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**A Smaller, More Lethal Force:
Operational Art By An Outnumbered Army**

**A Monograph
by
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Armor**

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Second Term 90-91

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91-10360



084

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE <i>MAY 1991</i>	3. REPORT TYPE AND DATES COVERED	
4. TITLE AND SUBTITLE <i>A SMALLER, MORE LETHAL FORCE: OPERATIONAL ART BY AN OUTNUMBERED FORCE</i>			5. FUNDING NUMBERS	
6. AUTHOR(S) <i>MAJ JAMES E. ZANOL</i>				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <i>SCHOOL FOR ADVANCED MILITARY STUDIES U.S. ARMY COMMAND AND GENERAL STAFF COLLEGE FT. LEAVENWORTH, KS 66027</i>			8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) <i>SEE #7</i>			10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION/AVAILABILITY STATEMENT <i>DISTRIBUTION UNLIMITED</i> APPROVED FOR PUBLIC RELEASE DISTRIBUTION UNLIMITED.			12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words) <i>SEE ATTACHED SHEET</i>				
14. SUBJECT TERMS <i>OPERATIONS, OPERATIONAL ART, THEORY OF WAR, CENTER OF GRAVITY, DECISIVE POINTS,</i>			15. NUMBER OF PAGES <i>50</i>	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT <i>UNCLAS</i>	18. SECURITY CLASSIFICATION OF THIS PAGE <i>UNCLAS</i>	19. SECURITY CLASSIFICATION OF ABSTRACT <i>UNCLAS</i>	20. LIMITATION OF ABSTRACT	

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The criteria used to analyze campaigns of an outnumbered force come from the Clausewitzian theory of war. The concepts used are center of gravity, decisive points, attack and defense, and simultaneous and sequential operations. These concepts are discussed in order for the reader to better understand their influence on campaign design.

The Israeli Army campaigns of 1967 and 1973 serve as historical examples. Both cases illustrate a force that fought outnumbered and won. These two campaigns provide a contrast in campaign planning. Israel won in both wars, although the sphere of her victories differed.

This paper concludes that an outnumbered force can win a war against a larger enemy. Nevertheless, this force needs excellence in all facets of war, from strategic guidance to tactical execution. The small force must also recognize the elements of operational art in campaign design, thus ensuring effective use of the limited means available.

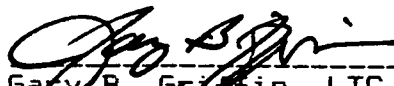
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MONOGRAPH APPROVAL

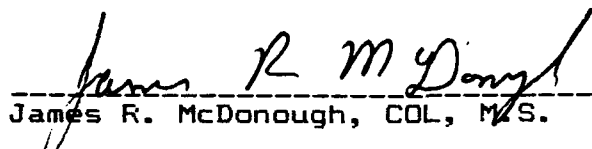
Major James E. Zanol

Title of Monograph: A SMALLER, MORE LETHAL FORCE:
OPERATIONAL ART BY AN OUTNUMBERED ARMY.

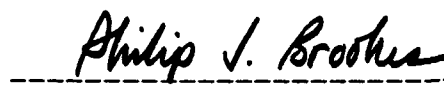
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Degree Program



Accepted this 8th day of May 1991

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ABSTRACT

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OUTNUMBERED ARMY by MAJ James E. Zandl, USA, 50 pages.

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I. INTRODUCTION

Since 1976 the United States Army has believed that it can fight outnumbered and win. That year Field Manual 100-5, Operations, advanced fighting outnumbered in the defense as its basic premise.¹ While later versions of this key warfighting manual restored the balance between offense and defense, fighting outnumbered remained a likely condition of war.² Further, emerging doctrine assumed that U.S. forces would fight a nonlinear battle with an enemy force of comparable size or larger.³ Clearly from the development of its doctrine, the United States Army believed it could fight and beat a larger army.

This monograph looks at operational art as executed by an outnumbered force. Specifically, the research question is: How have outnumbered armies designed and executed successful campaigns? Fighting outnumbered and winning is a high risk venture which requires near flawless use of the principles of operational art to succeed. Operational art as described in contemporary U.S. Army doctrine can offer help in the serious challenge faced by a small force opposing a numerically superior one.

Three questions from FM 100-5 describe the design of campaigns.⁴ Changed slightly from their original form, these questions form the subordinate research questions used to develop evidence. First, what

military condition must an outnumbered force produce in the theater of war or operations to achieve the strategic goal? Next, what sequence of action is most likely to produce that condition? Finally, how should an outnumbered force apply limited resources to accomplish that sequence of action? Simply, this monograph looks at how outnumbered forces achieve ENDS through WAYS with limited MEANS. The answers to these questions form the evidence for this monograph.

This study follows an organization of theory, history, and synthesis. The criteria uses concepts of the theory of war to analyze evidence including center of gravity, decisive points, attack or defense, and simultaneous and sequential operations.

The Israeli Army campaigns of 1967 and 1973 serve as historical examples. While both cases show a force that fought outnumbered and prevailed, each provides a contrast in campaign planning. It is, however, not the intent to describe these campaigns in detail beyond that required to support the analysis. But before drawing general conclusions from these examples, the context of Israel's wars needs review.

Israel's wars occurred within the context of restricted geography, time, and international pressures. First, Israel enjoyed advantages peculiar to the geography of the Middle East. In general terms, Israel fought over a limited area that compressed the spheres

of strategy, operations, and tactics. This was especially the case for the Golan Heights. Second, Israel needed to fight a short war. She did not have the population to field a larger force or fight a protracted conflict with heavy casualties. Israel's Arab opponents, on the other hand, had an extensive population and therefore the potential for large forces that could sustain greater losses. Finally, Israel fought knowing that superpower interests in the region would contain the conflict. It is clear that Israeli commanders understood how to conduct campaigns under these restrictions. It is also clear that they understood operational art as we define it. That does not mean their Arab adversaries did not understand operations.

Operational art is just as important to a large force as it is a smaller one. A numerically superior force that fails to employ concepts of campaign design can lose. Any conclusions drawn on the importance of good campaign design also applies to a large force. However, it is imperative that the outnumbered force have superior operational planning to offset the adverse force ratio.

The important operational lessons for an outnumbered force derived from this study are outlined in the conclusion. As an adjunct, this monograph also reviews the value of theory in campaign planning.

