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Israeli Air Superiority in the 1967 Arab-Israeli War: An Analysis of  
Operational Art

by

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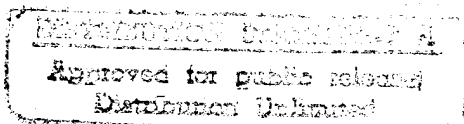
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<p>15. Abstract: On Monday morning 5 June 1967, Israel initiated, by preemptive air attack on Egypt, the Six Day War. By the end of the week, Israeli armed forces occupied the lands of the Sinai Peninsula, the West Bank, the Golan Heights, and the Gaza Strip. The Egyptian and Jordanian armies and air forces had been destroyed and the Syrian army had been routed. This overwhelming victory by a country surrounded on three sides by hostile forces who possessed superior numbers of troops and weapons provides an insightful lesson in the practice of operational art.</p> <p>The purpose of this paper is to analyze the Israeli Air Force (IAF) practice of operational art in the planning and execution of the preemptive air strike against Egypt. This key action shaped the Israeli victory and was the product of thorough planning and operational artistry. The IAF practice of operational art was influenced by a cohesive national strategy and a complementary military doctrine. The evolution of Israeli strategy and doctrine, through two previous wars, led directly to the development of an operational design to defeat Israel's enemies and ensure Israel's survival.</p> <p>The Israeli practice of operational art will be analyzed by first examining the origins of the Six Day War to understand the basis of the Israeli strategy. Second, by examining the formulation of Israeli doctrine, those fundamental military principles which guided IAF employment of air power. Third, by analyzing the IAF practice of</p>	

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## ABSTRACT

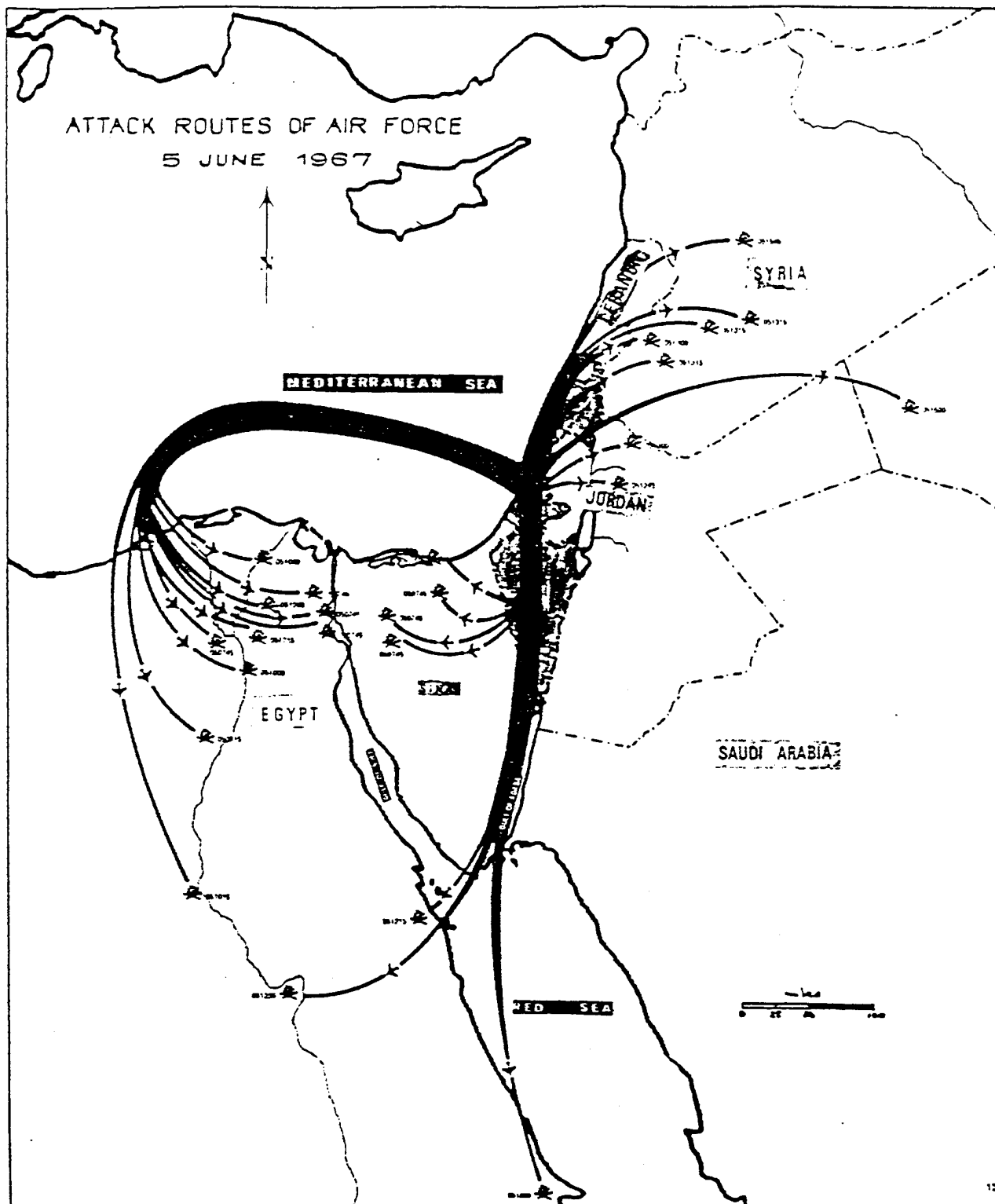
This paper analyzes the Israeli Air Force (IAF) practice of operational art in the planning and execution of the preemptive air strike against Egypt in the 1967 Six Day War. This key action shaped the Israeli victory and was the product of thorough planning and operational artistry. The IAF practice of operational art was influenced by a cohesive national strategy and a complementary military doctrine. The evolution of Israeli strategy and doctrine, through two previous wars, led directly to the development of an operational design to defeat Israel's enemies and ensure Israel's survival.

