transition from an infantry-dominated force to one which incorporated the tremendous tactical advantages of the tank. As a result of the success of the 7th Brigade in the 1956 war, the IDF leadership reevaluated the proper role of armor. They decided that, instead of acting as infantry support vehicles, armor added tremendous maneuverability on the battlefield. The tank was not

only a weapons platform but also had the protection to close with enemy armor and destroy heavily fortified positions. Once the IDF leadership resolved the role of armor, it did so with great fervor: "Dayan's ability to change his mind without regret or fear of losing face thus enabled him to replace misguided theory with correct practice." [Ref. 16:p. 263] The tank became the centerpiece of the IDF and would work with infantry in support.

c. Objective

The objectives adopted by the IDF in this war were summed up by Chief of Staff Moshe Dayan: "...to confound the organization of Egyptian forces in Sinai and bring about their collapse." [Ref. 8:p. 142] Dayan's strategy was to avoid any battles of attrition with the Egyptians and to use the indirect approach to bring about victory. It was a campaign of large-scale raids designed to outmaneuver the Egyptians and cut off their lines of communication. This strategic way of thinking has withstood the test of time and effectively remains Israel's policy today: take the offensive, fight short wars, and rely heavily on the reserve system. [Ref. 20:p. 9]

Prior to undertaking the Sinai campaign, the IDF established three [Ref. 15:p. 148] military objectives: destruction of the fedayeen bases in Egypt and along the Sinai border, elimination of Egyptian offensive potential by eliminating her Sinai infrastructure, and opening the Gulf of Aqaba to Israeli shipping. By establishing definable national objectives, commanders at the tactical level were able to make decisions that supported these goals. For example, a decision was made to

minimize the number of Egyptian soldiers killed. Enemy dead, it was felt, were not only easily replaceable but were unnecessary to achieve stated objectives. Instead, maneuver and surprise were chosen as the best manner to achieve the mission. [Ref. 11:p. 106]

d. Surprise

The IDF was able to achieve surprise through the use of decoys and feints. On a national level, it resisted mobilizing the reserves until three days prior to the war. Additionally, all indications pointed to an IDF attack against Jordan, not Egypt. On a tactical level, dropping paratroopers deep into the Egyptian rear gave the illusion that the IDF action was simply another reprisal against the fedayeen raids. It was almost a full day before the Egyptian leadership was able to piece together the magnitude of the IDF operation. [Ref. 16:p. 260]

G. THE ENVIRONMENT

Although this was the first of the truly modern wars of Israel, the environment remained relatively simple but, at this juncture, had also stabilized somewhat. These environmental conditions were a contributor to an IDF that was much more formalized and centralized as an organization, at least relative to 1948. Each unit was "...self contained, carrying with them all they will need to reach their final targets, and not be dependent on outside supplies." [Ref. 18:p. 196] Yet, there was little integration of units and brigade commanders operated "...as if the General Headquarters did not exist...." [Ref. 18:p. 197] The IDF was solely focused, in the author's opinion, on current operations or the immediacy

of the moment, a characteristic common to organizations in simple and stable environments.

V. THE SIX-DAY WAR

A. SITUATION

The aftermath of the 1956 Sinai campaign was a period of relative calm [Ref. 1:p. 145] along the Israeli-Egyptian border, mainly due to the presence of a United Nation's peacekeeping force. The remainder of the Middle East, however, had not achieved such stability. The Syrian-Israeli border in particular became the scene of bitter fighting between Arabs and Jews. Guerilla raids by the dozens were conducted during the 1965-1967 time frame against Israel. Many of these Arab raids were in response to Israeli actions in three demilitarized zones along the border. These constant tensions were a hindrance to all attempts aimed at achieving stability in the region. [Ref. 15:p. 223]

A crucial disagreement arose in 1964 as a coalition of Arab nations agreed to a plan aimed at diverting the headwaters of the river Jordan, knowing full well the devastating effect this would have on Israeli agricultural efforts. In November of that year [Ref. 12:p. 147], Israeli aircraft were sent into action against those diversion work sites which were outside of IDF artillery range. Israel's strong actions forced a cessation of the ill-fated diversion plan.

A more ominous development occurred in this time frame when the Arab League agreed to the establishment of a "Palestinian entity" and provided this group with materiel and moral support to intensify guerilla activity along Israel's borders. Attempts by Israel throughout the middle

1960s to gain support [Ref. 15:pp. 224-225] from the United Nations were met with little success. The United Nations was seen as weak and ineffectual by both sides and was generally ignored when it did attempt to act as an intermediary. In many respects, the tensions and situation which gave rise to the 1956 war were duplicated in the days leading up to the Six-Day War.

The final impetus towards war occurred on May 22, 1967, when Egypt's President Nasser [Ref. 11:p. 133] ordered that the Strait of Tiran be blockaded to Israeli shipping. This was a declared Israeli *causus belli* and the IDF began plans for a preemptive strike.

B. ENEMY FORCES

Quantitatively, the balance of forces prior to the outbreak of hostilities favored the Arab nations. Indeed, in Egypt, President Nasser in the days leading to the war deployed some 100,000 troops in seven divisions along his border with Israel. With these soldiers [Ref. 12:p. 149] came upwards of 1,000 tanks. As Nasser inspired much of the Arab world toward a perceived final confrontation with Israel, additional League nations agreed to support an attack. Before long, Israel was literally ringed with enemy forces totalling 250,000 soldiers, 2,000 tanks and 700 modern aircraft. [Ref. 12:p. 149]

C. FRIENDLY FORCES

One of the most difficult, and frustrating, aspects of analyzing the IDF lies in the fact that it has never published an order of battle for any of its combat actions. Indeed, much of the mystique which surrounds

this force can be attributed to this issue. Nobody, outside of a select few high-level Israeli leaders, is sure how large the Israeli forces were which fought the Arabs in 1967. Although outnumbered in terms of weapons systems, an estimate [Ref. 15:p. 231] of the total troop strength of the IDF on 4 June 1967 was 250,000, roughly equal to its Arab counterparts. Consensus of several sources would place the number of brigades under 25. Of these, approximately eight were armored brigades, with ten to twelve standard infantry and the remainder elite parachute brigades. The air force portion of the IDF consisted of approximately 200 fighter aircraft. [Ref. 13:p. 39]

D. OPERATIONS

The Israeli victory over the Arabs in the six days beginning on June 5, 1967 was accomplished by professionals who understood the need to seize the initiative across the battlefield. Complete volumes have been written detailing the scope of the Israeli victory. Here, only a capsulized version will be offered.

1. The Air War

The major function of the Israeli Air Force (IAF) had long been to deliver a preemptive strike against the enemy. On the morning of June 5 it did just this. From a mission start time of 0710 until completion late that afternoon, the IAF destroyed [Ref. 11:p. 137] 286 Egyptian planes, 52 Syrian, 27 Jordanian, and nine Iraqi. All this was at a cost of only 19 Israeli planes. The means by which this was accomplished were multiple. First, the IAF made use of the element of surprise by attacking Egyptian bases at a time coinciding with the breakfast hour. In fact, the attack

found most [Ref. 12:p. 152] of the Egyptian Air Force Command personnel in their cars en route from their homes. Second, the IAF flew at extremely low altitudes to avoid radar detection and increase bombing hit probabilities. Finally, even though the IAF had fewer than 200 planes with which to strike, it committed almost its entire force to the undertaking, a considerable risk which paid huge dividends. [Ref. 11:p. 137]

2. The War Against Egypt

The Israeli General Staff recognized Egypt as the principal and most dangerous enemy. Plans were devised to concentrate the bulk of IDF ground power against Egypt while attempting to avoid fighting on the other fronts for as long as possible. [Ref. 11:p. 137]

The Southern Command of the IDF consisted of a three-division-sized force. In the north was General Israel Tal's two-armor-brigade task force, in the center General Yoffe, also with two brigades of armor, and in the south, General Sharon with a mixed division of armor and infantry brigades. The average strength of these divisions was approximately 15,000 soldiers. [Ref. 15:pp. 243-244]

The overall operational concept of the southern land war can be summed in four points and is graphically depicted in Figure 5 (Ref. 3:p. 200). First was a breakthrough of the Egyptian lines in two sectors, along the coastal axis and at Abu Ageila-Um Katef in the south. Second, a deep penetration by General Yoffe aimed at smashing an anticipated second Egyptian defensive line. Third, a concentration of the armor units of all three divisions in the general triangle of Nakhl, Mitla Pass, and Bir

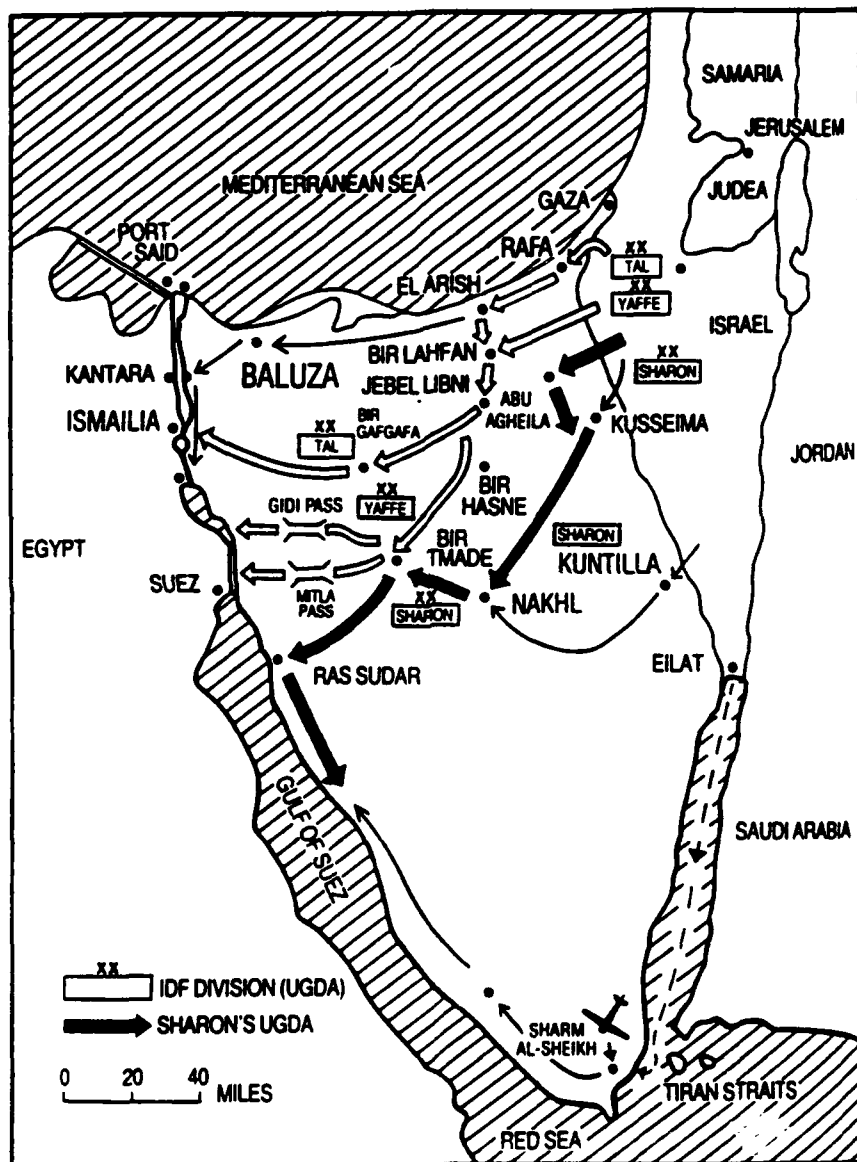


Figure 5. Six-Day War: Sinai Campaign

Gifgafa. The final thrust would be an advance to the Suez Canal and capture of Sharm el Sheikh. [Ref. 15:p. 243]

Each of the Israeli generals in the Sinai accomplished his assigned mission, but in a very distinct manner. While Tal relied upon the firepower and mobility of his armored forces, Sharon fought a carefully orchestrated set piece battle. Yaffe's division [Ref. 11:p. 142] traversed seemingly impassable terrain to establish blocking positions deep in the Egyptians' rear. True to their heritage, the leaders of the IDF had been given specific mission orders with wide latitude on how best to accomplish them.

3. The War with Jordan

Israel desperately wanted to avoid a war with Jordan. King Hussein of Jordan was, however, entangled in the web of Arab alliances and was compelled to attack on June 5. The Israeli General Headquarters was forced to improvise a swift and decisive response. [Ref. 11:p. 144]

While the Jordanians could deploy seven infantry and two tank brigades, the IDF was limited to its Central Command of a few units. Using their interior lines of communication, however, GHQ was able to divert a reserve brigade and units from the northern front to launch an attack. In short order, the IDF would deploy two armored, one mechanized, and eight infantry brigades against the Jordanians in a hastily improvised operation which dramatically displayed its tactical flexibility. [Ref. 9:p. 138]

In a matter of three days' fighting, the IDF had virtually destroyed the Jordanian army and captured the West Bank of the Jordan

River. With this conquest came the city of Jerusalem, the holiest place in the Jewish religion.

4. The War Against Syria

Syria had not supported Nasser on June 5 with the establishment of a second front. Instead, it had maintained a primarily defensive orientation along the Golan Heights. While their Arab allies were being soundly defeated on 7 and 8 June, the Syrians were content to limit themselves to sporadic shelling of nearby Jewish settlements. [Ref. 11:p. 147]

Once the war against Jordan was finished, the IDF turned its attention to Syria and the Golan Heights. General Eleazar, Northern Commander, chose a frontal attack at several points aimed at masking his main thrust and preventing Syrian concentration against any one point. For his main thrust, he chose the northern approach, the most difficult terrain. In so doing, he attacked along the line of least expectation and fighting was concluded in 27 hours with the IDF within striking distance of Damascus [Ref. 11:p. 147]. This operation is depicted in Figure 6 [Ref. 11:p. 149].