Nevertheless, before the historical narrative, the theory of war concepts used as criteria require discussion.

II. CRITERIA

Theory then becomes a guide to anyone who wants to learn about war from books....It is meant to educate the mind of the future commander, or, more accurately, to guide him in his self-education, not to accompany him to the battlefield....

Clausewitz, On War

Using the above quote to start a discussion of criteria is appropriate. Four concepts of the theory of war make up the analytic criteria: center of gravity, decisive points, the relationship of attack and defense, and simultaneous and sequential operations. Carl von Clausewitz discussed these concepts in his brilliant but unfinished book, On War. Though his book is over 150 years old, Clausewitz's work still has powerful relevance today. Using his concepts as a guide should reveal how an outnumbered force wins by balancing ends, ways, and limited means. While these theoretical concepts interact in war, one plays a key role -- the center of gravity.

Clausewitz wrote that war plans must focus on the enemy's center of gravity. The first reference to the center of gravity is the battle. The second and most useful reference to center of gravity is the concentrated power of armies. In developing his thoughts

on war, specifically the role of the engagement, Clausewitz introduced the theory of the center of gravity.

To develop a theory of war, Clausewitz began by reducing war to its simplest parts. In Clausewitz's view, fighting is the essence of war. Therefore, the battle fought by the main force is the center of gravity of the war.⁵ Further, both sides of a war commit the largest concentration of their strength to this battle. As such, this battle of decision becomes the "provisional" center of gravity of the campaign.⁶ As Clausewitz's describes the main battle as the center of gravity, another element is always present -- the mass of the opponent's army.

The main body of the enemy armed force is the second way Clausewitz described center of gravity. And as his theory developed, his definition of center of gravity became more refined. Clausewitz states:

A center of gravity is always found where the mass is concentrated most decisively. It presents the most effective target for a blow: furthermore, the heaviest blow is that struck by the center of gravity.....It is therefore a major act of strategic judgment to distinguish these centers of gravity...and to identify their spheres of effectiveness.⁷

Clausewitz narrows his definition of center of gravity in his chapter on war plans. For example, in campaign planning, one must consider the characteristics of the opposing armies. These characteristics will reveal a center of gravity, "the

hub of all power and movement, on which everything depends."⁹ This center of gravity then becomes the focal point of the campaign.

A useful summary of Clausewitz's center of gravity concept is:

At the operational level we create a center of gravity when we concentrate our subordinate maneuver formations. This creates a concentration of potential combat power."⁷

The center of gravity definition in FM 100-5 is also useful: a "source of strength or balance." Destroying the enemy's center of gravity thus produces the greatest results and likelihood of success. Losing this source, the enemy's entire force begins to come apart, "producing a cascading deterioration in cohesion and effectiveness."¹⁰

Therefore, the outnumbered force must make this major strategic judgment of correctly identifying the center of gravity when developing its campaign plan. The outnumbered force must then concentrate its limited resources against this center of gravity. Correctly identified, the next step is deciding how to attack the center of gravity.

The decisive point offers a way to get at the enemy's center of gravity. While Clausewitz understood the relationship between the center of gravity and the decisive point, he did not formally define the latter. However, he did offer that relative superiority of

strength must concentrate at the decisive point. This is true even when an absolute superiority of strength is impossible.¹¹

While still not defining a decisive point, Clausewitz stated that choosing the correct decisive point helps achieve relative superiority. Picking this point during the planning process comes from "the resolution needed to sacrifice nonessentials for the sake of essentials."¹² Another theorist of Clausewitz's era provided a better definition of decisive points.

The Swiss theorist Baron Henri Jomini defined decisive points more fully in geometric and geographic terms. He stated that three factors determine a decisive point: features of the ground, relation of local features to the strategic aim, and positions occupied by the respective forces.¹³ Of the many points Jomini named, the decisive strategic point is most important. In fact, a decisive strategic point can potentially have a marked influence on battle or campaign results.¹⁴ Said another way, a decisive point provides a force with a marked advantage over its opponent. Therefore, holding this point will theoretically decide the outcome of the action. The decisive point also forces a decision on the commander who must decide to either seize or defend this decisive point. He also must decide how much force he will use in keeping or capturing this point.¹⁵

As Clausewitz points out, the correct identification of the decisive point offers the outnumbered force a degree of relative superiority. Armed with the knowledge of the decisive point, the outnumbered force then masses its strength against it. In doing so, it causes the most destruction and dislocation of the enemy's center of gravity. As with the center of gravity, the outnumbered force must also select the correct decisive point on the first try. Therefore, application of force at the correct decisive point enables the outnumbered force to destroy the enemy at a rate that ensures the collapse of his center of gravity. Nevertheless, the outnumbered force must also select the form of war that best helps this process.

Attack or defense are the two forms of war available in operational design. Clausewitz develops his argument around the proposition of the interdependence of these forms. Where two ideas, like attack and defense, are the logical antithesis of each other, then one form implies the other.¹⁶ This relationship is clear in Clausewitz's description of the defense. He calls it "not a simple shield, but a shield made up of well directed blows."¹⁷ However, Clausewitz sees a difference in strength between attack and defense.

By its nature, defense is theoretically the stronger form of war. Clausewitz makes this assertion based on three factors. In the engagement, the defense enjoys the advantages of surprise, terrain, and concentric attack.¹⁶ Further, fighting forms the basis of defense, whereas the nature of attack is possession. Therefore defense is the stronger form since it is based on fighting, the essence of war.¹⁷ Then, to make up for its size, the outnumbered force should defend to capitalize on the inherent advantages of this form of war. Regardless of the inherent strength of the defense, the object of the war also influences the form of war used.

While defense is the stronger form, it has a negative object as its principal aim. Clausewitz characterized this negative object in his concept of the defense as awaiting and parrying the blow. Therefore, one should defend only as long as forced to by circumstances. When there is enough strength to attack, one must pursue a positive object. To Clausewitz, remaining in a defensive posture contradicts the very idea of war."²⁰ Therefore, in order to prove decisive, transition to the attack must eventually occur.

Although the attack pursues a positive object, it always stays closely tied to the defense. In Clausewitz's theory, strategic attack is "thus a constant alternation and combination of attack and

defense."²¹ Clausewitz also warns that if a successful defense can imperceptibly turn into an attack, the reverse is also true.²² Looking at the relationship of attack and defense, the outnumbered force must use the strength of combining forms. Using a combination of attack and defense, therefore, implies the use of force over time.