The Israeli practice of operational art is analyzed by first examining the origins of the Six Day War to understand the basis of the Israeli strategy. Second, by examining the formulation of Israeli doctrine, the fundamental military principles which guided IAF employment of air power. Third, by analyzing the IAF practice of operational art in terms of the present day concept of operational design, specifically the operational idea or scheme. Fourth, by relating relevant lessons from the IAF practice of operational art to the present day employment of air power.

Israel's strategic vulnerability, small population, and limited resources required a substantial military qualitative advantage to avoid destruction. The sound practice operational art ensured this qualitative advantage was present. A clear understanding of the concepts of operational art provided a framework for superior planning and the execution of air power to achieve the operational, and in turn, strategic objectives necessary to win the Six Day War.

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## INTRODUCTION

On Monday morning 5 June 1967, Israel initiated, by preemptive air attack on Egypt, the Six Day War. By the end of the week, Israeli armed forces occupied the lands of the Sinai Peninsula, to the east bank of the Suez Canal; the West Bank, and with it the city of Jerusalem; the Golan Heights; and the Gaza Strip. The Egyptian and Jordanian Armies and Air Forces had been destroyed and the Syrian Army had been routed. This overwhelming victory by a country surrounded on three sides by hostile forces who possessed superior numbers of troops and weapons provides an insightful lesson in the practice of operational art.

The purpose of this paper is to analyze the Israeli Air Force (IAF) practice of operational art in the planning and execution of the preemptive air strike against Egypt. This key action shaped the Israeli victory and was the product of thorough planning and operational artistry. The IAF practice of operational art was influenced by a cohesive national strategy and a complementary military doctrine. The evolution of Israeli strategy and doctrine, through two previous wars, led directly to the development of an operational design to defeat Israel's enemies and ensure Israel's survival.

The Israeli practice of operational art will be analyzed by first examining the origins of the Six Day War to understand the basis of the Israeli strategy and the formulation of Israeli doctrine which guided IAF employment of air power. Next the analysis will examine IAF operational art in terms of the present day concept of operational design, specifically the operational idea. Lastly the analysis will relate relevant lessons from the IAF practice of operational art to the present day employment of air power.

## ORIGINS OF THE SIX DAY WAR

Since the end of the War of Independence in 1949 Israel had experienced nearly continuous border clashes with Egypt, Syria, and Jordan and been subjected to artillery fire, guerrilla (Fedayeen) raids, and terrorist attacks. The states of the Arab League after the armistice of 1949 refused to recognize Israel and waged war on her with all the economic weapons at their disposal.<sup>1</sup> Israeli businesses as well as foreign firms doing business with Israel were boycotted. Egypt imposed a blockade on Israeli shipping through the Suez Canal. In 1953 this blockade was expanded to include all goods being shipped to Israel by other nations. In September 1955, Egypt restricted Israeli shipping through the Straits of Tiran in the Gulf of Aqaba, which served the Israeli port of Eilat, Israel's only access to the Red Sea.<sup>2</sup>

The Fedayeen raids into Israel increased in frequency and the economic strangulation by the Arab states continued to threaten the existence of the state Israel. In July 1956, in response to the ever-worsening state of affairs, Ben Gurion, who was both Prime Minister and Minister of Defense gave approval for the Israeli Defense Force (IDF) to begin planning for war.<sup>3</sup>

The opportunity to strike came during the Suez crisis when Britain and France decided to respond by force to the Egyptian nationalization of the Suez Canal. On 29 October 1956, Israel, with the approval of Britain and France, invaded the Sinai. On 31 October, Britain and France initiated air attacks against Egyptian military targets. The Egyptian Air Force was quickly defeated and the Israeli Army overran the greater part of the Sinai Peninsula, reaching the Suez Canal in eight days. On 5 November Israel



occupied the Egyptian fort at Sharm-el-Sheikh ending the blockade of the Israeli port of Eilat.