E. RESULTS

The aftermath of the Six-Day War fundamentally altered Israel's strategic situation. For the first time in its history, it had the benefit of defense in depth. From the south, it had the Sinai Desert to act as a buffer. Control of the West Bank had expanded the narrow center of Israel and pushed back potentially hostile forces. In the north, the Golan

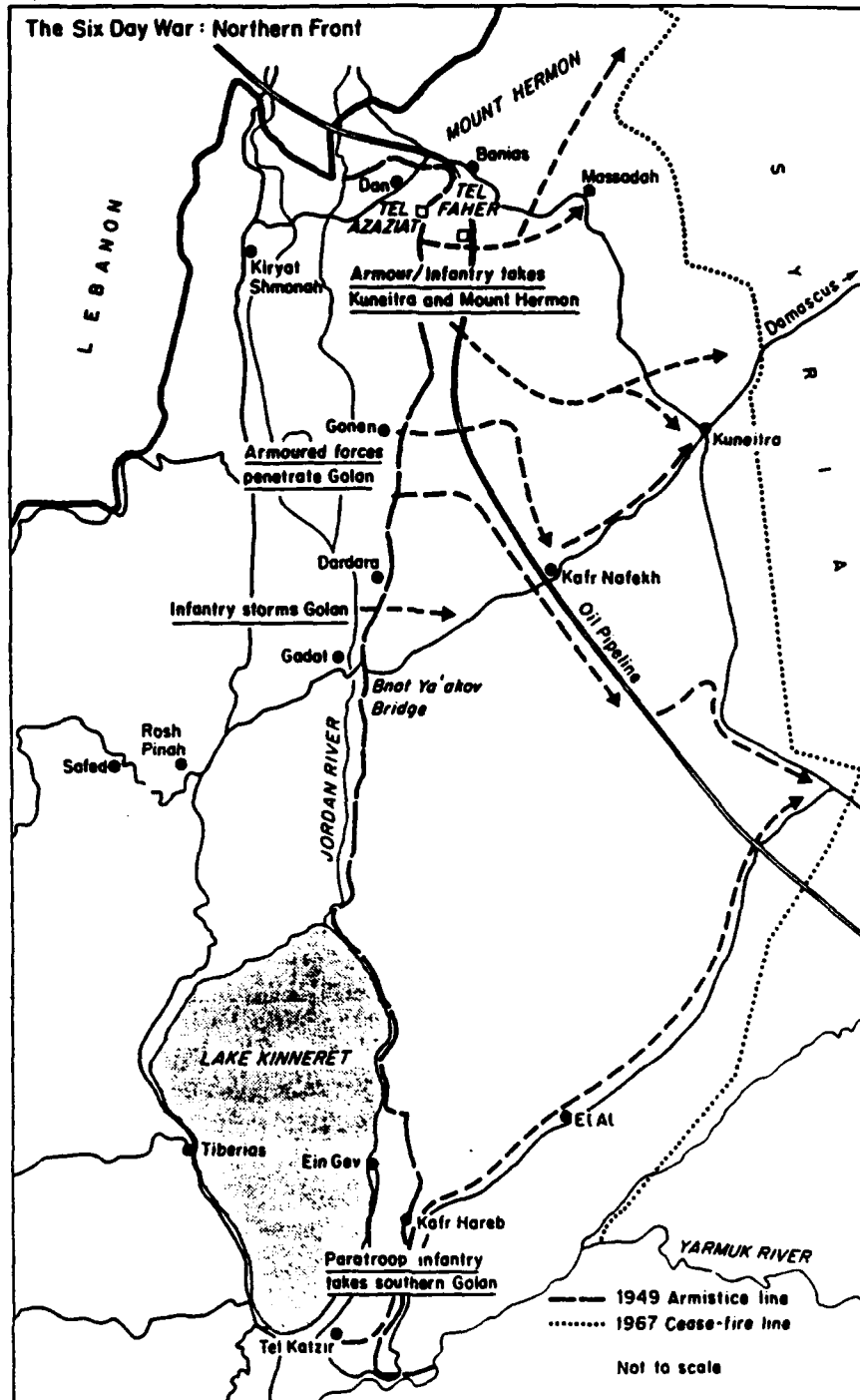


Figure 6. Six-Day War: The Northern Front

Heights now offered the IDF the luxury of artillery and armor dominance over Damascus, in complete reversal of the pre-war situation. Indeed, Israel could now bargain for peace from a position of strength in the region. [Ref. 12:p. 189]

F. ANALYSIS

1. Inputs to the System

The IDF which accomplished the incredible feats of the Six-Day War was a fundamentally different organization than the one which captured the Sinai in 1956. The period between the wars had seen a fundamental evaluation of the structure of the IDF. Both civilian and military leadership had used the interim period to define the future role of the IDF based upon perceived or real changes in technology, the nature of the threat, socio-economic factors in Israeli society, and defense doctrine.

a. Technology

During the period leading to the Six-Day War, both the Arabs and Israelis embarked upon programs designed to exploit the increased technological capabilities of weapons systems. While the Arabs were supported in their efforts by the Soviets, the IDF was forced to modernize its existing stocks, attempt to purchase modern systems from abroad, and develop its fledgling domestic arms industry.

The IAF was in the process of purchasing modern fighter bombers from the U.S. and France when the war broke out. The U.S. fighters were delivered after the war, while changes in French foreign policy caused cancellation of arms sales to Israel. [Ref. 13:p. 39]

While the Egyptians were willing to accept any Soviet weapon they could get, the Israelis were extremely selective in absorbing increasingly advanced weapons. They purchased weapons selectively after conducting extensive testing to insure adequate performance to suit local conditions and Israeli tactics. Imported tanks were rebuilt for desert warfare and aircraft were modified according to Israeli specifications. The Israelis never permitted themselves to be overwhelmed by new technologies. [Ref. 8:p. 171]

b. *The Threat*

The Arabs not only had accepted large quantities of Soviet weapons but also had adopted Soviet doctrine and tactics. The Egyptian army in the early 1960s had deployed in the Sinai in accordance with Soviet techniques. It was deployed in several fortified lines flanked by natural obstacles. Located to the rear of these lines were large concentrations of armor. This was a clear example of the Soviet "sword and shield" doctrine, the lines being the shield and the massed armor the sword. These defensive perimeters were established along major axes of advance into the Sinai, insuring they could not be bypassed by the rapid tactics of the IDF [Ref. 11:p. 123]. In addition, the Egyptians had adopted the Soviet anti-tank tactic of massing their guns and training their crews to fire in salvos against one tank at a time [Ref. 8:p. 188].

c. *Socio-Economic Factors*

The rapid growth of Israeli society provided the means by which the IDF was restructured. Although the population of Israel tripled during the period 1948-1967, the gross national product was growing at

a rate of more than ten percent. In short order, citizens went from living in tents and wooden huts to modern housing. Whereas rationing had been the norm in the early days of Israeli society, goods were now in relative abundance. These economic developments allowed the nation to absorb a steadily increasing defense budget and bring about upgrades in the defense forces. [Ref. 8:p. 170]

d. *Changing Doctrine*

The fundamental lesson the Israelis learned from the 1956 Sinai campaign was that mobile warfare was the doctrine which best fit their defense needs. More than ever, the Israelis were convinced of the need for a short war capability—that their survival depended on quick and decisive victories [Ref. 4:p. 14]. This, coupled with their offensive orientation, dictated the structure of the IDF [Ref. 8: p. 172]. This national military doctrine drove a great many of the force changes in the years leading to the Six-Day War but, in the view of one author, “the most important development in the ground forces was the expansion of the Armored Corps and its transformation into the decisive arm.” [Ref. 11:p. 121] Equally important, in the author’s opinion, was the increased role of the Israeli Air Force as a means of accomplishing an effective first strike.

In a nation with limited resources such as Israel, a decision to make the armor branch the decisive arm can have far-reaching consequences. The military leaders of the Armor Corps during this period believed that armor alone could win a decision on the battlefield and that infantry could be relegated to support actions. This feeling led to decisions to allocate resources to upgrading the armor branch with new

equipment, while the infantry was to maintain the aging fleet of M3 half-tracks. During the Six-Day War, this predominance of armor was validated, but only because of the lack of sophisticated anti-tank weapons in the hands of Arab infantry.

Air superiority was a key tenet in the defense doctrine of Israel. It was clearly dominant in that,

during the sixties the Air Force continued to enjoy a clear priority in the allocation of money and manpower; it had the pick of the country's youth in its all volunteer force and received a major share of the hard currency in the procurement budget. [Ref. 8:p. 192]

The IAF had convinced the leadership, in the author's opinion, that while ground forces could fight and win in less than the most modern equipment, the air force must have the capacity to fight an enemy from an equal footing.

2. Organizational Structure

The result of the interim period of 1956-1967 was an IDF that had been fundamentally restructured based upon the aforementioned inputs to the organizational system. While the changes were dramatic, it is important to note that they were gradual in nature and evolved over the decade. The IDF, by its very nature, can never "stand down." Organizational changes must be accomplished in the context of constant military preparedness.

a. Strategic Apex

The General Headquarters (GHQ) of the IDF during the Six-Day War was a much more viable entity than it had been only a decade earlier. The affirmation of the short-war doctrine led to the need for a

GHQ capable of providing command and control over each of the areas of operation. The GHQ had become an integrated and centralized structure without separate staffs for the air force, navy, or army. The Chief of Staff is the Supreme Commander and, in time of war, the chiefs of the air force and navy serve as his advisors. [Ref. 9:p. 123]

Nowhere was the importance of the GHQ more evident than in the war against Jordan. Having properly identified Egypt as the primary threat, few forces were allocated to the Central Command. In fact, intense efforts were made to avert a war with King Hussein. Once the war became inevitable, however, GHQ maneuvered adequate forces from Northern Command and from reserve brigades to defeat the Jordanians in short order. [Ref. 11:p. 143]

Also at the strategic apex of the IDF were men who had experienced the two previous wars, Moshe Dayan and Yitzhak Rabin. Dayan was installed as Minister of Defense just days prior to the outbreak of the war. He brought to his new post, and the IDF, charisma and daring leadership at a crucial time. Likewise, Rabin, a veteran Palmach officer, had overseen the changes [Ref. 8:p. 202] in the IDF as Chief of Staff and was intimately familiar with its strengths and weaknesses.

b. *The Middle Line*

The role of the officer in the IDF had been validated during the War of Independence and the Sinai Campaign. In the years leading to the Six-Day War it was formalized. Dayan insisted upon his vision of the heroic combat leader who always leads his soldiers from the front. While this philosophy results in extremely high officer casualty rates (23

percent of IDF casualties in the 1967 war were either officers or NCOs), it also remains one of the main secrets of Israel's success. [Ref. 12:p. 190]

Policies were put into place in the IDF to insure that a talented supply of officers would be available to lead. Officers are selected from among the newest recruits based upon leadership attributes and military proficiency. Upon selection, they are aggressively schooled and trained for their role as combat leaders. In order to receive exposure to all facets of the IDF, officers are rotated from staff to command assignments throughout their careers. As Chief of Staff, Rabin instituted a program to train officers in modern management and planning methods, resulting in a more professional officer corps. [Ref. 8:p. 181]

Although not a formal regulation, Dayan instituted a policy calling for officers to retire from active duty by the age of 40. He felt that this policy had the dual benefit of allowing junior officers to move up the ranks quickly while providing the nation's economy with a source of talented leaders young enough to pursue a second career. [Ref. 8:p. 180]

c. The Operating Core

While other aspects of the IDF were undergoing a fundamental restructuring, the operating core of the organization retained its basic character—an army which "...came from the people and returns to the people." [Ref. 11 :p. 115] While the nature of the IDF at its most basic level (a large reserve force with an active duty contingent of conscripts and a small nucleus of career soldiers) did not change, the quality of the manpower pool increased greatly. Conscripts were in better physical

shape, better educated, and better trained because their instructors were products of the post-1956 Army. [Ref. 8:p. 180]

One clear change at the operating core level was in the role of women in the IDF. No longer assigned to combat units, women were nonetheless utilized in key administrative and logistical functions. The females of the IDF were assigned in groups no smaller than 15. Discipline of female soldiers was to be handled only by female superiors. In addition, in an effort to maintain discipline, female soldiers were assigned to units close to their homes whenever possible so that they did not spend the night in IDF barracks. [Ref. 11:p. 117]

d. *The Support Structure*

The supporting structure of the IDF underwent a radical restructuring in response to doctrine and the nature of the modern battlefield. In order to meet the needs of the mobile warfare doctrine they had established, the IDF adopted from the U.S. Army the concept of the "push system," which moved supplies forward without waiting for specific requirements. It was understood that as mechanized units maneuver on the battlefield, supply lines must follow. The push system of support is a concept where fuel, ammunition, and other supplies are sent up the main axis of advance without waiting for a specific unit's request. Under this system in the IDF, area supply depots would send forward supplies to division support elements. At division, the supplies would be broken down into smaller convoys and pushed to brigades, and so on until the supplies would reach the actual combat units [Ref. 8:p. 174]. This

system allowed tactical commanders the freedom to maneuver without the constant fear of exhausting critical supplies.

Chief of Staff Rabin proved to be particularly innovative in the area of support. Under his guidance, the IDF upgraded the capability of support services such as ordnance and logistics. Additionally, he introduced modern management techniques and computers to streamline administrative requirements. [Ref. 8:p. 177]

e. *The Technostructure*

The GHQ had experimented in the 1956 war with an *ugdah* or divisional system. Prior to the 1967 war, this system was fully implemented in the IDF. The *ugdah* concept [Ref. 8:p. 176] could cater to any combination of armor, infantry, artillery, or service units, as opposed to the more rigid structure of a conventional division. In the *ugdah*, units were allocated to the divisional structure with self-contained supporting units, allowing for more rapid and flexible force organization. These divisions were, in 1967, really task forces and were in no way standardized. Their strength lay in the flexibility they allowed the commanders to shift reserve forces "internally" to whichever division was most in need. [Ref. 18:p. 201]

f. *Ideology*

By 1967, a new generation of citizen-soldiers had taken the place of the veterans of the War of Independence and the Sinai Campaign. There existed some apprehension about the willingness of this group to fight and, if necessary, die for the preservation of the State of Israel. These doubts proved unfounded, however, as the new IDF fighter

understood there could be no retreat or surrender as the enemy was bent on destroying his home, his family, and his nation. Limited alternatives, Israelis have shown time and again, make for formidable fighters. [Ref. 11:p. 116]

An interesting aspect of the Jewish character is a "...curious ambivalence towards the enemy." [Ref. 11:p. 116] Although made up of fierce fighters, the IDF has never adopted an objective of inflicting maximum casualties on the enemy. Indeed, measures are taken to insure that prisoners of war are treated with dignity and compassion. Standing orders were in place warning soldiers not to shoot at surrendering or fleeing enemies and to protect civilians and their property. Incidents violating this informal code of conduct are treated with the harshest of discipline. [Ref. 11:p. 116]

3. Organizational Outputs

The result of the restructuring of the IDF during the period between the Sinai campaign and the Six-Day War was a force capable of mobile, offensive warfare.

a. Unity of Command

The concept of optional control, merely a theory in 1956, was fully validated during the Six-Day War. This command and control (C²) technique insures that "...middle-rank officers in charge of battalions and brigades are given full powers to make tactical decisions in the course of the battle....," while still allowing senior commanders the option to intervene when necessary. [Ref. 8:pp. 173-174]

This C² doctrine places a tremendous reliance on the skills and initiatives of the IDF's leadership. It demands more than anything else accurate reporting. This system cannot work with officers who "...try to conceal their failures or exaggerate enemy strengths...." [Ref. 8:p. 173] If reporting is inaccurate, a vicious circle develops. Having supplied false information to a superior, an officer may not trust orders received from above because he knows that those orders are based upon inaccurate reports.

Given accurate reporting, however, the IDF believed that optional control can act as a force multiplier on the battlefield. It allows an army to respond in real time to tactical opportunities which present themselves on the battlefield. Israeli officers are taught that the "fog of war" can be used to advantage [Ref. 8:p. 173]. When plans break down and the enemy responds in an unexpected manner, IDF leaders are taught to continue fighting and moving toward their objectives. They are instructed to "...impose their will on the confusion of battle and determine its outcome." [Ref. 8:p. 174] Optional control, coupled with the principle of maintenance of the objective, allows for total flexibility, except for the choice of the objective. In that respect, leaders are able to work backwards in their planning, making decisions based on their units' strengths and weaknesses, as long as the objective is attained. [Ref. 8:p. 174]

b. Surprise

The initial air strike by the IAF, in a carefully planned attack, took the Egyptian and other Arab air forces by surprise and

paved the way for victory by the ground forces [Ref. 12:p. 188]. The element of surprise seriously disrupted the Egyptian and Jordanian command, allowing IDF ground forces to exploit their superior combat effectiveness [Ref. 15:p. 335] without having to cope with the enemy's air power. The IDF may not have fully recognized, however, the devastating physical and psychological effects of the air strikes on the Arab ground forces, and may have overestimated their combat effectiveness as a result. [Ref. 15:p. 346]

The IDF, by conducting the massive preemptive air attack, was taking a risk. In essence, the leadership was leaving Israel unprotected from enemy air attacks in order to undertake this mission. This was a measured risk that had been carefully weighed by the Israeli leadership.

c. *Offensive*

The IDF strategy of taking the battle to enemy territory and seizing the offensive was fully validated during the Six-Day War. Likewise, the importance of the first strike was reinforced.

d. *Maneuver*

While the nature of the war resulted in little uniformity in the tactics used, the predominance of armor and the IAF were affirmed. Only in the Syrian conflict did infantry fight independently, further serving to diminish its role in the IDF. The IDF used the mobility of its armored forces in concert with its flexible command structures to gain local superiority at the decisive point. Excellent tank gunnery allowed

massed armored formations to role through open desert, unhampered by enemy anti-tank positions. [Ref. 11:p. 151]

The leaders of the Armor Corps felt [Ref. 8:p. 192] that the lessons of the 1967 war proved that well-trained armored forces do not need mechanized infantry forces accompanying them into battle but only to mop up after them. This interpretation would prove costly in the opening days of the Yom Kippur war, however.