The outnumbered force must now decide on the simultaneous or sequential use of means. Clausewitz talks at length about the simultaneous use of force at the strategic/operational level. In his judgment, large forces used simultaneously provide a greater chance of success.²³ Further, simultaneous use of forces inherently brings a decision earlier in a campaign, a critical fact for the outnumbered force. Therefore, all parts of the army must act since "even the least appropriate task will occupy some of the enemy's forces and reduce his overall strength...."²⁴ However, Clausewitz cautions that simultaneous use of force is not the only course.

When war consists of a "lengthy interaction of mutually destructive forces," successive or sequential use of force is also possible.²⁵ Nevertheless, the outnumbered force may have another alternative -- a combination of both means. Combining simultaneous and sequential use of force can create favorable conditions for the tactical battle.

These concepts -- center of gravity, decisive point, attack and defense, simultaneous and sequential operations -- form the criteria for this analysis of two successful campaigns fought by an outnumbered force. These theoretical concepts are important to any army, but to the outnumbered force understanding them is critical.

In summary, faced with fighting a war with limited means, the outnumbered force must act correctly or suffer defeat. Selecting the correct center of gravity and decisive point is absolutely critical. Further, the campaign plan must include the form of war used, attack or defense, and the simultaneous and sequential use of force over time.

The Israeli Army fought two successful wars while outnumbered. The campaigns of the Arab-Israeli Wars of 1967 and 1973 provide interesting contrasts in the use of the theoretical concepts described above. While both campaigns succeeded, the level of success varied. Nevertheless, analyses of both campaigns provide important lessons for successful warfighting by an outnumbered force.

III. Israel 1967.

Where the weaker side is forced to fight against odds, its lack of numbers must be made up by the inner tension and vigor that are inspired by danger.

Clausewitz, On War

Strategic Context

After nearly ten years of uneasy peace between Israel and her Arab neighbors, war broke out in the summer of 1967. During the summer of 1966, Palestinian guerrillas had launched repeated attacks on Israel from bases in Jordan. In November 1966, Israel struck back, conducting raids on suspected guerrilla bases. Six months later, Syria again conducted heavy artillery attacks on Israeli villages. Israel responded with air strikes bombing guerrilla bases and shooting down six Syrian aircraft with no Israeli losses.²⁴ However, the major threat did not appear along the Syrian border but on Israel's southern frontier -- in the Sinai Peninsula.

By the spring of 1967 it was clear that Egypt was taking steps that would lead to war. During May Egypt moved 100,000 troops into the Sinai, ejected the United Nations peacekeeping forces, and closed the Straits of Tiran to Israeli shipping. Israel made it clear that it considered the latter grounds for war. Other Arab nations also mobilized forces and hastily sent them to the Sinai. By the end of May, Israel faced an Arab army consisting of 250,000 troops, 2,000 tanks, and some 700

combat aircraft (See Chart 1 in Appendix A).²⁷ Aware of the imbalance in military men and material between the Arab and Israeli armies, the world watched for the expected destruction of Israel.

Israeli Campaign Design (Appendix B)

Ends. The 1967 Israeli campaign had to create the military conditions necessary to achieve the strategic goal of ensuring Israel's survival. A viable and secure Israel was the desired strategic end. The Arab end was to destroy Israel and create a Palestinian state. Israel's lack of strategic depth and its limited means made it vulnerable to a coordinated Arab offensive. As a result, the Israelis had to select an operational end that would disrupt a decisive Arab attack. This would allow Israel to concentrate on one front, hold on another, and then shift forces as needed.²⁸ To pursue this end, the Israelis had to identify the Arab center of gravity.

Israel focused its pre-war plans on the Egyptian Armed Forces and did not foresee a multi-front war. Fortunately, the conditions of the multi-front war in 1967 did not change the choice of center of gravity. The IDF analysis showed that the principal threat to Israel was Egypt.²⁹ Specifically, the Egyptian Sinai Army's armored reserve was the operational center of gravity.

The Israeli selection of the enemy's principal armored force as its center of gravity fits with the definitions of the term. Clausewitz would approve of this choice in that it correctly identified the mass of the enemy's potential combat power. This Arab center of gravity clearly threatened the Israeli center of gravity. Further, this center of gravity provided the Israelis the opportunity for operational, if not strategic success. By destroying the Egyptian armored reserves, Israel could start the disintegration of the entire Egyptian Army. Selecting the Egyptian forces as the center of gravity also fits with definitions from contemporary U.S. Army doctrine.

FM 100-5 includes the possibility of alliance cohesion as a center of gravity.³⁰ The Israelis correctly assessed the Arab coalition would collapse if they defeated the strongest army. Not only would the coalition break up, but any military coordination would also disintegrate. While Israel did not expect to fight on several fronts, selecting Egyptian forces was correct to meet that possibility.³¹ Having made the destruction of the Egyptian Sinai Army its objective, the Israelis then assigned the means to accomplish it.

Means. Israel went into the 1967 Seven Day War facing a numerically superior enemy. Further, the Arab coalition could potentially mobilize even more force than they put in the field initially.

Official figures of Israeli strength are not available. However, estimates show that a fully mobilized Israel could field 275,000 troops, 800 tanks, and 197 combat aircraft (See Chart 2 in Appendix A).³² While smaller in numbers, the Israelis clearly had other advantages.

The Israeli Defense Force (IDF) had many qualitative advantages in personnel and doctrine over its Arab opponents. First, the IDF soldier had a much higher level of education, enabling him to employ modern weapons effectively. Consequently, small unit leadership also enjoyed this advantage. The quality of Israeli senior civilian and military leadership also surpassed that of the Arab forces.

These qualitative advantages enabled Israel to develop and execute mobile warfare doctrine. This type of warfare allowed considerable discretion to small unit leadership that could capitalize on both initiative and unforeseen tactical and operational opportunities.³³

Ways. Israel had its choice of the two forms of war, attack and defense. This choice had to account for two critical factors. First Israel's lack of strategic depth meant that an enemy on its borders could threaten

the whole country. Therefore, to reduce her vulnerability and to gain depth, Israel had to take the war into the enemy's depth.³⁴

The second factor was time. Because of Israel's smaller population and limited resources, it could not fight a protracted war of attrition. However, Israel could mobilize faster than its enemies.³⁵ To exploit this ability, Israel had to act before the armies of the Arab nations could fully mobilize. In summary, lack of depth, and the need for a short war, led Israel to opt for a strategic pre-emptive attack. Two other factors also influenced this choice.

Qualitative superiority and central position made Israel favor the offense. As discussed earlier, the IDF enjoyed a qualitative advantage in personnel over its enemies. Recognizing this fact, the Israelis created units and doctrine designed to execute highly mobile warfare based on the striking power of tanks and aircraft. Additionally, their doctrine emphasized rapid offensive action on multiple fronts.³⁶ Also supporting Israel's offensive strategy was its central position in relation to its enemies.

The geography of the Middle East positioned Israel between her enemies. While this central position has the hazard of encirclement, it does have advantages.³⁷ The central position provides Israel with short, interior lines of communications that helps economy of

force measures. Therefore, Israel could hold on one front, concentrate on another, and rapidly shift forces as required. In contrast, because of their physical separation, the Arab armies could not shift forces between fronts.

All the factors discussed so far led Israel to forego the theoretically stronger form of war, the defense. It is, nevertheless, important to point out that Israel conducted a strategic defense with an operational offense. Once again, it bears repeating that Israel's strategic goal was the preservation of the country. Her operational goal, however, was the seizure of territory that would provide a protective buffer. The nature of Israel's strategic and operational goals allowed her to capitalize on the advantages of both forms of war.³⁸ Having chosen the operational offense, Israel could complete its campaign plan.

The original Israeli campaign plan for the Sinai sought to achieve limited objectives. By short, limited attacks, the Israeli Army would seize the Gaza Strip and the northern Sinai. Israel would then use these areas to bargain for Egyptian withdrawal and the opening of the Straits of Tiran. However, Moshe Dayan, the newly appointed Minister of Defense disagreed with this plan. He felt that the attack should "destroy the Egyptian Army in the Sinai rather than bargain for its withdrawal."³⁹

Dayan's view was correct in Clausewitzian terms. An attack with limited objectives would not threaten the Arab center of gravity. The threat or actual destruction of that center of gravity would clearly do more to achieve Israel's ends. Therefore, the final Israeli plan aimed to attack and destroy the Egypt Sinai Army.

While the Southern Command concentrated on defeating Egypt, the Northern and Central Commands took up a defense. To threaten the operational center of gravity in the Sinai, Israel designed its campaign using decisive points. These decisive points provided focus for each phase of the campaign. The phases were: penetration, defeat of the second defense line and armored reserves, and advance to the Sinai passes to cut of the Egyptian Army.⁴⁰

During the penetration phase, Israel chose three decisive points. In the north, one ugdah, a division sized unit, would attack to seize El Arish. This attack would unhinge the north end of the Egyptian defensive line. In the center, another ugdah would penetrate rough terrain to cut lateral routes, preventing movement of Egyptian reserves. The southern ugdah attacked to seize the Abu Ageila/Umm Katef crossroads.⁴¹ Holding these crossroads would prevent the Egyptians from moving their operational reserves, and bypass the bulk of the .pa Egyptian defenders. Further, if successful the

Israelis would have routes into the Egyptian rear. Seizing these decisive points set the conditions for the next phase.

The Egyptian defenses near Gebel Libni constituted the decisive point for Israel's second phase. The significance of the Gebel Libni area was that the northern two Israeli ugdahs would join here. Once combined, this force would defeat the two Egyptian armored divisions located in this area.⁴² Having defeated the operational reserve, the Israelis could then cut off remaining Egyptian units.

The passes across the central mountains of the Sinai were the decisive points in the third phase. Capturing these points would cut off the Egyptian Army in the Sinai. Having these passes, the Israelis could take advantage of the strength of the tactical defense. Combined with tank fires on the ground, the Israeli Air Force would destroy the Egyptian Army as it tried to escape through these passes.⁴³

In the Sinai, the Israeli commanders had designed a campaign around decisive points that uncovered the Arab center of gravity. Therefore, the Israelis could mass their combat power at these points and achieve relative superiority. Another part of this design directed the timing of the Israeli actions.

The Israeli campaign design also included simultaneous and sequential use of means, clearly falling within the parameters of Clausewitz's theory.⁴⁴ Israel employed all her available force to her strategic and operational plans. Engaging Arab units on all fronts -- the Sinai, Old Jerusalem, and on the Golan Heights -- disrupted any mutual support or coordination. However, sequential use of force also occurred.

The simultaneous use of force implied sequential use for Israel. Since Israel could not win the war in a single battle, the committed forces had to conduct a sequence of battles over time. Given Israel's limited means, all forces took action by either attacking or defending. After beating the Egyptians in the Sinai, Israel planned to shift forces to the Central or Northern fronts to deal with the Jordanians or Syrians as necessary. This multi-front war required sequential operations, the Sinai campaign phases are an example. Sequential operations allowed the Israelis to mass combat power for each phase. Thus, as with attack and defense, the Israelis gained an advantage by using a combination of simultaneous and sequential operations.

Summary

Israel's campaign design for the 1967 war proved decisive. The 1967 campaign achieved success beyond that thought possible by many, including the Israelis. The campaign correctly used elements of operational art

including center of gravity, decisive points, simultaneous and sequential operations, and attack or defense.

Clausewitz's theoretical concepts served Israel well in her campaign planning. Planners identified the strategic center of gravity of the Arab coalition, the Egyptian Army. Further, the campaign plan focused on the operational center of gravity, the Egyptian armored operational reserves. Israeli commanders fully understood that destruction of these Arab centers of gravity would lead to success. Limited offensives that did not threaten the center of gravity simply could not succeed. Further, a limited offense would waste Israel's limited assets to no end or purpose. It is also clear that the Israeli campaign plan included decisive points to uncover the Arab center of gravity.

The campaign plan identified decisive points where Israel massed superior combat power. Further, the decisive points followed a logical progression. This progression set the conditions for the tactical battles that ultimately led to the destruction of the Egyptian Army.

The combination of attack and defense took full advantage of the strengths of both forms. The Israelis conducted a strategic defense and an operational offense. Additionally, they took advantage of the tactical defense within the operational offensive

campaign (as at the Sinai passes). Similarly, the lethal combination of simultaneous and sequential operations fully supported the Israeli campaign principal objectives.