4. Summary

It is somewhat difficult to make broad assessments of the IDF's combat actions in 1967. In many respects, this was three wars fought against three very different enemies. Nevertheless, the Six-Day War was a proven, undeniable victory for the IDF and an affirmation of the structural changes which had occurred since 1956. While the lessons they learned from this war were valid for the most part, some in the Israeli Command credited themselves [Ref. 12:p. 189] with achievements that were more a result of Arab incompetence than Israeli effectiveness. Particularly in the area of air and armor dominance, the IDF would learn that all combat forces have their limitations.

G. THE ENVIRONMENT

In the author's opinion, the IDF was operating in a complex and dynamic environment in 1967. The variety which existed among the multiple threats, changing weapons technology, and socio-economic factors affected this assessment.

While the General Headquarters had fully evolved as a viable command organization by this time, there was an organizational trend

toward decentralization. This occurs simply because any single man or headquarters cannot handle the multitude of information which is inherent in a complex and dynamic environment [Ref. 7:p. 295]. Flexibility was attained through utilizing the *ugdah* system and tailoring various units to meet the needs of a rapidly changing situation. Although each *ugdah* was not standardized, the process of task organization had been.

VI. THE YOM KIPPUR WAR

And fight for your brothers, your sons and daughters, your wives
and your homes.

Nehemiah 4:8

A. SITUATION

The Yom Kippur War, launched as a coordinated attack by an Arab coalition, caught the IDF by surprise. Overconfidence on the part of Israeli civilian and military leadership resulted in a false sense of security concerning Arab intentions. In many respects, the origins of the Yom Kippur War can be traced back to the conclusion of the 1967 Six-Day War. While the Arab leadership did not forget the lessons of that resounding defeat, they did embark upon a long-term strategy aimed at regaining the lost territories. President Sadat of Egypt, in particular, knew that the solution would have to be a combination of political as well as military moves. He also recognized that any military action he took would have to be massive in order to counter the IDF's tendency to retaliate with massive force against even the most minor operations. [Ref. 12:p. 227]

In part, the IDF was caught unprepared due to the prolonged War of Attrition which took place almost immediately upon the conclusion of the Six-Day War and lasted until August 1970, when an American-sponsored cease-fire [Ref. 9:p. 178] went into effect. The stated aim of the Arabs during this war was to wear Israel down by hammering away at her defenses and inflicting unacceptable casualties.

The War of Attrition caused the IDF to fight with a defensive orientation, from static lines. Since plans and operations had always been directed towards an offensive mode, this was a radical departure from its normal doctrine. There was a great concern on the part of many in Israel that fighting on the defensive would stymie the initiative and aggressiveness of its soldiers. [Ref. 9:p. 180]

Repeated exercises by the Egyptians on their side of the Suez Canal had made the IDF's intelligence community complacent. While there were massive amounts of information available indicating that an Arab attack was imminent, the intelligence branch [Ref. 15:p. 408] dismissed it out of hand. When the attack was launched at 1400 on 6 October 1973, the IDF was woefully unprepared. This would nearly cost them everything.

B. ENEMY FORCES

The reason many in Israel discounted the likelihood of an Arab attack was the perception that the IAF was simply too dominant in the region. The conventional wisdom was that until the Arabs had the capability to neutralize the Air Force of Israel, they would not attempt an attack. The Arabs recognized that

[T]he solution was to create an anti-aircraft umbrella by dense massing and mixing of numerous systems which would provide redundant coverage and negate the effectiveness of Israeli electronic countermeasures against any single system. [Ref. 13:p. 61]

The Soviets provided Egypt and Syria with such a system, consisting of SAM-2, SAM-3, and SAM-6 as well as conventional air defense weapons. In addition, the Soviets provided SCUD surface-to-surface missiles,

which would threaten cities in Israel in the event of deep penetrations by IAF fighter bombers into Egypt or Syria. [Ref. 12:p. 227]

The Arabs also learned lessons from 1967 and agreed to launch attacks simultaneously in order to stretch the IDF to its limits. Both Syria and Egypt agreed to attack along broad fronts in an attempt to spread the IDF to its breaking point.

The strength of the Egyptian army just prior to the war included approximately 300,000 soldiers, 1,600 tanks, 1,850 artillery pieces, and 62 SAM batteries. The Syrians had 190,000 soldiers, 1,500 tanks, 600 artillery pieces, and 38 SAM batteries. [Ref. 13:p. 62]

C. FRIENDLY FORCE

During one of the periodic lulls in the War of Attrition, the IDF constructed a series of concrete fortifications along the Suez Canal. These positions were not originally intended to be heavily defended fighting positions but rather a series of lookouts. Soon, however, various factions of the IDF insisted on increasing the fighting abilities of this so-called Bar-Lev line and firing ramps for tanks were constructed. What resulted, in the author's opinion, was a combination of both concepts— observation posts with limited fighting capabilities.

The interval from 1967 to 1973 had seen the transformation of the IDF from an organization heavily dependent on manpower to one heavy in hardware. Massive American arms and equipment [Ref. 18:p. 203] had been absorbed by the Israelis. The IDF when fully mobilized could field over 300,000 soldiers, 2,000 tanks, and 900 guns and heavy mortars. In

terms of units, this equated to 17 brigades of armor, three airborne brigades, and a few regular infantry brigades. [Ref. 13:p. 62]

D. OPERATIONS

The three-week Yom Kippur War can be divided into four major phases: the holding phase of 6-7 October, the counter-attacks of 8-10 October, attacks against Syria with a repulse of the Egyptian attack 11-14 October, and IDF offensive 15-25 October. [Ref. 11:p. 185]

1. The Holding Phase: 6-7 October

The Egyptians attacked across the Suez Canal using established Soviet doctrine. Forward elements of five divisions crossed in rubber boats. While some engaged positions along the Bar-Lev line, others penetrated deep to establish anti-tank positions to screen the crossing of the main body. The lightly held IDF positions proved to be no match in stopping the massive Egyptian crossing, although they did manage to delay the onslaught. The IDF active armored division in the Sinai fought a series of disjointed actions in attempting to relieve the Bar-Lev strong points and regain control of the canal. Their efforts did little but result in the near decimation of the division. [Ref. 11:p. 186]

The war in the north against Syria went much better for the IDF. Syria attacked along three major axes: one in the north, two in the south. The armored brigades of the IDF fought well against the quantitatively superior force. Much of the attacking force was destroyed from prepared positions using excellent tank gunnery skills. Superior Syrian numbers began to overwhelm the southern flank of the Golan defenses

and the IAF was diverted to slow them down until IDF reserve brigades could be mustered and employed. [Ref. 11:p. 188]

2. Counter-Attacks: 8-10 October

The IDF's predisposition to always seek the offensive was evident on the southern front on 8 October. General Gonen, commander of the Southern Front, attempted to launch a massive counter-attack. The concept was for one division to penetrate the Egyptian lines all the way to the canal and then roll up the exposed enemy flanks by wheeling south. The attack failed miserably as the armor moved without infantry support into a mass of concentrated Egyptian anti-tank weapons. The disastrous operation resulted in General Gonen being replaced by General Bar-Lev. [Ref. 11:p. 190]

The war in the north continued to go much better for the IDF. Fresh divisions were launched against the southern and central sectors of the Syrian army, and while their resistance was determined, the IDF drove them back. The IAF had mastered the use of electronic counter-measures to diminish the effectiveness of the SAM batteries and allow them to help influence the outcome of the ground battle. In an effort to send a message to the Jordanians not to enter the war, as well as meet head-on three advancing Iraqi divisions, the decision was made to continue the attack into Syria.

3. Northern Offensive and Repulse the Egyptians: 11-14 Oct

The commander of the Northern Front, General Hofi, decided to attack from his northernmost sector. This, he felt, would offer the dual advantage of protecting his flank with Mount Hermon while forcing the

Syrians onto the defensive. An additional attack was planned along the Kuneitra-Damascus axis, with the final division used as a screening force on the flanks against a suspected Jordanian, Saudi, and Iraqi counter-attack. By the morning of the 12th, both attacks had penetrated Syrian defenses, inflicting heavy casualties on the Arab coalition. In all, the Syrians lost 1,150 tanks, the Iraqis about 100, and the Jordanians 50. The IDF in this sector lost about 100 tanks, but many more were damaged. The role of the IAF in forging this victory cannot be underestimated. [Ref. 11:p. 193]

In an effort to save the Syrian forces from total defeat, the Egyptians began moving their armor reserves across the Suez Canal in preparation for a major offensive. By now, however, the reserves of the IDF had formed in the Sinai and consisted of more than 700 tanks. In the biggest tank battle since WW II, the Egyptians lost almost half of their armored forces in one day. IDF losses stood at six. The Egyptians had advanced beyond the protection of their air-defense umbrella, making them vulnerable to IAF attacks. This, coupled with superior IDF gunnery skill and American TOW missiles, had resulted in the Egyptian debacle. [Ref. 21:p. 18]

4. IDF Counter-Offensive: 15-25 October

In order to bring the war to a close on its terms, the IDF conducted Operation Gazelle (an offensive across the Suez Canal). This operation is depicted in Figure 7 [Ref. 11:p. 196]. This was felt to be the only way to dislodge the Egyptians from their heavily defended positions on

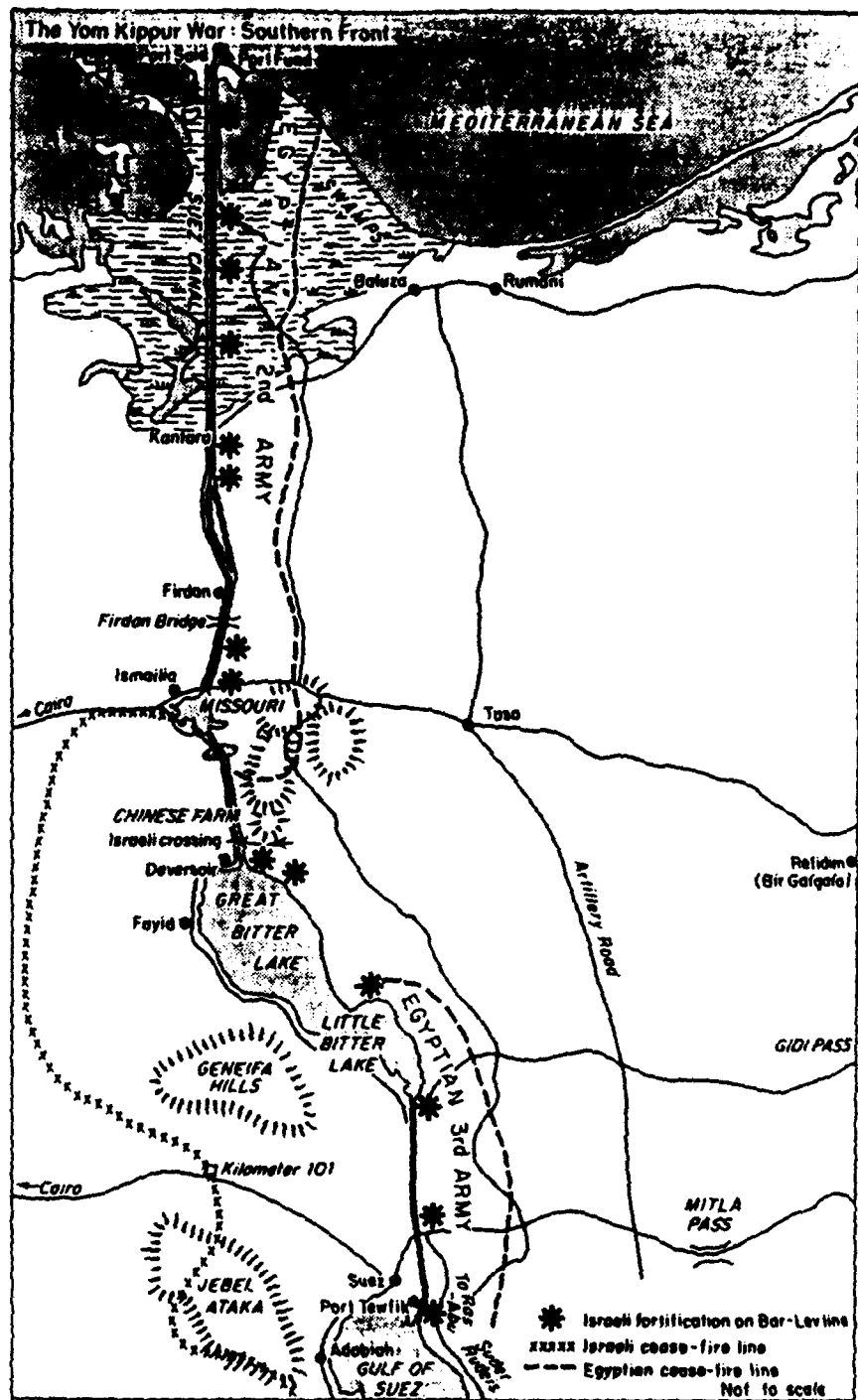


Figure 7. The Yom Kippur War: Southern Front

the east side of the canal while utilizing the IDF's mastery of mobile warfare.

The actual crossing operation was conducted by the division of General Sharon. Using rubber rafts and ferries, he was able to transfer some of his division across in full view of the surprised and disoriented Egyptians. After the IDF engineers had established two bridges, elements of three divisions poured across, effectively cutting off Egypt's Third Army. A hasty cease-fire was imposed by the United Nations with the IDF poised on the road to Cairo. [Ref. 21:p. 20]

E. RESULTS

In retrospect, while Israel won the war on the battlefield, in the author's opinion, it lost it politically. The United Nations Security Council had called for a cease-fire when Egypt's Third Army was about to be destroyed. As a result of the negotiated troop disengagements, the Israelis were forced to give up the territory they had captured on the west side of the canal. In addition, they had to withdraw off of the banks of the Suez in the east.

Most ominous was the crisis of confidence this war caused internally in Israel. The civilian leadership, particularly Defense Minister Moshe Dayan, was heavily criticized [Ref. 9:p. 220] for allowing a lack of preparedness and for their handling of the war. Also in the aftermath came the "War of the Generals," an ugly exchange between the IDF's top leadership assessing fault for problems in the conduct of the war. Even though it had won on the battlefield, the Israelis did not look or act like winners in the aftermath of the Yom Kippur War.

F. ANALYSIS

1. Inputs to the System

In the words of one noted author on the growth and change in the IDF from the end of the Six-Day War to the start of the Yom Kippur War, "[S]eldom has a victorious army undergone such a radical transformation so soon after its men and methods had proved so successful in battle." [Ref. 8:p. 336] The changes which occurred in the IDF during this period were brought about, once again, by a complex array of factors. Included among these were the nature of the threat faced during and after the years of the War of Attrition, a booming national economy, increasingly complex weaponry, and changes in doctrine brought about by necessity as well as by choice. It will be shown in this analysis that, in some cases, an unwillingness to impose organizational changes resulted in poor performance on the battlefield in the initial days of the Yom Kippur War.

a. Socio-Economic Factors

The growth of the Israeli economy during the years preceding the Yom Kippur War was incredible. For example, the number of private automobiles in Israel doubled between 1967 and 1971 [Ref. 8:p. 327]. During this time, the nation was running a full-employment economy. The War of Attrition was placing tremendous demands on the economy because the need for money and manpower to maintain the defensive posture was acute. The defense budget of Israel during these years [Ref. 8:p. 328] amounted to more than a quarter of the gross national product (GNP). The values of a consumer society adversely affected the

IDF. Reports of lower performance standards, faulty equipment maintenance, and loose inventory control were pervasive. [Ref. 11:p. 156]

During this period, there arose a small group of middle-class intellectuals in Israel who challenged the levels of military spending as well as the morality of holding onto the captured territories. Though their impact remained small, they served to undermine unity in national security efforts. [Ref. 11:p. 156]

The security demands of the nation were in conflict with the demands of the economy. Substantial resources were absorbed in allocating human and material assets in support of a broad range of security programs.

b. *The Threat*

While Israel's victory in the Six-Day War significantly improved its geostrategic position, it also vastly increased the borders it was called upon to defend. While Israel has always relied upon a small standing force, supplemented by a huge reserve, the Arab nations have maintained some of the largest standing armies in the world. This fact, coupled with massive Soviet arms transfusions, dramatically increased the scope of the threat faced by the IDF.