In the 1967 war, Israel showed the world how an outnumbered force could defeat a larger opponent in modern war. Even though an ineffective Arab performance aided them, it was clear that Israel achieved a decisive victory. Israel's use of theory in campaign design made a significant contribution to her success. In her 1967 victory, Israel had set a standard of operational success for her future conflicts.

IV. The War of Atonement, 1973.

In practice, the size will be decided by the government. ...the general who is to command the army in the field usually has to accept the size of his forces as a given factor.... Consequently, the forces available must be employed with such skill that even in the absence of absolute superiority, relative superiority is attained at the decisive point.

Clausewitz, On War

The period between the 1967 and 1973 Arab-Israeli Wars was one of violent peace known as the War of Attrition. Egypt, Syria, and Israel routinely traded artillery fire and commando raids along the Suez Canal and the Golan Heights. In fact, Egypt had begun to prepare for the next war as early as 1968.

Aided by the Soviets, Egypt rebuilt its air defense system to defend against the Israeli Air Force. Egypt also fielded the Sagger anti-tank missile system to cope

with Israel's armored units. By these two actions, Egypt had countered the two principal Israeli military strengths that had dominated the 1967 war.

The Egyptians thus designed their campaign to take full advantage of their military strengths to win a limited victory. Under the Arab plan the Egyptian and Syrian armies would attack simultaneously to limit Israel's response. After seizing limited objectives in the Sinai and Golan Heights, the Arabs would set up defensive positions under the cover of anti-aircraft and anti-tank missile screens. The Arabs would then call for a cease-fire and negotiations with Israel. Additionally, the Egyptians conducted a well-coordinated deception plan, including routine military activities and diplomatic steps, to hide their war preparations.

Tensions mounted during the late summer and fall of 1973. In September, Israeli and Syrian Air Force fighters clashed. Syria lost thirteen aircraft to Israel's one. Under the guise of a response to the air battle, Syria mobilized and massed her army on the Golan. At the same time as part of her deception plan, the Egyptian Army conducted exercises near the Suez Canal.⁴⁵ The Arab deception plan worked. Surprised by the Arab attack, Israel was again at war.

Israeli Campaign Design (Appendix C)

Ends. The results of the 1967 war changed Israel's strategic options, giving her more depth for defense. This depth also meant that an Arab attack did not immediately threaten Israel's existence.⁴⁶ Therefore, Israel could conduct its defense differently from previous Arab-Israeli wars. Israel's 1973 war aims reflected the new options.

Israel first sought to deter an Arab attack. If deterrence failed, Israel wanted to prevent the Arabs from capturing terrain by gaining air superiority and then destroying Arab forces. Further, Israel wanted to capture additional Arab territory as a bargaining chip.⁴⁷ The Israeli General Staff had to design a campaign to meet these war aims.

As in 1967, the Arab armored forces remained the center of gravity that Israel would target, this time including the Syrian armor. Ideally, destroying this center of gravity would produce the same effects as in 1967. Israel would first cause the Arab coalition to collapse, providing the freedom to capture additional Arab territory. As in 1967, Israel's 1973 campaign plan correctly focused on destroying the Arab center of gravity. Nevertheless, Israel once again faced a larger enemy force.

Means. Once again, the Arab coalition, with Egypt and Syria as the leading nations, outnumbered Israel. Initially facing the IDF in the Golan, Syria fielded three infantry and two armored divisions, plus many separate brigades. The Syrian force had nearly 1,500 tanks when the war began.⁴⁸ Iraq, Jordan, and Saudi Arabia would ultimately send forces to join the Syrians on the Golan Front.

In peacetime on the Golan Heights, Israel stationed two brigades consisting of 177 tanks and 11 artillery batteries. This small force would face the initial brunt of any Syrian attack. A similar situation existed in the Sinai.

The Egyptian Army took the field in large numbers. The Egyptian first line consisted of five infantry divisions and several independent brigades. Three mechanized and two armored divisions made up the second line. In all, the Egyptian Army fielded 800,000 troops, 2,200 tanks, and 2,300 artillery pieces. Additionally, the Egyptians deployed 150 anti-aircraft missile batteries and 550 first line aircraft.⁴⁹ Against this large Egyptian Army Israel deployed a relatively meager force.

The Israeli force in the Sinai consisted of three brigades that manned the Bar-Lev Line of fortifications and formed armored reserves. The total strength of the Bar-Lev Line positions on the Suez Canal was 426

soldiers. Seven artillery batteries and 277 tanks backed this thin Israeli line on the Suez Canal.³⁰ Significantly, the Israelis also suffered from a doctrinal disadvantage.

The Israeli's spectacular success in 1967 led them to some wrong doctrinal conclusions. The IDF believed their success came from massed armor attacks and the air force. As a result, these arms got priority of resources and dominated doctrinal development. Even though combined arms tactics won the 1967 war, a balanced combined arms doctrine was the unfortunate cost of this air force-armor dominance.³¹ In the opening battles of the 1973 war, Israel used armor without infantry or artillery support in piecemeal tactical and operational counterattacks. These attacks failed, denying the Israelis the tactical prerequisites required for operational success. Eventually Israel would regain its tactical superiority through a return to balanced combined arms operations.

Ways. The post 1967 war strategic situation also changed Israeli operational use of attack and defense. The strategic depth gained in 1967 offered Israel new options in this area as it did in others. Israel could still pursue its traditional strategy of strategic pre-emptive strike and operational offense. But now, as a second option, Israel could accept an Arab first strike

because of its new depth for strategic and operational defense.⁵² Regardless, the choice to attack or defend had to fit with Israel's overall strategic concept.

Three assumptions formed the basis of Israel's strategic plan. First, the Israeli intelligence system would identify an imminent Arab attack and provide ample warning time. Second, the standing IDF would fight a holding action while reserves mobilized. Finally, the Israeli Air Force would win air superiority and help the Army reserves turn the tide of battle on the ground.⁵³ These assumptions, based on the experience of her previous wars, guided Israel's transition to war in 1973.

Israel choose to conduct a strategic and operational defense to meet the 1973 crisis. However, debate surrounded this decision. The IDF Chief of Staff asked for permission to mobilize reserves and launch a pre-emptive attack. Minister of Defense Dayan refused, allowing only partial mobilization.⁵⁴ Thus, Israel gave up its tradition of strategic defense through a pre-emptive strike followed by operational attack. In the 1973 crisis, political constraints directed the operational defense. However, once the reserves mobilized, Israel would change its attack-defense combination.

Her mobilized reserves allowed Israel to return to strategic defense through operational offense. The operational defense of the standing army would create conditions for the attack. Then, Israel's mobilized reserves could concentrate, attack, and gain the initiative. This operational offense would begin to destroy the Arab center of gravity. The IDF's attack-defense combinations worked with another part of operational design.

Once again, both the operational defense and offense used decisive points. In the Sinai, the initial decisive point was the Bar-Lev Line. Egypt attacked and seized this decisive point but then stopped in accordance with her plan. The Line then became a decisive point for Israel simply because of the antitank and air defense belt covering it.

As in 1967, the Mitla and Gidi passes also formed decisive points. Israel's defense of these passes against the attack of the Egyptian armored reserves set the conditions for Israel's counteroffense.⁵⁵ Another decisive point in the Sinai was the boundary between the two Egyptian armies. These two armies had not completely joined their flanks, leaving an undefended gap. Once discovered, Israel exploited this point to cross the Suez Canal and attain operational depth.⁵⁶

The shallow depth of the Golan Heights effected the decisive points on this front. Since holding this line or limiting penetrations created favorable conditions for attack, the Israeli's prepared defensive positions became decisive points. The epic battles near Kunetria and the southern Golan created such conditions. Syrian weakness at these points offered opportunity for Israel's counteroffensive.

Israel's historic battles at decisive points on both fronts led to success. The results of these battles gave Israel a marked advantage, allowing her to attack the Arab centers of gravity. In the Sinai at the Mitla and Gidi Passes, Israeli forces destroyed Egyptian armored reserves. This battle set the conditions for the Israeli crossing of the Canal and the encirclement of the Egyptian Third Army. On the Golan, Israel destroyed the Syrian first echelon and launched its own attack. This Israeli attack forced the Syrian armored reserves to move, leading to their defeat. When these battles on both fronts occurred is another part of operational design.

As in 1967, Israel combined simultaneous and sequential use of forces. Israel committed all of her active duty operational forces concurrently, totally committing the standing army and the Israeli Air Force (IAF). When her reserves mobilized, they moved

immediately to Israel's two fronts. However, Israel designated a main effort which led to sequential operations.

Israel made the Golan Heights her main effort as it had the least depth making it the most vulnerable to penetration. As such, the Golan Heights received priority of air force and reserve resources. Action in the Sinai had to wait for a decision on the Golan. This sequence of operations worked better than Israel expected.

Israel attacked on the Golan Heights to knock Syria out of the war. The Israeli General Staff felt that defeating the Syrian armored reserves and threatening Damascus would achieve this end. Under the Israeli attack, Syria asked Egypt to launch an attack in the Sinai to relieve the pressure. Egypt obliged, moving her armored reserves across the canal and beyond the air defense and antitank missile defenses. Israel destroyed these Egyptian armored forces in front of the Sinai passes. This battle set the conditions for Israel's operational attack in the Sinai.⁵⁷ Thus, Israel's sequential use of force produced favorable conditions for both fronts. Simultaneous and sequential operations, as with other elements of operational design, contributed to Israel's success.

Summary

Israel won the War of Atonement only after surviving initial setbacks. Like 1967, Israel benefited from Arab strategic, operational, and tactical errors. Egypt gave up its operational design to meet coalition needs, leading to her defeat. Nevertheless, Israel's decision to forfeit up the strategic and operational initiative resulted in a narrow victory. This decision was made worse by the IDF's acceptance of unfavorable force ratios in her defense.²⁸ Simply stated, heroic action by Israel's small units saved her from these flawed strategic decisions. In the end however, Israel succeeded through good operational design.

In broad terms, Israel made good use of operational concepts in its campaign planning. The centers of gravity of the Arab forces was correctly identified. Israel recognized the decisive points and wove them into the campaign design. Combinations of attack and defense with simultaneous and sequential operations aided effective use of limited resources. An important lesson for an outnumbered force from the Israeli's 1973 campaign is that gaining the initiative is critical to success.

V. Conclusions

Where the disparity of strength is so overwhelming that no limitations on one's objectives will provide protection from failure...that not even the greatest economy of strength can lead to success... at that point the greatest daring, possibly allied with a bold stratagem, will seem to be the greatest wisdom. Where success is out of reach, an honorable defeat will at least grant one the right to rise again in days to come.

Clausewitz, On War

In 1967 and 1973, Israel demonstrated that an outnumbered force can beat its larger enemy. Israel's campaigns accurately aimed at the operational center of gravity of the Arab armies. The IDF traditionally sought to gain positional advantage over this part of the enemy force and then destroy it. Israel knew it had to destroy the enemy center of gravity to quickly force a decision. She could not waste her limited combat power on an enemy force which would not bring victory. Therefore, Israel looked for ways to get at the Arab center of gravity.

Decisive points provided Israel the positional advantage it needed to threaten the Arab center of gravity. The IDF identified these points to mass its combat power to gain relative superiority and isolate that enemy force that would not influence the decision. Further, the IDF picked decisive points on an indirect approach that provided her smaller force with some protection. Israel was then positioned to destroy the enemy center of gravity through attack or defense.

Israel's 1967 and 1973 wars are good examples of combinations of the attack and defense, taking advantage of the strengths of both forms. The attack-defense combinations helped Israel gain the initiative. With the initiative, the Israel could set favorable conditions for battle.

In 1967, Israel knew that war with her Arab neighbors was imminent and had set clear strategic goals. Israel conducted its strategic defense with operational attack. This crucial decision allowed Israel to gain the initiative from the outset of war. Within the operational offense, Israel combined attack and defense. The Northern Front defended while Southern command attacked. Further, Southern Command combined forms, attacking to penetrate Egyptian defenses, then racing to the Sinai Passes to defend. Combining forms allowed Israel to mass combat power at the decisive point, also providing economy of force in other areas. Israel was lucky that in 1967 the strategic setting allowed it to choose the form of war it wanted.