Also, the captured territories greatly increased the role of the Israeli Navy. Whereas before 1967, the navy provided mainly coastal defense, the capture of the Sinai greatly increased the Israeli border, and thus the threat, on the sea. [Ref. 11:p. 164]

c. Weapons Technology

One of the major deterrents to an Egyptian attack across the Suez Canal had been the vivid memories of the air superiority achieved by the IAF in 1967. Thus, the introduction of the latest Soviet surface-to-air missiles (SAM) into the region fundamentally altered the security equation.

Advances in anti-tank weapons would also prove significant, although IDF doctrine did not respond prior to the 1973 war. Man-packed and reliable, these weapons would alter the IDF preference toward the "all-armor" assaults it had adopted as a result of successes in the Six-Day War.

d. Doctrinal Changes

While the lessons of the Six-Day War appeared to vindicate the proponents of the "all-armor" doctrine, this approach was not accepted without disagreement. Some in the IDF leadership insisted on a more balanced approach of combined arms operations. The net result, however, was a force still heavily oriented towards armor with the infantry relegated to a supporting role. The tank purists managed to discount the threat posed by anti-tank guided missiles and rocket-propelled grenades. It was their belief that in the desert, massive tank formations could penetrate concentrated anti-tank weapons through speed and fire-power. [Ref. 11;p. 160]

The result of the capture of all the territory of the Six-Day War was a transformation of the IDF from a mobile force to one of territorial defense. The manner of accomplishing this new mission was the

subject of considerable debate among the leadership. The concept of the Bar-Lev line in particular caused considerable controversy from a faction in the IDF opposed to any sort of static orientation. In any case, while manpower issues began to become more pressing as the nature of the mission began to change, so too did the heavy reliance on the intelligence services. All IDF doctrine was based on the understanding that there would be at least a 48-hour warning prior to an Arab attack in which to mobilize the reserves. [Ref. 9:pp. 212-213]

2. Organizational Structure

In the author's opinion, the willingness of the IDF to introspectively evaluate its organization and the way it operates has been a consistent quality. In some instances, however, the lessons of 1967 were either misread or not read at all, resulting in limited or improper organizational changes in the IDF. In addition, the IDF experienced what might be called "growing pains" as the size and complexity of the organization expanded.

a. Strategic Apex

While the GHQ had firmly established its role within the IDF as the focal point of command and control activities, the method of manning and operating this organization was in disrepair. Most of the senior generals who had led the army through the previous wars had left active service. Yet, while they were replaced by able leaders, they continued to remain around the periphery of daily operations of the IDF. Indeed, many of the senior leaders had assumed political positions in the government (e.g., Sharon, Rabin, Bar-Lev). As a result, much of the

internal conflict which is inherent in any military organization attempting to redefine its missions and roles was played out in a very public fashion.

The assumption of command by the "new" generation of leaders resulted in some real operational difficulties. On the Southern Front, for example, General Gonen was in command. One of his division commanders was General Sharon, who only months before had been the front commander. Naturally, the command relationship here was awkward at best, impossible at worst. [Ref. 12:pp. 254-255]

At the GHQ, during the initial stages of the war when things were not going well for the IDF, General Eleazer was visited by three former chiefs of staff offering assistance. In the clamor and confusion of the command post, such assistance was hardly welcome or productive to the effort. [Ref. 18:p. 209]

b. *Middle Line and Operating Core*

Given the structural nature of the changes which occurred after the 1967 war, the middle line and the operating core will be analyzed together. The analysis will be done in three parts: the ground forces, the air forces, and the naval forces of the IDF.

(1) IDF Ground Forces. The fundamental challenge to the IDF ground forces was to build a force oriented on the territorial defense needs while maintaining constant combat readiness. By 1973, the IDF could deploy seven armored divisions. Each of these divisions [Ref. 11:p. 159] was configured with three armored brigades of two tank battalions each, a reconnaissance battalion, an artillery regiment, and small supporting elements. While each armored division had an infantry battalion

in each brigade, "half-tracks and APCs, serving both as personnel and weapons carriers, were considered at best as secondary vehicles, and often as superfluous impediments in an armored battle." [Ref. 11:p. 159]

The IDF discovered the value of artillery during the Six-Day War and made efforts to upgrade its capabilities in this area. By 1973, IDF artillery was organized in regiments and entirely equipped with self-propelled guns. [Ref. 11:p. 161]

(2) Air Forces. The performance of the IAF in the Six-Day War had assured it a prominent place in the budget and defense decisions of Israel. Indeed, many in Israel saw the IAF as an "all-purpose" defense force. The most sophisticated aircraft available were purchased from the United States. Additionally, the presence of Soviet SAM batteries in Egypt and Syrian resulted in Israel receiving from the U.S. [Ref. 11:p. 163] the most advanced electronic counter-measure equipment available. The personnel assigned to the IAF continued to be the cream of the crop and underwent rigorous training.

(3) The Israeli Navy. The increased coastline of Israel resulted in the expanded importance of the navy. Efforts were undertaken, successfully, by Israel to purchase missile-capable boats in order to gain some depth to their coastal defense. Additionally, the navy established an elite force of commandos who had repeatedly distinguished themselves. Personnel volunteering for the navy signed a career contract and enlisted volunteers grew as the importance and stature of the service was enhanced. The commander of the Israeli Navy in 1972 defined his

services mission "...as defending Israel's coastline and sea communications by offensive action." [Ref. 11:p. 165]

c. Support Structure

Based upon the lack of support from her so-called allies in 1967, Israel made the conscious decision to become self-sufficient in as many areas of weaponry as possible. While national industry was still incapable of producing battle tanks and jet fighters, it did develop production capabilities in light arms and all types of ammunition. Also, long-term development programs were established for the future production of sophisticated weaponry. [Ref. 8:p. 329]

d. Technostructure

The sheer size of the post-1967 IDF, coupled with the infusion of massive amounts of American arms, resulted in organizational change. After a great degree of argument, the decision was reached to alter the *ugdah* (division). As opposed to the flexible approach adopted in the Six-Day War, the division was standardized prior to 1973. The feeling was that standardization of the division would result in a wider span of control for a commander. In one analyst's opinion, however,

these changes, as well as the general neglect of the infantry, including mechanized infantry, made subordinate units up to brigade less self-contained and less able to deal with a variety of threats. [Ref. 18:p. 204]

e. Ideology

The level of tolerance for casualties in the IDF is very low. Indeed, many operational decisions are made strictly on the basis of possible friendly losses. While this has a tremendous impact on the soldiers'

morale (they know that their lives will not be risked frivolously), it can also be used against the IDF by its enemies [Ref. 8:p. 206]. President Nasser of Egypt once said, "...I cannot conquer Sinai, but I can grind Israel down and break her spirit." [Ref. 9:p. 182] The memories of the Nazi Holocaust make the Israelis extremely sensitive to any loss of life. [Ref. 9:p. 182]

3. Organizational Outputs

Despite being surprised at the onset of the Yom Kippur War, the IDF was able to recover in time to forge a victory on the battlefield. Its performance in this war clearly showed evidence that its soldiers were indeed human and capable of error, however. In the upcoming output analysis, the author will show where the IDF failed to respond as an organization to the aforementioned environmental inputs.

a. Security

The failure of the IDF intelligence community prior to the Yom Kippur War was a classic one. It failed to focus on the enemy's capabilities [Ref. 15:p. 585] and instead focused on what it perceived to be his intentions. The failure of the intelligence community to give adequate warning nearly cost Israel its very existence. The defense concept of Israel had always been based upon the fact that warnings of hostile intentions would be received in sufficient time to mobilize the reserves. In effect, Israeli Intelligence failed to properly evaluate the material it had collected. [Ref. 9:p. 210]

In some respects, Israeli leadership, both military and civilian, had become anchored to the opinion or belief that the Arabs simply

would not attack again. Despite overwhelming evidence to the contrary, the leadership chose to close its collective eyes, allowing the IDF to be surprised on 6 October.

b. *Unity of Command*

The activities on the Southern Front in the opening days of the Yom Kippur War were a case study in improper command and control. The previously alluded-to lack of personal trust among the senior commanders resulted in a breakdown of the IDF optional control doctrine. Indeed, what resulted, in the opinion of one author [Ref. 18:p. 228], was reverse optional control. Distrust among the senior leadership, starting with Chief of Staff Eleazar and extending through Front Commander Gonen and down to division commanders such as Sharon, resulted in each level reserving approval of important decisions for itself. This in turn drove commanders to alter their plans and operations as maintaining communications with higher headquarters became the overriding concern, taking priority over fighting the battle. The result of this aberration was a total lack of initiative at the unit level, coupled with the dysfunctional circumstance of the commander with the least information [Ref. 18:p. 231] making the major decisions in a battle. Fortunately, this problem was quickly rectified by the relief of General Gonen with General Bar-Lev. Trust, re-introduced to the command, allowed for the implementation of optional control and the successful accomplishment of missions in the Sinai.

c. Maneuver

The most obvious lesson to come out of the Yom Kippur War was the need for a more balanced approach to force structure in the IDF. The combination of enemy infantrymen armed with anti-tank weapons with the SAM batteries limiting the ability of the IAF to influence the ground battle called for a reappraisal of the "all-armor" doctrine. Against modern tank defenses, this approach simply proved inadequate. The massed firepower of the long-range anti-tank weapons simply could no longer be overwhelmed by armored forces acting alone. Instead, it was necessary for IDF infantry to move with the tanks, providing the capability to rout out the anti-tank positions and allow the armored forces to take full advantage of their speed and mobility. Additionally, the need for adequate mortar and artillery support to assist in clearing the advance of the armored forces of dug-in infantry with anti-tank weapons was never more evident. [Ref. 13:p. 71]

4. Summary

The lessons learned by the IDF in this war were certainly not all bad. Indeed, more than ever, the qualitative edge of the IDF proved capable of beating quantitatively superior forces. This war identified to the IDF leadership, however, some fundamental flaws in the organization of the IDF [Ref. 9:p. 228], such as the lack of a strategic reserve and the need to enlarge the standing portion of the force to counteract the Arabs. The IDF leadership also identified the need to develop local weapons industries to meet the demands of an increasingly complex battlefield.

G. THE ENVIRONMENT

As an organization, the IDF believed that it was in a complex, yet stable, environment in the period between 1967 and 1973. One senior IDF leader even remarked after the 1967 victory that "the enemy is not going to be able to fight for many years to come." [Ref. 11:p. 153]

In the author's opinion, the IDF misread the environment. This failure caused some improper organizational changes within the IDF, including the more rigid and standardized *ugdah*. This attempt at standardization proved costly, particularly in the Southern Front, where commanders appeared locked into predetermined plans and tactics with little room or desire for flexibility. Additionally, the complexity of the environment called for decentralization of command authority. Unfortunately, the awkward command relationships which had developed, particularly in the Southern Command, had made efficient decentralized command impossible.

A second flaw in the IDF at the time was an organizational tendency to simply ignore environmental variety. The intelligence branch in particular was anchored on one position and refused to believe obvious signals pointing to an imminent attack.

VII. LEBANON INVASION 1982

Of every tribe a thousand throughout all the tribes of Israel ye shall send to the war.

Numbers 31:5

A. SITUATION

In order to understand the context of the operation the IDF undertook in Lebanon in 1982, one must have a working knowledge of the roots of the Palestine Liberation Organization (PLO). The creation of the PLO in 1964 was prompted partly by Palestinian pressures on Arab states to support their nationalist goals but mainly because of the nature of the inter-Arab politics of the time and the self-interests of the states involved [Ref. 22:p. 22]. The PLO was designed to act as an umbrella organization to provide some structure to the many anti-Israel guerilla factions in existence at the time. The most powerful of these factions was Al Fatah, led by Yasir Arafat, which would come to dominate the PLO from both a military and political perspective. Fatah controls the PLO's most important institutions and fills its diplomatic posts abroad [Ref. 22:p. 42]. The PLO does not, however, speak with one voice. The PLO is not a national group but an international organization that maintains connections with other guerilla movements throughout the world. It is an extremely factionalized organization with approximately 20 groups representing various constituencies and advocating (and sometimes pursuing) widely different political and military strategies. [Ref. 22:p. 26]

The PLO gained prominence in the region at the conclusion of the 1967 war as a result of a respectable military performance and the widespread belief that the organization was capable of inflicting damage upon Israel [Ref. 4:pp. 31-32]. After having suffered consecutive devastating defeats at the hands of the IDF, the Arab states [Ref. 4:p. 32] looked at the PLO as a convenient and inexpensive way to further their ultimate goal of the destruction of Israel. This support of the PLO was in lieu of direct military confrontation with the IDF and allowed the Arab states a means to maneuver between the U.S. and the Soviets for influence in the region as well as economic incentives. [Ref. 4:p. 32]

The PLO has never been solely a military force. Instead, armed struggle provided an immediate way to take action against Israel and gain credibility for the organization among other Arabs. Military struggle was thought less important than the act of resistance itself [Ref. 22:p. 86]. Changes in strategy have refocused the PLO into concentrating its attacks on Israel through political action on the world stage. First, the PLO has attempted to portray itself as a legitimate freedom fighter movement. Second, it has sought and received heavy financial support from Arab states which, in addition to furthering the war against Israel, sought to keep the Palestinians from causing unrest in their populations. Third, the PLO has adopted a strategy of international terrorism aimed at eroding support for Israel among western nations. A final tenet of the PLO has been to maintain enough of a military force to inflict unacceptable casualties on Israel as well as continue to maintain leverage on the Arab states, insuring their continuing financial support [Ref. 4:p. 33].

Overall, the PLO has long been committed to thwarting the Arab-Israeli peace process. They have reasoned that even another war that ends in defeat for the Arabs is preferable to a negotiated settlement. They reason that such a defeat might bring about the fall of moderate Arab regimes, particularly King Hussein of Jordan, and create the necessary turmoil in the region to achieve their organizational goals. [Ref. 11:p. 166]

The seeds of the conflict with Lebanon were sown during the Jordanian Civil War of 1970. The PLO had been fomenting internal unrest in Jordan, resulting in military action against them by King Hussein. Many PLO members were killed in this conflict and the remainder were driven into Syria. The Syrians [Ref. 12:p. 222] distrusted the PLO almost as much as the Jordanians and forced large numbers of these refugees into the Lebanon, a nation with a notoriously weak central government. While in Lebanon, the PLO was able to launch raids into Israel as well as bring the northern portions of Israeli settlements under artillery fire. [Ref. 12:p. 222]

B. ENEMY FORCES

The PLO in Lebanon was largely deployed in an area ranging from Beirut south to the Israeli border. The total number of Palestinians in this area was approximately 100,000, although of this total only about 15,000 could reasonably be described as fighters. Although equipment was never a problem for the PLO (because of almost unlimited support from the Soviets and other Arabs), effective utilization was another story. The PLO has never been configured to utilize tanks, for example. Instead, they would purchase them and position them in fixed sights. Similarly,

the artillery they purchased was almost never directed against IDF targets. Rather, it was used to harass civilian population centers. Above all else, it must be remembered that the PLO was configured as a guerilla force, not a conventional army. [Ref. 4:p. 50]

Along with the PLO in Lebanon, the IDF was faced with elements of the Syrian army. The Syrians had entered Lebanon in 1976 at the start of the Lebanese Civil War in an attempt to separate warring factions. They remained there, however, for reasons of their own. First, Syria had long considered Lebanon as part of its country and harbored thoughts of recapturing this nation [Ref. 4:p. 53]. Second, the Syrians knew that any attack from the IDF into their country would most likely come through the Bekka valley [Ref. 12:pp. 356-357]. It was here that they positioned the preponderance of their force. In all, the Syrian force in Lebanon totalled 30,000 men, 600 tanks, and 30 commando battalions [Ref. 4:p. 54].