In 1973, however, the Arabs surprised Israel. The Arab attack gained the initiative, forcing Israel to initially combine strategic, operational, and tactical defense. The Israeli General Staff, however, knew it had to gain the initiative through a combination of defense that transitioned to the attack. Israel's forces on the Golan Heights attacked while her Sinai

front defended. Eventually, the IDF took the operational offensive on both fronts. The transition of attack and defense encompassed the use of Israeli forces over time.

Israel's campaigns included simultaneous and sequential operations. Just the fact of being a small force meant that none of Israel's potential combat power could lay idle. All her available force played an active role in the campaigns. This way Israel could develop mass for use at the decisive point.

Israel, like any outnumbered force, needed to fight a short decisive war. Simultaneous use of all forces available helped Israel to win an early decision. However short the war, a modern conflict, like the Arab-Israeli wars, will consist of more than one battle.

A single battle is unlikely to decide a modern war. Therefore, the operational design must use sequential operations to create favorable conditions for future battles. Overall, the outnumbered force must balance simultaneous use of available force with sequential operations.

Implications

In order to win, the outnumbered force, like any force, must balance ends-ways-means in its campaign design. The campaign design, made using the elements of operational art, helps insure the effective use of

limited means. The operational planner must recognize the following implications of fighting with limited force:

- * The campaign must strive to reach a quick, decisive end. A smaller force cannot conduct a long war of attrition. In other than a short war, numbers do count. This is not to say that the small force avoids combat. Rather, it creates the conditions for a sequence of decisive battles to destroy the enemy center of gravity.

- * A clear, unambiguous strategic goal simplifies campaign design. When strategic guidance is unclear, the campaign will run more risk.

- * The smaller force must try to achieve surprise. Conversely, it cannot allow the enemy to achieve surprise.

- * The outnumbered force must gain and keep the initiative. This allows it to set favorable conditions for battle.

- * Geography will affect operational depth. Restricted military geography will compress operational depth. In this case, the spheres of strategy, operations, and tactics begin to overlap. Where there is limited depth, the outnumbered force must transfer operations into the enemy depth. Once in operational depth, a small force can create big effects.

* The small army must have tactical excellence. Once in battle, the small force must defeat the enemy through superior tactics. The small force must employ the coordinated, violent use of concentrated combat power.

Twice in ten years, Israel defeated larger armies attacking her from many directions. In doing so, she demonstrated that an outnumbered force can fight and win. Israel showed that an outnumbered force needs excellence in all facets of war, from strategic guidance to tactical execution. The likely consequence of failure in any of these areas by an outnumbered force is defeat. This includes the use of operational art and theoretical concepts in campaign design. Operational design provides the essential link between correct strategic goals and superb tactical execution. As Israel showed, a small force can beat the odds.

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APPENDIX A

ARAB FORCES

Arab Military Capabilities on 5 June 1967 (Collated Estimates)

Air Power (Operational Combat Aircraft Only)

	Egypt	Syria	Iraq	Jordan
Mach 2 first-line fighters (MIG-21)	125	36	48	-
Other supersonic Aircraft (MIG-19/SU-7)	80	-	12	-
Subsonic fighter-bombers	110	40	80	21
Light bombers (Il-28)	40	-	10	-
Medium bombers (Tu-16)	30	-	6	-

Ground Forces (Operational and Deployed Only)

Combat and first line support troops	100,000	65,000	20,000	55,000
Battle (and medium) tanks with guns of 75mm and above	900	300	200	300
Other armored vehicles mounting guns (except AA)	200	50	-	30+
Artillery weapons (excluding infantry mortars and light anti-aircraft guns)	900	300	-	100

Chart from Luttwak and Horwitz. The Israeli Army, 1948-1973. Lanham, MD: University Press of America, 1975, p. 222-223.

ISRAELI DEFENSE FORCES

Unofficial Estimates of Israeli Troop Deployments in 1967.

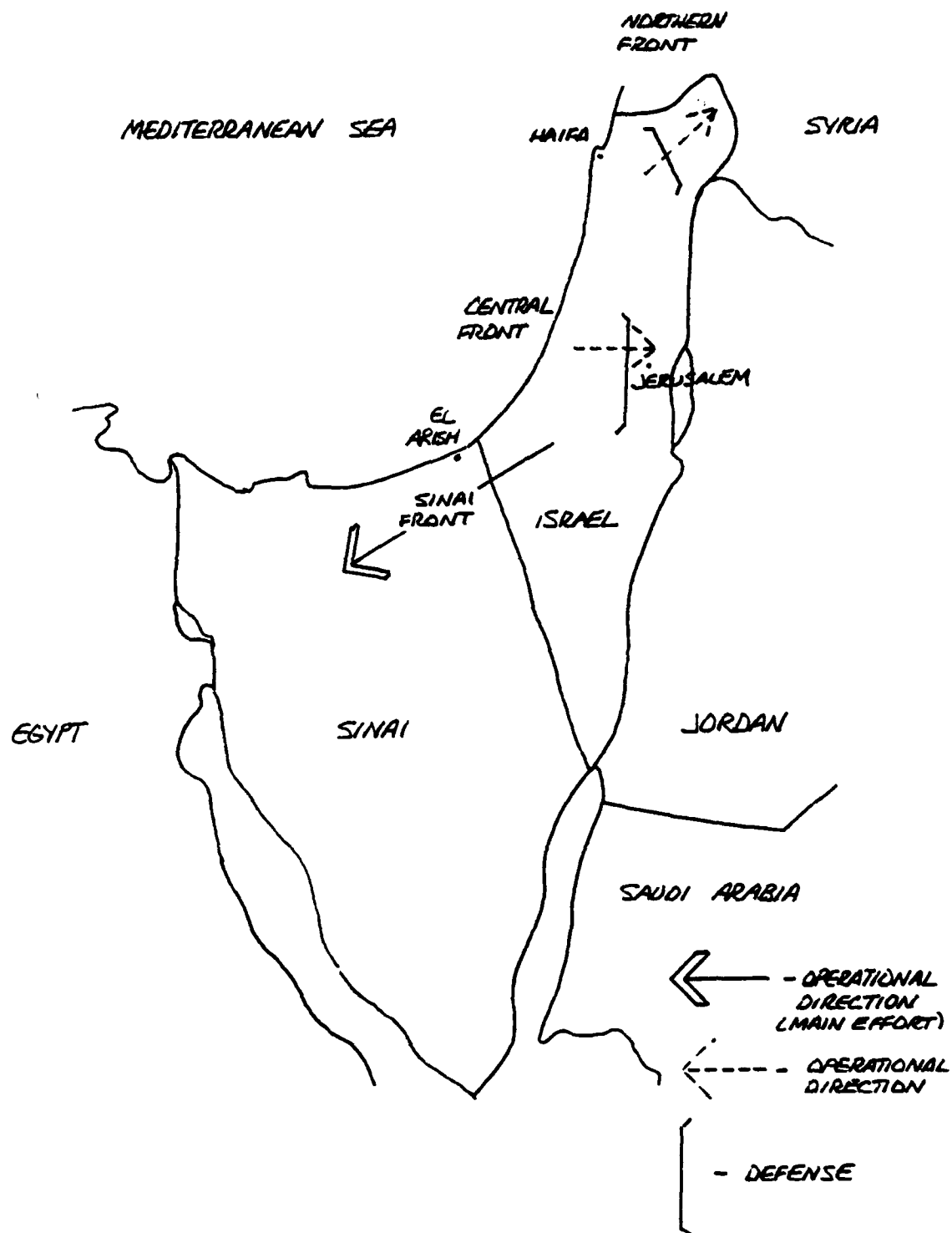
Total Strength of Israeli Defence Force	I.S.S Press Release 6 June 1967	N. Safran From War to War
Troops strength (fully mobilized)	275,000	275-300,000
of which:		
1. Ground force total	No Estimate	250-265,000
2. Conscripts and career professionals of the standing forces	No Estimate	71,000
Total number of brigades	31	24-26
Local Defence Units	No Estimate	Equivalent of 14 Brigades (70,000)