C. FRIENDLY FORCES

Operation Peace for Galilee was the first war Israel fought where it was not at a numerical disadvantage regarding its enemy. The IDF launched the invasion on June 6, 1982 with its three active armored divisions. This war did not result in a general recall [Ref. 13:p. 78] of the reserve force, but four reserve armored divisions and several brigades of mechanized infantry were mobilized for the invasion. In total, the IDF would commit five armored divisions to the attack, along with an undetermined number of separate brigades. [Ref. 13:p. 78]

The Israelis established three objectives prior to undertaking the operation into Lebanon [Ref. 9:p. 243]. First, the IDF was to evict the PLO from Lebanon. Second, Israel sought to engineer the election of Bashir Gemayal as President of Lebanon— Gemayal was a man considered pro-Israeli and sure to keep out the Palestinians. A final goal was to drive the Syrians out of Lebanon.

D. OPERATIONS

The initial operational objectives of the move into Lebanon by the IDF were limited in scope. At least publicly, the IDF was committed to clearing the PLO up to 40 kilometers [Ref. 9:p. 245] from their northern border, basically out of artillery range. This limited objective did not, of course, address all the war aims of the Israelis, most specifically driving the Syrians out of Lebanon. This seeming inconsistency between national goals and operational plans, in the author's opinion, plagued the IDF throughout this operation. It seems clear in retrospect that the plan envisioned by the Israeli Cabinet and briefed to the world was not consistent with the larger objectives of Defense Minister Sharon.

The three active IDF divisions attacked along three different axes. Each was to move rapidly, bypassing isolated resistance to maintain the mobility of the attack. One division attacked up the western coast of Lebanon, along the Mediterranean. Its mission was to drive the PLO from the cities of Tyre and Sidon. [Ref. 12:p. 344]

The division in the center was to attack along the western slopes of the Lebanese mountain range, with the ultimate objective of severing the

Beirut-Damascus highway. Capturing this major line of communication, it was hoped, would drive the Syrians out of Lebanon. [Ref. 12:p. 344]

The division in the east was to attack into the PLO stronghold known as "Fatahland" as well as the Syrian-controlled Bekka valley. This portion of the overall operation [Ref. 12:p. 344] was aimed at securing the eastern flank of the IDF against any possible Syrian counterattack. The operational graphics for Operation Peace for Galilee are shown in Figure 8 [Ref. 3:p. 477].

E. RESULTS

IDF planners had anticipated that each of the attacking divisions would achieve its objectives with relative ease. While this proved to be the case in the west, the divisions in the center and the east ran into considerable resistance [Ref.9:p. 251]. The terrain in the center resulted in unsupported armor attacks along narrow roadways, where they met with a series of Syrian ambushes. It was not until five full days into the operation that this division had achieved its objective and severed the Beirut-Damascus highway. In the east, Syrian SAM batteries had severely impeded Israeli ground forces. In a stunning military operation, much of which is still highly classified, the IDF eliminated [Ref. 3:p. 466] these SAM sites, freeing up the ability of the ground forces to maneuver in the Bekka valley.

The second stage of Operation Peace for Galilee was the siege of Beirut. Trapped in the city was some 6500 Syrian soldiers and 11,000 PLO fighters. As Israeli forces encircled the Lebanese capital, the world

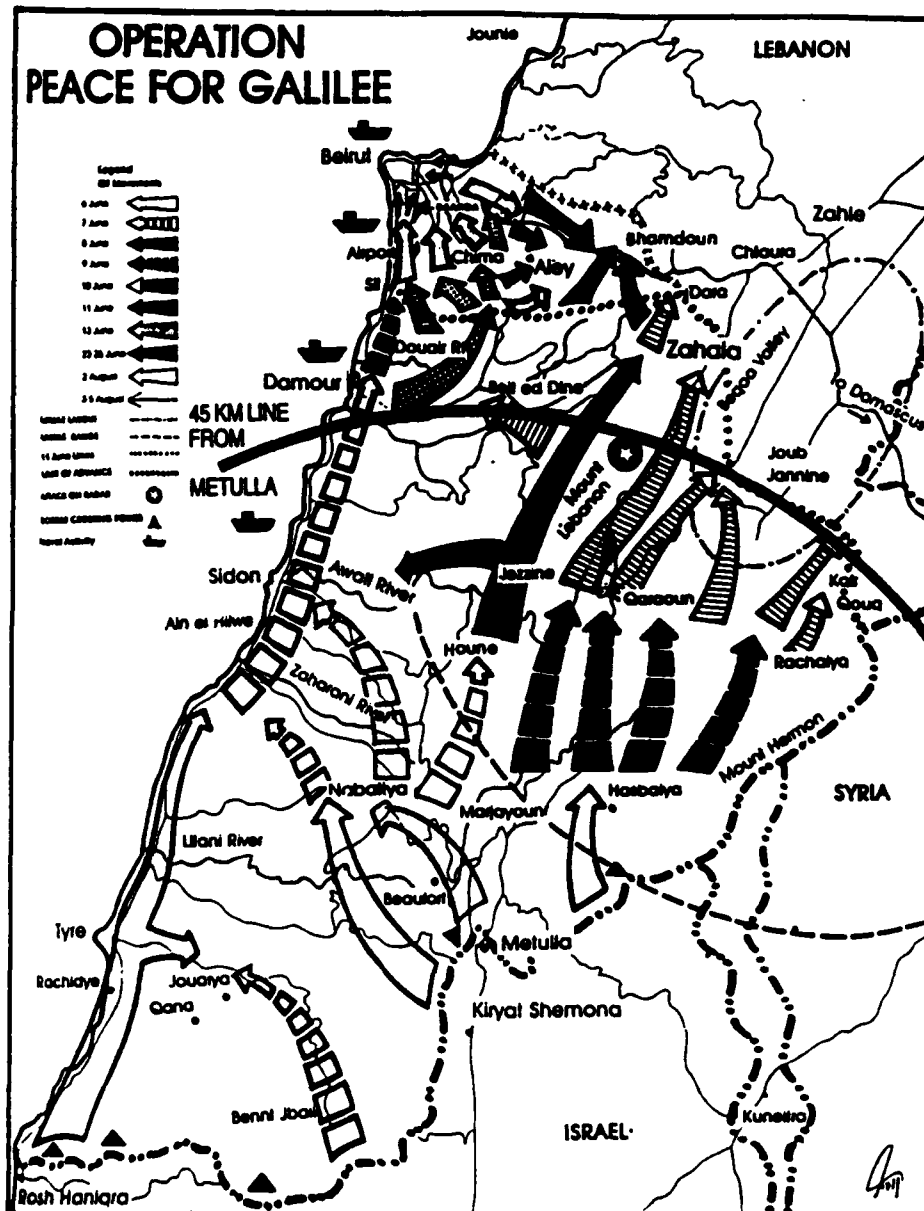


Figure 8. 1982: The Invasion of Lebanon

political powers frantically attempted to arrive at an agreeable solution in an effort to avoid a massacre. [Ref. 23:pp. 202-203]

The solution to the impasse was political, not military. American mediators were able, after weeks of fruitless negotiations, to obtain an agreement calling for an evacuation by the PLO from the city of Beirut. The agreement called for the Syrians to withdraw from the city, at which time American, French, and Italian troops would assume responsibility for evacuating the PLO over land and by sea. The PLO had agreed to this plan only upon American assurances that civilians left behind would be safe. This promise was brutally broken, however, when Phalangist soldiers massacred hundreds of PLO civilians in the camps of Sabra and Shatila in the name of restoring order. [Ref. 9:p. 257]

Israel was held indirectly responsible for this massacre by an inquiry board headed by one of its Supreme Court justices. Defense Minister Sharon was forced to resign in February 1983 because of his failure to take appropriate command precautions in the face of apparent warning signs. The scars of this debacle ran much deeper, however. The IDF had lost its moral standing in Israel. The long-standing national security consensus which had been forged throughout its history was lost in the quagmire of Lebanon. Israelis were uncertain as to the necessity of ever having waged the war. Citizens protested on the streets of Tel Aviv, demanding an immediate IDF withdrawal. However, the war dragged on into 1984 until, after scaling down its objectives repeatedly, Israel was able to forge a limited political agreement and extricate the IDF. [Ref. 9:pp. 256-261]

From a military perspective, the IDF learned some valuable lessons in the Lebanon War. First, a nation can win on the battlefield, yet lose a war strategically. Second, there are real limits to the application of military force. Third, a democracy like Israel, whose defense is based on a militia army, cannot fight a war without the support of the public. [Ref. 9:pp. 261-262]

F. ANALYSIS

1. Inputs to the System

The years following the Yom Kippur war were a time of growth throughout the IDF. In terms of sheer physical size as well as in terms of technological advancements, the IDF was evolving into a large military organization. As will be shown, these efforts at expanding force capabilities were not without cost. First, however, the factors which led the IDF to restructure will be analyzed.

a. *The Threat*

The threat of imminent, massive Arab invasion diminished somewhat after the Yom Kippur war. The Egyptians and the Israelis entered into peace talks which eventually resulted in the return of the Sinai, the Camp David Accords, and a lessening of tensions on the southern border. Nonetheless, the IDF responded to the near disaster of having been surprised in the initial stages of the 1973 war. The long-range threat to Israel, it was decided, was permanent and required constant capability to defend along three possible invasion fronts. [Ref. 4:p. 20]

b. Technology

The IDF learned, at great cost, the tremendous increases in weapons technology during the 1973 war. Arab infantrymen armed with extremely accurate anti-tank missiles had almost devastated the Israeli armored forces. Precision guided weapons were now a part of the Arab arsenal and would have a tremendous impact on the IDF approach to mechanized warfare.

Similarly, the Israeli Air Force found itself incapable of influencing the ground battle due to the missile screens put up by the sophisticated SAM batteries the Arabs had acquired from the Soviets. No longer [Ref. 4:p. 18] could the IDF look at its air force as being a sort of flying artillery. In fact, in 1973 the SAM sites were neutralized, not by the IAF, but by armored forces which eventually were able to destroy the missiles on the ground.

c. Socio-Economic Factors

The IDF has, throughout its history, served the needs of Israel in roles other than national defense. The manpower problems facing the IDF appear to be systemic and long term because "...immigration just barely matches emigration..." [Ref. 11:p. 216] Thus, Israel has looked to the military to assist in some non-traditional roles [Ref. 4:p. 8]. First, in a nation of citizens of diverse cultures, the IDF has served a nation-building role. Conscripts all learn a common language (Hebrew) and have a shared common experience to take back to their civilian occupation. Second, the IDF serves as one of the largest educational institutions in Israel. In addition to military training, it sends soldiers to

technical schools for skills which are of tremendous benefit to the civilian economy. Last, the IDF is used to accelerate the upward mobility of those who serve. The military service is seen in Israel as a means of social advancement and a solid record of service is fundamental to long-term success in Israeli society as a whole. [Ref. 4:pp. 8-10]

d. A New Doctrine

The experiences of the 1973 war caused a fundamental reevaluation of IDF doctrine. The lessons of this war pointed out the vulnerability of the tank when operating alone. This acknowledgement was the driving force behind a restructuring of the IDF. The new doctrine focused on a combined arms approach to fighting the next war. It still looked at the tank as the major ground arm of combat but sought to combine the capabilities of the other branches in a more effective manner. [Ref. 12:p. 321]

The role of the infantry was expanded in this new doctrine. Infantry forces were made totally mobile and capable of moving with or even ahead of armored forces when required. Similarly, artillery was given a newly defined role in the IDF. Previously, artillery had been relegated to a back-up role in the IDF method of operations. After 1973, however, an entirely new branch of service was created for artillery and it was fully equipped with highly mobile, self-propelled guns. [Ref. 24:p. 23]

2. Organizational Structure

The dominant theme in analyzing the organizational restructuring which occurred in the IDF after the 1973 war was growth. In all areas, the decision was made to expand in size and, by default,

complexity. Inherent in any sort of transformation from a relatively small force to a large, complex military machine are problems of bureaucracy, mission focus, and command relationships. These problems will be analyzed here.

a. Strategic Apex

Operation Peace for Galilee is, in the author's opinion, a case study in miscommunication. At the highest levels of the Israeli government, there was confusion as to the goals and aims of this war. Defense Minister Sharon is painted in the literature as the primary culprit in expanding this war beyond the wishes of the cabinet. Yet the problem ran deeper than that. The institution of the Defense Ministry had grown beyond control. It is the largest of the Israeli government's offices in terms of budget and staff and it "...has been known to develop its own contacts and relationships with various foreign governments, often dictating policy to the Foreign ministry." [Ref. 9:p. 231] Sharon, in the author's opinion, was guilty of using his powerful position to accomplish his own agenda, although with the limited complicity of the IDF Chief of Staff. Problems ensued, however, when the members of the Israeli cabinet realized that the war was being expanded in direct contravention of their stated aims. The resultant rift in the governmental leadership in the midst of the conflict was not in the best interests of the IDF, which was then engaged in combat. The resultant confusion [Ref. 9:p. 255] and timidity in the operational conduct of the war proved costly to Israel from both a military and political perspective.

There has long been a debate surrounding the question of control over the military establishment in Israel. In the Israeli system of government, there is no provision for the post of Commander-in-Chief; in theory, the entire cabinet maintains the ultimate command authority. By default, however, these powers have been assumed by the Minister of Defense, who serves as the link between the political and military in all issues of national security in addition to running the ministry itself. In the author's opinion, this is a basic organizational weakness in the IDF. The Minister of Defense is placed in the almost untenable position of trying to perform multiple national security roles while attempting to maintain allegiance to his political roots. His roles can sometimes blur, resulting in jurisdictional disputes with military and political leaders. [Ref. 8:p. 98]

b. *Middle Line and Operating Core*

There was a tremendous expansion of the IDF after the 1973 war. In terms of both manpower and equipment, the face of the IDF was restructured. The most striking example of the "new" IDF is that while in 1973 it could deploy about six divisions, in 1982 it was capable of deploying 15 fully mobilized divisions in 72 hours. The chart on the following page graphically depicts the scope and extent of these changes. [Ref. 4:p. 21]

	1973	1982
Standing Forces	75,000	172,000
Israeli Army	61,500	135,000
Mobilized Reserve Capacity	275,000	450,000
Tanks	1,225	3,825
Fighting Vehicles	1,515	4,000
APCs	500	4,800
Self-Propelled Artillery	300	958
Military Budget (in dollars)	1.48 billion	7.3 billion
% of GNP	27.4	31.9

These figures represent, graphically, the changing orientation away from the "all-tank" doctrine towards a more balanced combined arms approach. Specifically, the growth of the infantry as well as the advent of artillery as a new and important branch were indicative of an attitude which sought to achieve a more balanced force capability.

c. Support Structure

The IDF incorporated many of the logistical lessons from 1973 into the restructuring of their organization prior to the invasion of Lebanon. Yet, the support structure was really not tested during this operation. First, stockpiles of all material were more than adequate for a short war. Second, ground vehicles were in abundance and, when the decision was made to utilize aircraft, C-130s were used with great effectiveness to deliver supplies well forward in the battle area. [Ref. 4:p. 210]

The Israelis continued to make progress towards self-sufficiency in the armaments area. Almost all small arms weaponry for the ground forces is made in Israel, the armored force makes use of the

domestically made Merkava tank, and even fighter aircraft production was begun after 1973. The mission of the supporting staff of the IDF is to maintain the capability to fight a sustained battle for 28 days [Ref. 4:p. 12]. Lessons from 1973 had been well learned and "from a logistic point of view, the army was far superior to anything that had been known hitherto." [Ref. 12:p. 354]

During Operation Peace for Galilee, the IDF standardized its medical evacuation methods. The goal of the medical support system in Israel is to treat the wounded as close to the front as possible. This is accomplished in the IDF by positioning medical personnel carriers, with doctors, across the entire front. Even some surgery is performed on the battlefield in specially configured vehicles. [Ref. 4:p. 206]

d. Technostructure

The war in Lebanon saw the IDF for the first time implement a corps-level echelon. This new command structure was used due to the diversity and size of the force committed to the operation. No longer, it was felt, could a front commander adequately control three divisions as well as follow-on forces [Ref. 4:p. 76]. The increased role of infantry and artillery dictated the requirement for an additional command echelon.

e. Ideology

The ethical foundations of the IDF were severely tested during this war. For the first time in its history, the IDF was called upon to fight in an urban environment, with all the inherent dangers and moral conflicts. The IDF operates within the doctrine of *Tohar Haneshek* [Ref.

4:p. 171], or purity of arms. Fundamentally, this doctrine calls for the use of the defense forces only in defense of the Jewish state and the Jewish population. The doctrine calls for extremely rigid rules of moral behavior on the part of all IDF soldiers and extends to the treatment of injured or captured enemy soldiers and civilians. The Israeli attempts to clear the PLO from heavily populated areas were difficult given the nature of their moral strictures. Soldiers were forbidden to throw hand grenades into houses or use satchel charges, both common urban tactics. Instead, the IDF attempted to maintain its moral legitimacy by offering warnings to its enemies, even at the cost of increased Israeli casualties. They felt that on balance their men would fight more effectively if they did not harbor doubts about the morality of their operations [Ref. 4:p. 174]. While they were largely successful in their aims, it is also true that "...dozens of officers and men chose to stand trial and serve jail sentences rather than serve in Lebanon." [Ref. 9:p. 240]

3. Outputs of the System

a. Unity of Command

One of the results of the post-1973 restructuring of the IDF had been a tendency towards more centralized command and control and decision making. While these changes made sense on paper, many of these new command characteristics proved ineffective in the opening stages of Operation Peace for Galilee and were quickly discarded. [Ref. 4:p. 196]

The advances in technology had an impact on the command and control process in Lebanon. "Real-time" intelligence was

available at each echelon of command. Television monitors linked division, corps, and territorial command [Ref. 4:p. 195]. Although not a significant problem in Lebanon, there is a concern among IDF leadership that this real-time link may result in a diminished willingness of junior leadership to seize the initiative and make on-the-spot decisions. The other fear is that higher commanders will seize control of the fighting given the technological capability to do so. [Ref. 4:p. 195]

The IDF forgot many of the basics of unity of command during the invasion of Lebanon. Command integrity was not always maintained, sometimes resulting in the presence of "...more than one commander of equal rank in the same operation in which the force itself was a combination of troops from both commanders." [Ref. 4:p. 196] This uncharacteristic IDF action was, in the author's opinion, a result of a lack of plans that matched stated goals as well as rapidly changing battle conditions.

b. *Maneuver*

A basic tenet of military planning is that one must take into account the mission, the enemy, the terrain to be fought on, and the troops available to the planner. While the IDF plan appeared sound on paper, it may not have adequately addressed the issue of terrain. The lack of pure light infantry (the IDF infantry was mainly mechanized) resulted in tanks leading attacks through mountain terrain. Proper tactics would dictate that dismounted infantry should lead in terrain which affords limited mobility, but the IDF sensitivity to casualties precluded doing this.

The attack on the Syrian SAM missile sites was, on the other hand, an outstanding military maneuver [Ref. 12:p. 348]. First, the IDF sent remotely piloted vehicles across the battlefield, emitting signals designed to confuse the SAM tracking systems into thinking real aircraft were attacking. Once the SAM sites began tracking, their signals were relayed to AWACS aircraft orbiting off the coast. The IAF then overflew the area, gathering data and emitting signals designed to jam the SAM tracking systems. Ground artillery units began to pound the pinpointed SAM sites while IAF planes overflew, emitting chafe to confuse the missile-tracking radar further. Israeli fighters then attacked to drop conventional ordnance and "smart bombs" on the overmatched Syrian units [Ref. 4:p. 99]. The ability of the IDF to totally overwhelm the SAM batteries was met with astonishment in military circles throughout the world and added to its reputation as the dominant regional power.

c. Objective

As previously mentioned, the overall objectives of Operation Peace for Galilee were never clearly defined. As early as five months before the war, at least three war plans were circulated among the cabinet. Without detailing each plan, suffice it to say that each had fundamentally different objectives involving the PLO and the Syrians. The plan ultimately approved by the cabinet was a vague combination of all three and resulted in granting Sharon great leeway in pursuing an expanded concept of the war. In retrospect, it seems that the policy makers moved too quickly and without carefully detailing the specific objectives they wished to accomplish. The result was a bogged-down affair in which IDF

casualties mounted as the leadership sought a means to extricate Israel from a war it never intended to wage.

G. THE ENVIRONMENT

In the author's opinion, the IDF at this period was operating in a complex but stable environment. The rapid growth had certainly strained the IDF as an organization, but the newly signed peace treaties with Egypt had significantly stabilized the region. In effect, a great deal of the variety to which the IDF had become accustomed was eliminated. This new environment had influenced the organizational tendency back toward a more centralized approach in the form of Defense Minister Ariel Sharon. Additionally, the General Headquarters was instrumental in influencing decisions at both the political and military levels. The centralization was countered somewhat with the creation of the corps-level echelon to facilitate control with higher headquarters. [Ref. 4:p. 76]

As mentioned, much of this move towards command centralization was quickly recognized as inappropriate and altered. Ground commanders were judged to be moving tentatively [Ref. 9:p. 251] based upon confusing mission orders and stated objectives from higher headquarters. The IDF senior leadership moved to reaffirm their belief that nothing should impede the junior leaders' willingness or capacity to make appropriate tactical decisions. [Ref. 24:p. 24]

VIII. THE IDF TODAY

A. INTRODUCTION

The IDF has earned its international image as a battle-hardened force capable of defending both the land [Ref. 25:p. 45] and the four million people of Israel. Although the threat has varied from invasion by outsiders to dispossessed inhabitants who wish to return to Israel on their own terms, it has never diminished. The IDF remains the foundation for the future of the state of Israel. The feeling persists among the citizenry that if the IDF should ever falter or significantly weaken, then the survival of the nation is doubtful given the fact that it is surrounded by hostile neighboring nations [Ref. 25:p. 45] whose populations exceed 47 million. Constraints on the budget after the Lebanon invasion once again forced the IDF to restructure and reorganize. Perceived organizational inefficiencies which had accumulated during the massive growth after 1973 were eliminated. The emphasis [Ref. 26:p. 48] was placed on creating a leaner but stronger force structure. Once again, this shows that the willingness to adapt that has been so evident throughout its history is present in today's IDF. In the author's opinion, the IDF continues to adjust to the demands placed upon it by an ever-changing environment.

Most recently, the uprising in the occupied territories—the *intifada*—has resulted in some restructuring and reorganizing by the IDF. A new headquarters, the Field Forces Command (FFC), has been established to address readiness concerns. The FFC's mission is to maintain a focus on

combat readiness, looking beyond the police duties of the intifada to the task of preparing the IDF for future wars. [Ref. 24:p. 20]

The IDF is, understandably, very secretive about its current force structure and capabilities. Therefore, this chapter is, by necessity, a sampling of the current material available in open sources. In most cases, where specific numbers of weapons and forces are cited there are at least two sources whose numbers generally corroborate. The purpose of this chapter is to show that a continued emphasis exists on the part of the IDF to respond within its organizational structure to system inputs from its environment.

B. AFTER LEBANON: THE IDF OF TODAY

1. The Ground Forces

The key focus of the IDF's organizational structure remains on maximizing readiness. In keeping with the constant need to address the threat, the IDF has adopted "multi-mission formations" designed to be adaptable to various combat situations [Ref. 24:p. 21]. The *ugdah* (division) remains the basic formation and usually is composed of several armored brigades. Unlike the U.S. Army, there are no specially designed light, heavy, or airborne divisions. The IDF maintains all armored divisions [Ref. 26:p. 48], but these are designed to fight as combined arms teams at all levels. When deployed for combat, the *ugdah* is allocated elite infantry and special forces, while retaining organic artillery and armored engineer support. Complete mobility has been achieved across the entire spectrum of ground forces and most are armored. All have been modified and refined based upon years of battle experience. Current

estimates of IDF ground force strength are 130,000 active duty and 310,000 reservists. [Ref. 24:p. 24]

a. Armor

The armor branch has fully integrated the first Israeli-made tank, the Merkava. These tanks are used predominantly in the elite, active-duty brigades and saw extensive action in Lebanon. The IDF has instituted a program [Ref. 24:p. 21] whereby modifications to the Merkava are made constantly based upon field experience at unit level. It is believed that this industry-unit cooperation is unique to the IDF and results in fewer problems in new equipment integration. The Merkava tank is unique in that its design is centered around crew protection. Israel realizes that manpower is one of its most crucial resources and has designed their main battle tank accordingly. Special designs include self-sealing fuel tanks, fireproof ammunition containers, immediate fire sensors and suppression system, and a main 105 mm gun [Ref. 4:p. 198] that ranks among the world's best. An additional feature of the Merkava, and an acknowledgement of the IDF's reaffirmation of combined arms doctrine, is its ability to carry 10 infantrymen in a rear compartment. The tank is the only one in the world that can be entered from the rear. [Ref. 4:p. 199]

The reserve armored brigades are equipped with upgraded versions of Centurion or M60 Patton tanks. Product improvements include add-on reactive armor suits, advanced fire control systems, and fire suppression equipment to enhance crew survivability. [Ref. 24:p. 21]

b. Infantry

Lessons from Lebanon have convinced the IDF leadership of the need for mobile infantry forces that have the training and capability to conduct extensive dismounted operations. This new thinking has evolved despite the traditional Israeli fear of unacceptable loss of life in dismounted actions [Ref. 4:p. 203]. Although recent activities in the occupied territories have occupied the elite infantry units in police-type operations, repeated efforts have been made to balance this work with training in the soldiers' actual combat missions. [Ref. 24:p. 21]

The IDF currently maintains a fleet of between 4,000 and 5,000 armored personnel carriers. Among these are a number of Soviet-made BTR-60s that have been captured in previous conflicts. The IDF has developed the necessary logistics ability to fully integrate and utilize these vehicles for its own purposes. [Ref. 25:p. 46]

c. Engineers

The engineer branch has found a renewed prominence in the combined arms orientation of the IDF. Used to assist the forward movement capabilities of the armor and the infantry, the engineers have been furnished equipment [Ref. 4:p. 209] that rates among the best in the world. Special systems have been designed to overcome obstacles, destroy enemy fortifications, and provide hasty road and bridge construction capability. [Ref. 24.:p. 21]

d. Artillery

The once-neglected branch of artillery continues to flourish now in the IDF. Artillery assets [Ref. 25:p. 47] include between 2,000 and

2,500 artillery pieces, of which about 1,000 are self-propelled. Officers of artillery undergo basic training in the infantry or armor branch to give them a broader understanding of their support roles. Additionally, research in advanced technology artillery weapons is continuing in the area of fire direction centers and precision navigation equipment. [Ref. 24:p. 2]

2. The Israeli Air Force

The IAF relies on better-trained pilots to maintain air superiority in the region. It is considered the most prestigious of the services and attracts the highest-quality volunteers. Training is arduous, both mentally and physically, but the select few [Ref. 9:p. 153] who accomplish the program are welcomed into a service renowned for high morale and esprit. At a time when other services are experiencing drastic budgetary cutbacks, the IAF is growing in strength. Defense Minister Rabin "...favors channeling the best and most resources to the boys in blue..." and refuses to consider that the days of airplanes influencing the battlefield may be past [Ref. 27:p. 31]. The IAF currently maintains approximately 600 aircraft, with the primary fighter being the American-made F-16. [Ref. 25:p. 47]

3. The Israeli Navy

The naval branch of the IDF, although the smallest with approximately 6,600 men, nevertheless fills a vital national security mission. Based largely off the coast of Israel, the navy must contend with naval forces of Libya, Syria, Lebanon, and the PLO. Efforts to upgrade the missile capability within the navy are continuing with the planned building

of three 1,100-ton missile-capable boats [Ref. 25:p. 48]. In addition, plans call for upgrading the current fleet of three diesel submarines with higher-performing vessels. The role of the navy in the future should continue to be one of deterrence aimed at protecting the Israeli coasts as well as shipping and access to the Mediterranean Sea. [Ref. 25:p. 48]

4. Nuclear Weapons

A topic of significant concern and importance in the current Israeli strategic approach to national defense is their position on nuclear weapons. The attitude of the Israelis, although somewhat clouded by secrecy, is evident by way of recent policy actions and statements. The Israelis have long proclaimed a strategic imperative calling for a reservation of the right to "...destroy the nuclear stockpile of any Arab country at war with Israel if there are grounds to believe that the country is manufacturing nuclear weapons." [Ref. 9:p. 119] It was with this premise in mind that Israel moved to destroy the Iraqi nuclear reactor on June 7, 1981 [Ref. 3:p. 383].

Coupled with its stated intention to destroy any enemy Arab nuclear capability is the widely held belief that Israel possesses either the technology to produce nuclear weapons or the weapons themselves. Defense Minister Dayan, during the darkest moments of the Yom Kippur War, was known to have actively considered an option to use these "last resort" weapons [Ref. 11:p. 220]. It is also a known fact that Israel has produced the Jericho rocket (range—300 miles) to counter Soviet-supplied SCUD rockets in Egypt and Syria (range—500 miles). The

suspicion exists that Israel has the capability of arming these Jericho rockets with warheads in the 20 kiloton range. [Ref. 11:p. 220]

Israel has long denied these rumors of nuclear capability and has vowed not to be the first to introduce them into the region [Ref. 8:p. 330]. On the other hand, it has refused to sign the nuclear nonproliferation treaty and has openly acknowledged a capability to produce these weapons if warranted [Ref. 9:p. 119]. This somewhat contradictory position is believed calculated to achieve a deterrent effect. This approach, described as a "...bomb in the basement" policy, forces the Arabs to be respectful of a possible IDF stockpile of nuclear weapons and of the Israeli willingness to use them if the existence of the state were ever seriously called into question. [Ref. 9:p. 120]

C. COMMAND AND CONTROL IN THE IDF

One of the unchanging operational norms in the IDF since its inception in 1948 has been the concept that leaders control their men from the front. Despite tremendous gains in technology, this continues to be the philosophy, despite its high cost in leader casualties. (In Lebanon, for example, tactical combat leaders suffered almost 40 percent of the casualties [Ref. 24:p. 24].) This is not to say that the IDF ignores the advantages of the developing technologies. On the contrary, the IDF is making use of the latest C² technology, including "integrated networks for electronics and optical and data transmissions at the tactical command level [to] provide accurate information for all-arms fire control." [Ref. 24:p. 24] Leaders are trained to use the data transmission and display consoles, but not at the expense of personally leading their soldiers. IDF

policy dictates that the commander will "...never send his men into battle; his place will always be where the action is, where he can see to lead, and where he can be seen by his troops." [Ref. 24:p. 24] The IDF has evolved in terms of its command structures at the highest level and performs research designed to aid the commander in the art of military decision making.