Ground Forces by brigade type

Armored (3,500 men each)	8	11
Paratroops (4,500 men each)	1	4
Infantry (4,500 men each)	22	9-11

Chart from Luttwak and Horowitz. The Israeli Army, 1948-1973. Lanham, MD: University Press of America, 1975, p. 217.

APPENDIX B



THE CAMPAIGN MATRIX

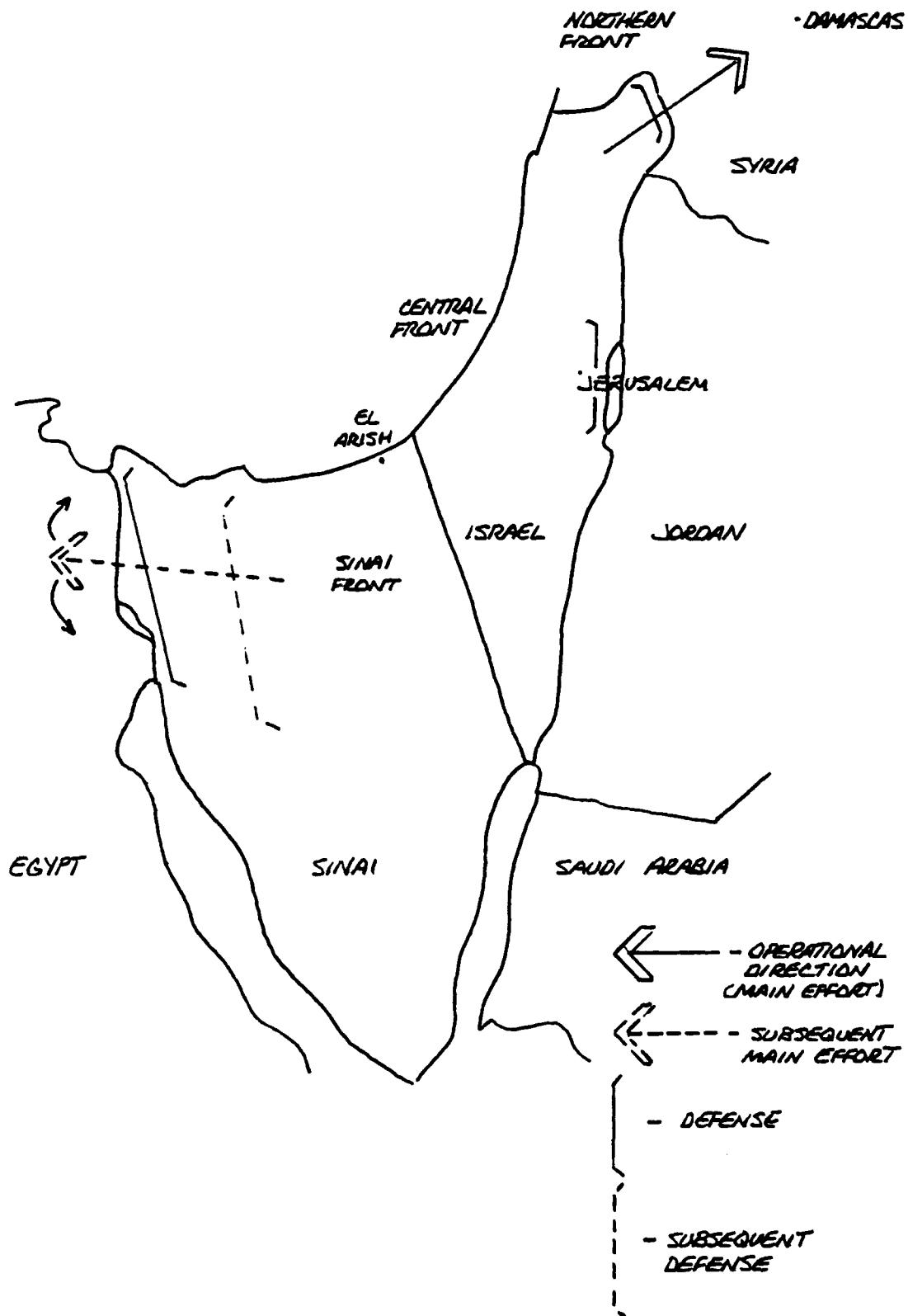
		LEVEL		
		Strategic	Operational	Tactical
F				
R	Sinai	Defense	Offense	Off/Def
O				
N	Golan	Defense	Def/Off	Def/Off
T				

Def - Defense

Off - Offense

Def/Off - Indicates sequence

APPENDIX C



THE CAMPAIGN MATRIX

LEVEL

		Strategic	Operational	Tactical
F				
R	Sinai	Defense	Def/Off	Def/Off
O				
N	Golan	Defense	Def/Off	Def/Off
T				