1. The Command Structure

Figure 9 depicts in block diagram format the unique command structure which exists in the strategic apex of today's IDF [Ref. 8:p. 97]. The truly unique feature of the IDF remains in the unified General Staff which controls all branches of the defense forces, to include the Navy and the Air Force. The Chief of Staff acts as the head of the entire force [Ref. 8:p. 95] and is the only member of the military service who is granted access to the political branch of the government. Permanent members of the General Staff along with the chief include the commanders of the Air Force, Navy, and Armor Corps as well as the three Area Commanders (Northern, Central, and Southern). The four branches of the General Staff depicted on Figure 9 are responsible for supervising a number of inspectorates. For example, the armor inspectorate is responsible for the training and development of operational procedures for all tank and mechanized infantry forces [Ref. 8:p. 95]. This command structure provides the Chief of Staff with a dual control measure. While he controls forces through an operational chain of command (area, divisional, brigade), he also maintains technical supervision of the forces

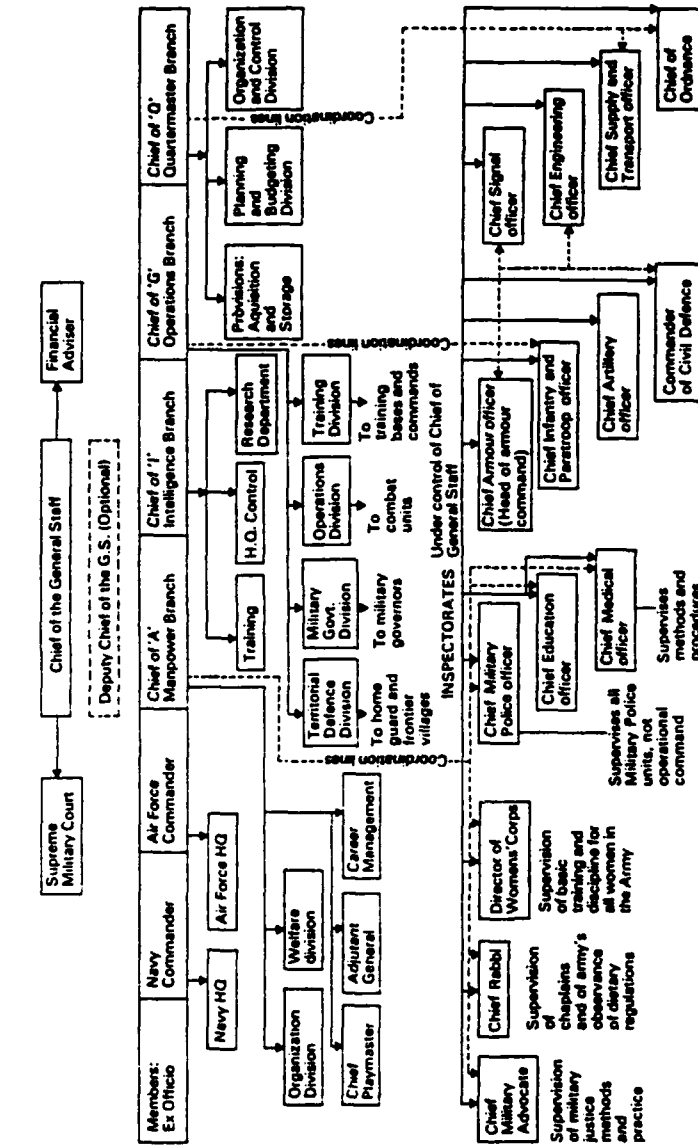


Figure 9. Organizational Structure of the General Staff

through the inspectorates of one of the branches of the General Staff.
[Ref. 8:p. 96]

The political sector controls the military through the Minister of Defense, as depicted in Figure 10 [Ref. 8:p. 100]. This powerful position is, in practice, the Supreme Commander of the IDF. The office of the Defense Ministry has evolved, in Mintzberg terms, into the technostructure of the modern IDF. The ministry is charged with providing the IDF with administrative and technical support while freeing the military to concentrate on matters relating more to the conduct of military operations. In actuality, these roles are sometimes confused and cause friction at the highest leadership levels of the IDF. [Ref.8:p. 98]

2. Decision Making

The ultimate goal of any command and control system, in the author's opinion, is a decision made by the commander which can be translated into timely actions on the battlefield. Much work has been done within the IDF focusing on the inherent problems of mission planning and command decision making [Refs. 28, 29]. One approach to this issue will be examined in detail after some background in the area has established a foundation.

In his article "Strategies of Decision Making" [Ref. 30:pp. 1-7], Gary A. Klein outlines the phenomenon of decision making in an excellent fashion. He argues that there are two methods of decision making: "...analytical ways and recognitional ways and that we must understand both in order to improve military decision making." [Ref. 30:p. 1]

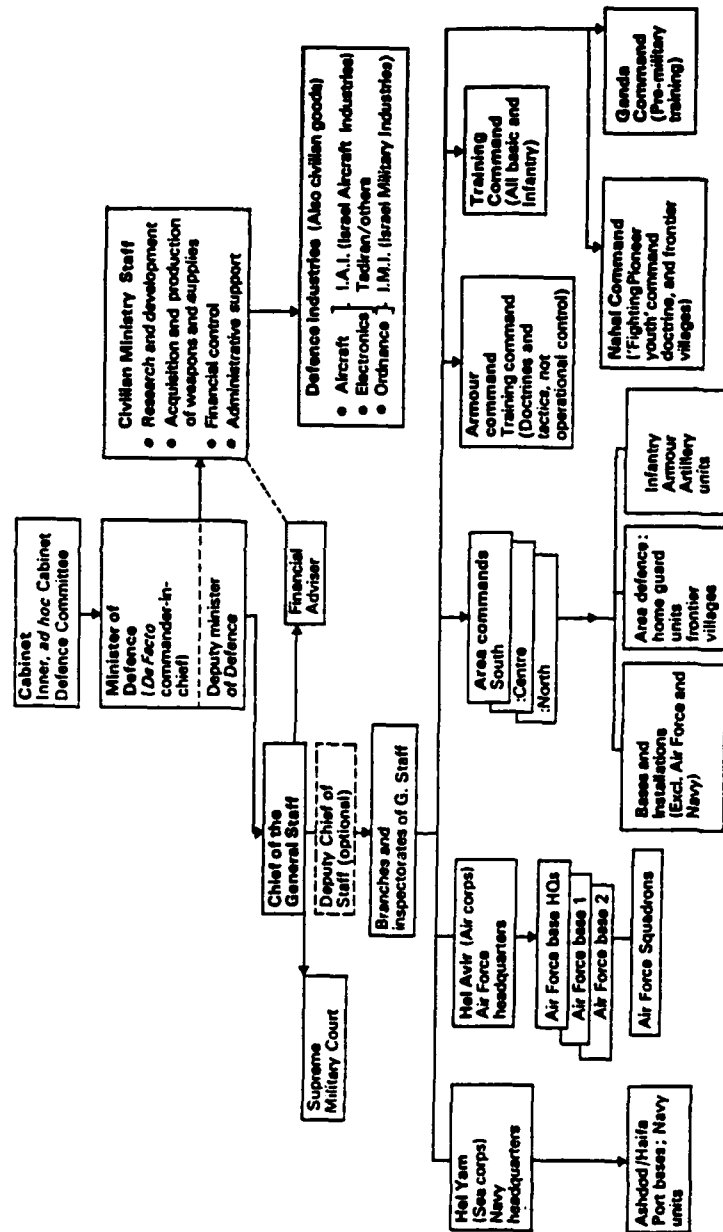


Figure 10. Organizational Structure of the Israeli Defense System

Mr. Klein points out that there are two different ways to make decisions. The analytical approach follows the following rigid procedure. First, options are generated based upon the perceived requirements of the situation. Next, criteria are established for analyzing the various options. Weights are then assigned to these criteria and the options evaluated. The prudent decision maker is then supposed to select the option that proves optimal. This approach is most practical, from a military standpoint, at the corps level and higher, where there is apt to be ample time for the decision.

A second decision-making method follows what Klein calls a more recognitional approach. This approach utilizes the decision maker's experience to recognize a situation as familiar. This ability to recognize the situation allows the decision maker to eliminate the need for the time-consuming analytical approach and facilitates a rapid response.

The IDF is doing work aimed at focusing attention and better understanding on this decision-making process. While its literature does not categorize decisions exactly as Klein, a good deal of its work can be seen as overlapping his. One of its approaches [Ref. 28:p. 1] is to analyze selected case studies within the context of a decision-making model. In the IDF's own words, "...multiple-dimensional analysis schema is applicable to study the complexities that are involved in the decision making processes of brigade and division commanders during combat." [Ref. 28:p. 33] In essence, the IDF selects a crucial decision made during a recent conflict. Care is taken to insure that the case is analyzed with an appropriate deference to the general background and setting of the

problem. This is to put the decision in perspective and not try to isolate it as a discrete event to be analyzed independently of additional related activities.

The second parameter in the model accounts for the participants in the decision. While, the focal person is invariably the commander, it is important to include other players (e.g., staff and other commanders) and clearly identify their positions and roles. [Ref. 28:p. 29]

A third input into the model is the location of the decision maker. Account is taken as to the physical setting of the commander as well as the manner in which he was able to receive pertinent information, either via radio communications or directly through eyesight impression. [Ref. 28:p. 29]

The fourth model input is the pressures facing the decision maker; these are accounted for and summed into four categories. The first category attempts to judge the amount of time pressure faced by the commander. Second, the pressures from an organizational standpoint are examined. In this category, the amount of pressure the commander was under from both his organizational superiors as well as subordinates is taken into account. The third category is the combat consequences parameter and implies the immediate consequences the commander faces given any of the decision alternatives. The last category accounts for the physical danger the commander is under. [Ref. 28:pp. 29-30]

The main focus of the model is upon the information processing done by the commander. There are acknowledged problems in attempting to model information processing. While some elements of the processing

of information can be observed directly (e.g., active information search, information transmitted, and alternatives raised by decision participants), other activities have to be more indirectly inferred. Nevertheless, the Israeli model attempts to gauge such things as extent of information gathering, the type of information most frequently sought by the commander (not surprisingly, this turns out to be location and fighting condition of his own subordinate units), and the willingness to generate alternative decisions. [Ref. 28:p. 31-33]

The final portion of the model attempts to draw conclusions as to whether the decision-making process achieved the outcome desired by the commander. Research continues in detailing the relationship between the decisional process and its consequence. [Ref. 28:p. 33]

D. TRAINING THE FORCE

The Field Forces Command (FFC) has proven its worth in the IDF. It has successfully organized large-scale combined arms exercises despite the obvious distractions [Ref. 24:p. 21] caused by the intifada. Training the force is a priority in the IDF for both the active-duty soldiers and the reserves (where one in six Israeli citizens serve). [Ref. 31:p. 267]

1. Training the Reserve Force

The reserve forces of the IDF can be required to train for up to 60 days per year [Ref. 25:p. 50]. Most reservists are assigned to a particular unit, however, and train about one day per month with a 31-day annual recall. Reserve officers are required to train an extra seven days [Ref. 32:p. 21]. Needless to say, this puts a tremendous strain on Israel's economy, and improved training techniques are constantly sought to

maximize the training time which is available. In particular, the IDF has incorporated computer simulation training that "...ranges from war gaming to tank gunnery and individual weapons training." [Ref. 25:p. 50] Almost all available training time is devoted to increasing or refreshing combat fighting skills.

A significant difference exists between the U.S. and IDF technique for training the reserve forces. In the U.S., reservists are largely responsible for training themselves. In the IDF, the active forces manage and train the reservists. In fact, active-duty officers are frequently placed in command of reserve units. [Ref. 32:p. 19]

2. Training the Active Force

Although the active-duty forces are committed to actual security responsibilities, from riot control in the West Bank and Gaza to counter-terrorist activities along and beyond Israel's borders, training for a possible major conflict must nonetheless occur. The FFC is responsible for establishing long-range training schedules designed to rotate combat units through this myriad of responsibilities. [Ref. 24:p. 20]

As are the reservists in their training, the active portion of the IDF is pursuing the latest technologies [Ref. 33:p. 49] in computer simulation techniques. The emphasis on simulation training in the IDF is upon supplementing and improving its proven battlefield techniques with the aid of computer graphics and variations. The IDF strongly resists making doctrinal changes based on the results of simulations and prefers to rely on what few modern armies possess—recent combat experience. [Ref. 33:p. 49]

One part of the training program of the IDF which is in no way simulated is the rigid physical fitness regimen required of all its soldiers. The IDF program differs from that of the U.S. in that each branch of the service designs a program that suits the military tasks its soldiers must perform. For example, while the program for the infantry emphasizes strength, endurance, and flexibility, the program for pilots stresses endurance, coordination, and strengthening of the neck, back and abdomen muscles [Ref. 34:p. 59].

Instead of a long morning run, the soldiers of the IDF are required to run just two kilometers, but in 6 to 10 minutes. The entire physical training period lasts only about 15 to 20 minutes. [Ref. 34:p. 59]

E. THE FUTURE OF THE IDF

There is ample evidence that the IDF will continue to constantly evaluate its position and structure its forces accordingly. The most recent references from Israel indicate a continuing debate about resource allocation and prioritization within the defense forces. The debate over resource allocations is not viewed by Israel in isolation, however. The U.S. provides Israel with a substantial portion of its military budget in the form of aid. With this assistance come various pressures and constraints [Ref. 35:p. 151]. The U.S. uses its aid package to Israel to further its own foreign policy interests in the region. It follows, therefore, that aid is either extended to support those objectives or can be withheld as a bargaining tool when those objectives seem threatened. For example, one type of leverage incorporated into all military aid agreements concluded by the United States is the pledge that the aid will be used to purchase

arms only for defensive purposes and forbids transference of the arms received to third parties without U.S. consent [Ref. 35:p. 151]. Constraints such as these and others influence procurement and doctrinal decisions in the IDF. The Lavi fighter aircraft program, for example, was cancelled based, at least partially, on a U.S. reluctance to fund a massive jobs program in Israel when American-made fighters were available on an "off the shelf" basis [Ref. 27:p. 31]. In general, it can be said that Israel is forced to consider factors of a broader nature than just its own national security when making decisions regarding allocation of scarce resources.

More specifically, the current budget question centers on the integration of the technologically advanced precision-guided weapons (PGW) as a prominent part of the overall defense concept. The debate has escalated because of constraints in the Israeli defense budget. Maintenance of the large standing force which came out of the Yom Kippur War has placed a tremendous burden on an already-strained Israeli economy.

On one side of the debate are those who wish to maintain the status quo and merely upgrade existing weapons systems and force structure. Their position is summed up by Deputy Defense Minister Israel Tal, who said, "We must put emphasis on large ground forces, giving clear priority to mobile and armored divisions, which alone can carry the offensive deep into enemy territory." [Ref. 27:p. 29]

His position is one of the entrenched bureaucracy and has, after all, been the concept that has worked so well for the IDF over the years. This group points out that the death of the tank has been predicted almost

since its inception on the battlefield, yet with each new generation produced, its capabilities and dominance seem to grow.

On the other side is a group which argues that the purpose of war has changed away from taking land to destroying enemy forces and that the IDF must change to acknowledge this difference. This position is summed up by General (Reserve) Hayim Yavetz, who recently said,

The armies of the world are rigid organizations and we, like everybody else, are stupidly built according to regiments, companies, and divisions, instead of establishing units that can neutralize the numeric force of the enemy. [Ref. 27:p. 30]

The promise of PGW is that with proper investment in the technology research, there will be no need for maintaining a large standing ground army. This group, which contains the IDF Chief of Staff Shomron, is clearly gaining influence. Defense Minister Rabin has spoken of change and of scaling back the size of the army with an eye towards adjusting to "future objectives." [Ref. 27:p. 31]

Continued production of the Merkava tank, coupled with suitable investment in PGW research and development, seems the most likely course of action for the IDF [Ref. 27:p. 31]. While this may ultimately appease neither side in the debate, it will avoid a potentially dangerous split in the leadership of Israel.

Framed in the context of this thesis, the Israelis show no signs of becoming organizationally rigid. In no way do they appear ready to rest on their laurels as the region's dominant military force. Instead, active debate is encouraged as a means to positively identify those environmental inputs most crucial to their organizational structure.

IX. CONCLUSION

A. OVERALL

This thesis has traced the growth and organizational development of the IDF from its inception to the present. In conjunction with this effort, lessons of use in the study of the military art have been extracted from the numerous conflicts in which the IDF has fought.

In the author's opinion, in order to maintain a qualitative advantage, the IDF has exhibited a willingness and an ability to adapt in the areas of doctrine, organization, planning, and decision making at the highest national and military levels. The IDF has responded in a manner which suggests a sophisticated understanding of the fact that it operates as part of an open system embedded in a changing environment. As such, the organization is subject to inputs from the environment. Sometimes the varied nature of these inputs requires systemic change and adaptation. It is in this respect that the evolution of the IDF is a study in organizational adaptability.

In formulating some final thoughts as to the nature of the IDF and the ability to transfer lessons from one organization to another, one is struck by the thought that while the IDF is similar in some respects to other military forces, in many ways it is a unique entity. Its largely militia nature distinguishes it from the U.S. military, for example, as does its bank of recent combat experience. On the other hand, as the IDF has grown in size and complexity, many of the bureaucratic inefficiencies

common to other large combat organizations have appeared. With these factors in mind, then, some general observations and conclusions are appropriate and necessary. These conclusions will be broken into two parts: historical constants for the military art and lessons from an organizational perspective.

B. CONTRIBUTIONS TO THE MILITARY ART

While the tactics of the IDF have changed dramatically as changes in the threat, available technology for weapons systems, and various social and economic factors have affected doctrine, the strategy employed by Israel in 1948 remains remarkably consistent with that of today.

1. Strategy

In large measure, the strategy initially adopted by Israel was due to its geography. The lack of any real strategic depth means, above all, that Israel cannot allow the enemy any significant penetration of its territory. Trading space for time would be disastrous. It is because of this fact that throughout its history Israel has put an enormous reliance upon its ability to quickly mobilize the reserve force. [Ref. 4:p. 14]

A second constant of Israeli strategy remains the "fast war" theory. Due to the sensitive nature of the Middle East and the global interest in the region's oil supply, Israel has long known that protracted conflicts would be harmful to its national interest. Intervention by the global superpowers has long been the norm and has resulted in the IDF goal of achieving a quick yet decisive military victory. [Ref. 20:p. 9]

A third leg of the strategy involves close linkage between political and military aims and objectives. Since the Arab enemy can never be

fully defeated on the battlefield, the Israelis have long sought to achieve political gains through military victories. The Israelis feel they must be in a position to offer the Arabs something in exchange for desirable political settlements. [Ref. 20:p. 9]

A fourth factor in Israel's strategy is its emphasis on the role of the entire state in the nation's defense. In this way, the effects of war are felt across the entire population and affect the war-fighting manner. Each life is considered precious and any casualties are cause for mourning in the entire nation. This deep human concern helps to shape the strategy that guides deployment decisions within the IDF. [Ref. 4:p. 14]

2. Tactics

The IDF has established itself as one of the premier fighting forces in the world. While the strategy has remained remarkably consistent, the tactics of the IDF have evolved to reflect changing circumstances.

a. 1948

The problem of the few against the many caused the IDF to structure its initial tactics [Ref. 20:p. 10] away from attrition warfare toward close combat. Instead of fighting to the objective, darkness and stealth were used to allow the IDF to fight on the objective. The superiority of the enemy's firepower was negated because most of the combat took place at close quarters, forcing the battle to "...man against man, grenade against grenade." [Ref. 20:p. 10]

b. 1956

The Sinai campaign was the first of the modern wars and the IDF's initial experience at mobile warfare. The open desert terrain of the Sinai was ideal for the rapid movement of tanks and light vehicles. The success of the armored units in attacking through the Egyptians' defenses signalled the ascendancy of the tank in IDF doctrine. [Ref. 4:p. 17]

c. 1967

In the Six-Day War, tactics were focused around the main battle tank. All other forces were reconfigured to support the tank, including the infantry, artillery, and air force. The tactic of striking the first blow was used to ultimate effect in the preemptive air strike, which freed IDF ground forces to overwhelm the Arabs with a combination of firepower and maneuver. [Ref. 20:p. 11]

d. 1973

The integration of anti-armor weapons into the Arab forces resulted in the failure of the IDF pure tank doctrine. The IDF was forced to engage in attritional tactics, using armor against infantry strongpoints at a tremendous cost in men and equipment. The inability of the IAF to gain air superiority resulted in limited support for IDF ground forces. Only daring tactics such as the seizure of the west bank of the Suez, coupled with the skills of the IDF tank crews on the Golan Heights, saved the day for the Israelis.

e. 1982

The lessons of the Yom Kippur War resulted in an IDF whose tactics were oriented more along a doctrine of combined arms. The attack launched into Lebanon reflected this approach with increased roles for infantry, artillery, engineers, and the air force. The lack of clear political goals and will resulted in some problems at the tactical level, however, with units fighting tentatively, particularly in urban areas where concern over casualties dominated military considerations.

C. THE MODEL'S CONTRIBUTIONS TO ORGANIZATIONAL THEORY

1. The Environment

The environment has had a great impact upon the IDF as an organization. The amount of variety, or possible states of nature, in the system has determined, over time, the level of command centralization, as well as influencing the degree of standardization within the IDF. As the environment increased in complexity, the IDF has shown a clear tendency toward decentralization of command authority concomitant with a move toward standardization of organizational process.

2. The Inputs to the System

The inputs discussed throughout this thesis are not all-inclusive. To be sure, another author might select other equally important inputs to an organization as complex and pervasive as the IDF. Yet, in specifying the threat, technology, and socio-economic factors, the case was presented that the IDF, as an organization, had to be responsive to changing priorities and forces acting external to it. The willingness of the IDF to engage in self-assessment is one of its strongest assets. Rather

than operate in an organizational vacuum, the IDF has responded to a varying threat, increased technological advances on both sides, and complex domestic socio-economic problems. This can be seen most clearly in its doctrine [Ref. 4:p. 16], which has gone through four major phases, including individual infantry, mobile light vehicle, pure tank, and now combined arms. Each of these doctrines has directly followed from an IDF evaluation of the threat, available technology, and impact on the social and economic fabric of its vulnerable nation.

3. The Organizational Structure

In establishing the model used throughout this thesis, a viable organization was depicted as consisting of six interrelated entities [Ref. 5:p. 116]. The strategic apex, middle line, operating core, support structure or staff, technostructure, and ideology were identified as basic to every organization. The remainder of this thesis was devoted to tracking and examining the changing nature of these parts of the IDF's organization, on examining the inputs which have most effected change, and the resultant effect on system outputs or combat capabilities. The organizational structure, by way of summary, has evolved in the IDF in the following manner.

a. 1948

The newly created state of Israel had, in 1948, created a functional, if overly simplified, defense force that proved capable of defeating the combined armies of five neighboring Arab nations. The strategic apex of the fledgling IDF consisted largely of one man, Prime Minister David Ben-Gurion. His dominance resulted from the frenetic nature of

the environment in the region as well as an absence of national institutions of any sort. The middle line and operating core of the IDF were structured around the strengths of the untrained, yet motivated, Israeli citizen-soldier. This backbone of the IDF was shaped by the realization that the survival of the state depended upon their performance on the battlefield. The leaders of this group were trained to eliminate the technological and numerical strengths of the enemy through use of night, stealth, and close combat skills. The support structure and technostructure of the IDF during the War of Independence grew in response to the needs of the fighting force. Mutual adjustment—a means of coordination between commanders on the ground—was the method of achieving the minimal required organizational standardization. The ideology of the IDF was firmly rooted in 1948 in the collective Jewish memory of the atrocities of the Holocaust and other religious persecutions. This collective sense of purpose and will was effectively used by Ben-Gurion in structuring a viable organization.

b. 1956

The period of relative calm following the War of Independence was used by the IDF leadership to work toward formalization and centralization of the organizational process. In response to social and economic factors, as well as the ever-present threat, the IDF focused its collective attention on standardizing the militia nature of the force. The strategic apex was still, in the author's opinion, largely focused in one man, now Chief of Staff Moshe Dayan. His visionary leadership, coupled with a charismatic personality, set the tone of bravado and spirit which

has remained an IDF trademark. He worked to institutionalize, in the middle line, the Israeli leader's perceived capacity for initiative and bold action through command and control doctrine. The operating core was structured according to the Defense Service Law, which recognized the inability of Israel to maintain a large standing force, and relied upon well-trained reserve soldiers. The technostructure and support structure were still not formalized and operated internal to the fighting units. Lateral coordination was the main manner in which support problems were resolved. The ideology of the IDF was firmly grounded in the moral standing offered in the Bible, which quotes specific tactical instructions given as the word of God to the people of Israel. This spiritual legitimacy was used as another tool to bind the IDF as an organization.

c. 1967

The period after the 1956 Sinai campaign saw a fundamental evaluation of the structure of the IDF. Increasing technological capabilities of weapons systems, a threat that was heavily supported by the Soviet Union, a rapidly expanding domestic economy, and an affirmation of a mobile warfare doctrine combined to influence the very nature of the IDF as an organization. Although the changes were dramatic, they were instituted in a gradual manner and evolved over the decade due to readiness concerns. At the strategic apex level, the increased complexity of the organization resulted in a more dominant role by the General Headquarters of the IDF. The threat faced on multiple fronts called for a command and control apparatus and structure able to effectively allocate limited combat resources. The middle line was a more standardized entity which

sought to train and educate IDF leaders in staff as well as command positions. Focus in the operating core was placed upon training the common soldier in the face of an increasingly complex battlefield. This complexity precipitated, as well, a more formalized support structure which was designed along the "push" system of resupply. The mobile warfare doctrine dictated this system as a means of alleviating resupply concerns in the mind of the maneuver commander. This increased system complexity also resulted in a technostructure that formalized a divisional system and recognized the need for rapid and flexible task organization. The ideology of the IDF affirmed the Israeli respect for the sanctity of human life and an organizational objective of minimizing both friendly and enemy casualties.

d. 1973

Despite an overwhelming success in the Six-Day War, the IDF underwent a radical restructuring in the years prior to 1973. The changes which occurred in the IDF during this period were brought about, once again, by a complex array of factors. In some instances, an improper interpretation of factors resulted in organizational failures. The strategic apex had become fouled in a confused command structure which deteriorated in the chaos of the war's first days. This lack of clear C² proved nearly fatal to the initial orchestration of forces on the Southern Front. The middle line and operating core were hampered by an incorrect organizational interpretation of the results of the 1967 war. The "all-armor" doctrine was limited in its ability to deal with the increased capability of anti-tank weaponry in the hands of the Arab infantryman.

Organizational adjustments were required in the course of the war to overcome this deficiency. Lack of allied support in 1967 precipitated a move on the part of the support structure to decrease foreign dependency by increasing domestic weapon production. Similarly, the technostructure had responded to the nature of the threat by standardizing the division in order to achieve a wider span of control for the maneuver commander. This move towards centralization had the undesired effect, however, of limiting the small unit's capability to flexibly respond to a variety of threats.

e. 1982

The years following the Yom Kippur War were a time for profound growth throughout the IDF. This move toward growth brought predictable organizational problems, including increased complexity. The push towards growth followed directly from an acknowledgement that the threat to Israel was permanent and would never diminish. Predictable conflicts arose between the military sector and the civilian economy as they competed for scarce manpower resources. The increasingly complex organization brought about a strategic apex that, once again, become dominated by one strong individual. Defense Minister Sharon came to dominate this war through his willingness to use his powerful position to achieve his own agenda. The middle line and operating core were in the process of transitioning from the "all-armor" force structure to one which emphasized combined arms in all actions. Entire branches of the ground forces, especially infantry and artillery, were given increased roles and importance in the new force structure. The support structure had grown

and formalized to the point where it could logistically support the IDF during a multi-front war for a period of 28 days. The increased size of the force resulted in the technostructure implementing a corps-level command echelon to alleviate the excessive span of control demanded of the Front commander. The legitimacy of this operation fundamentally shook the IDF at its foundations, however, as soldiers were called upon to fight in urban terrain with all the inherent problems and increased casualties. For the first time, the IDF experienced combat refusals whereby officers and soldiers chose jail over combat.

f. The IDF of Today: 1990

Currently, the IDF is working, in keeping with its adaptive heritage, to fit within changing roles and differing missions within Israel. The GHQ has established a Field Forces Command to provide a clear means of maintaining focus on combat readiness in the face of such internal distractions as the intifada. Ongoing competition for scarce resources has resulted in a more responsive training system that relies upon increasingly sophisticated computer war games and simulations designed to maximize limited training time. The IDF is presently evaluating its long-term force structure, again, in light of increasingly capable precision-guided weapons. Emphasis appears to be shifting away from armor-dominated ground forces toward a more balanced force which incorporates the most modern weaponry available.

4. The Outputs of the System

It is, at least to this author, somewhat remarkable that although the IDF has undergone numerous organizational

restructurings, the ability to effectively accomplish its mission has never wavered. There are numerous reasons for this repeated success, including the strong motivation of IDF soldiers who are, quite literally, fighting for national survival. In essence, the IDF has been able to maintain a qualitative advantage over its adversaries in both equipment and men. Thus, when General Israel Tal speaks of "superior technology" [Ref. 4:p. 13], he is referring not only to superior weaponry but also to maintaining the qualitative edge in manpower so evident in IDF history.

D. ADAPTABILITY—WHY AN IDF STRENGTH?

One question which remains to be addressed concerns the very nature of the IDF. Is there some special quality in this organization which promotes self-assessment and, in turn, change? In this author's opinion, there are at least two possible reasons for its proclivity to adapt.

1. Cultural

An IDF officer who questions methodology or current operational practice is normally not chastised. Quite the contrary, dissent is, if not encouraged, at least expected in the ethnically and socially diverse Israeli Defense Force. Officers who perceive improper or inefficient actions are allowed to lodge complaints, even against their commanders, without fear of losing their careers. After the 1956 war, for example, two battalion commanders demanded an investigation of their brigade commander's conduct, alleging that he had "...not shown due care in the moral application of force since he did not take due care to protect his men and civilians in the battle area." [Ref. 4:p. 172] Although the case proved insignificant, it is important to note that both the battalion

commanders went on to become IDF Chiefs of Staff and the accused brigade commander, Ariel Sharon, the Defense Minister [Ref. 4:p. 172]. This small example is some proof of the open conditions which exist in the IDF and reflects an organizational willingness toward self-assessment.

Culturally, it has been said that the Jews lack any semblance of military tradition. This fact allowed the formation of the military, and its continued evolution, to be based upon original methods and unique approaches [Ref. 8:p. 54]. One author points out that

junior leaders were encouraged to speak their minds freely, bringing fresh ideas to the attention of their seniors. This would sometimes lead to extremes and was not always welcome, but the IDF has always prided itself on its relative lack of convention and its flexibility and, as the record shows, this has been mostly to its advantage in battle. [Ref. 10:pp. 21-22]

Since many of the IDF's wars have been waged at the company level and below, the ability to foster innovative thinking at the junior officer ranks has, in the author's opinion, directly contributed to success on the battlefield.

2. Combat Experience

There remains the very distinct possibility that the IDF has been extraordinarily adaptable simply because it has fought seven wars in slightly more than 40 years. Combat experience has a unique capacity to focus a military's attentions on real or perceived weaknesses. The IDF has retooled and restructured periodically, only to find that minor, and sometimes major, alterations were required. After each conflict, the IDF leadership has evaluated lessons learned and funnelled these into its doctrine, trying to capitalize on experience gained while fighting.

Although on occasion lessons have been misread or improperly implemented (i.e., the pure tank doctrine), on balance, the IDF has proven a model of organizational adaptability.

E. THE UTILITY OF THE FRAMEWORK

Of possible interest for subsequent research, in the author's opinion, is an effort toward codification of a framework for organizational analysis. While the framework offered in this thesis has largely served the author's purpose of systemically capturing the IDF as an organization over a 40-year period, there clearly remains room for improvement.

The framework offered in Chapter II recognizes a failure to adequately identify and gauge for relative importance the entirety of possible inputs into any organizational environment. Instead, only those inputs most obvious to the author in the course of his research were utilized. Clearly, this framework could be improved, albeit complicated, with a more complete accounting of these inputs.

The use of the Mintzberg model to depict the six parts of any functional organization was useful but, once again, could stand improvement. In the author's opinion, this model should be supplemented with another category—hardware. It was difficult to capture the essence of an organization such as the IDF while strictly focusing on its people. While technology is an appropriate input in the organizational environment, fielded weapons systems are as much a part of the military organization as its ideology or its technostructure.

The framework offered in this thesis used the principles of war to capture organizational outputs. This approach was adequate in

summarizing combat outcomes but, once again, might be improved. In a thesis of broader or different scope, a framework might include an analysis of the organization's approach to fighting the various levels of war. In this way, strategy, operations, and tactics could be discussed as separate entities as appropriate.

This framework could also be improved in its ability to adequately capture the existing environment. The amount of variety which pervades the organization at a given time is most difficult to quantify and relies heavily upon the researcher's intuition and interpretation of source material. It is in this attempt to rate the relative complexity and dynamism of a particular organizational environment at a specific time that possible error can be introduced. While the author offers no solution to this problem, it is crucial that the reader understands this limitation in the framework from the beginning.

While this framework can obviously be improved, it must also be reaffirmed that as a method of systemic analysis on a limited scope, it has proven successful. The history of the IDF as seen through the lens of this framework is remarkably clear. In the space of this short thesis, the growth and changes in the IDF as a military organization over 40 years have been catalogued. In the author's opinion, the ultimate utility of this framework is in offering a disciplined approach to analysis of organizational tendencies over time.

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