The United Nations called for a cease-fire on 2 November 1956 and subsequently negotiated the establishment of a United Nations Emergency Force (UNEF) in the Sinai for the purpose of maintaining the cease-fire. On 15 November UNEF landed in Egypt, but it was not until March 1957 that the Government of Israel agreed to withdraw from the east coast of the Sinai and the Gaza Strip. The creation of UNEF was intended to prevent the two critical situations for which Israel had decided to go to war in 1956: first, to stop Fedayeen raids from bases in the Sinai and the Gaza Strip and second, to prevent the Egyptian blockade of the Israeli port of Eilat at the Strait of Tiran in the Gulf of Aqaba.<sup>4</sup>

Neither the cease-fire or the UNEF presence in the Sinai prevented the continuation of Fedayeen raids and border clashes between Israel and her Arab neighbors. Hostilities escalated in February 1966, following the installation of a new radical leftist regime in Syria and continued into 1967. The new Syrian leaders encouraged Palestinian infiltration and sabotage operations in Israel.<sup>5</sup> Israel retaliated in an attack on a Jordanian village on 13 November 1966 which did nothing to improve Syrian behavior. Israeli-Syrian incidents continued, culminating in an air battle over Damascus on 7 April 1967 in which six Syrian Mig fighters were shot down by the IAF.

Both Syria and Jordan complained loudly of Egypt's failure to respond to the Israeli retaliatory attacks, forcing President Nassar to take action to preserve his diminishing leadership in the Arab World.<sup>6</sup> Nassar responded by mobilizing the army on 14 May and sending 100,000 troops into the Sinai. On

16 May Egypt demanded the withdrawal of all UNEF forces from the Egyptian border with Israel and on 22 May Nassar announced his intention to reestablish the blockade of the Straits of Tiran.<sup>7</sup>

On 30 May 1967 Jordan and Egypt signed a mutual defense pact joining the existing alliance Egypt and Syria had established in November 1966. The collapse of King Hussein's moderating influence had long been viewed by Israel as a condition which could lead to war.<sup>8</sup> The military conditions which had precipitated Israel's preemptive strike in 1956 were again present in June 1967. Moshe Dyan's book, Diary of the Sinai Campaign, 1956, published during the 1967 crisis revealed Israel's three war objectives in 1956, "Freedom of shipping for Israeli vessels in the Gulf of Aqaba; end to the Fedayeen; and a neutralization of the threat of attack on Israel by the joint Egypt-Syria-Jordan military command."<sup>9</sup>

### **THE DEVELOPMENT OF ISRAELI MILITARY DOCTRINE**

In light of 30 years of hostilities with the Arab states, including two wars prior to 1967, Israel developed an offensive military doctrine. The basis of this doctrine was established in 1949 by Colonel Chaim Laskov, who was charged with defining the future role of the IDF.<sup>10</sup> The Laskov Committee established five precepts which were to define the IDF mission and provide guidelines for operational planning. Laskov's precepts were the blueprint for future Israeli doctrine:

**1. Few Against Many.** Israel would always be fighting a numerically superior enemy. Virtually any combination of Arab armies would outnumber the IDF.

**2. A War of Survival.** The Arab states had repeatedly stated their intention to annihilate the Jewish state and all who lived in it. There was no assurance that Israel could win another war.

**3. A Strategy of Attrition.** In view of Arab aims and numerical superiority, the IDF would wage a war to destroy the maximum amount of Arab weapons and war material. Once a war began the IDF would do everything in its power to end the war and put off the next by crippling the war-making capability of the Arabs.

**4. Geographic Pressures.** Given Israel's size she had no strategic depth and could not afford to allow a war to be fought on her soil. With no space to trade for time, no room to maneuver, and no natural barriers Israeli doctrine was to always fight on enemy territory. Israel's best defense was a good offense.

**5. A Short War.** Israel could not afford to fight a prolonged war; politically, economically or militarily. Neither the spirit of the people or the economy could sustain high personnel losses. Israel had to plan for a short, violent war, and it had to win.<sup>11</sup>

The essence of the Laskov Doctrine was an *offensive strategy of attrition*. This doctrinal foundation combined with the experience of two wars, led to the refinement of Israeli doctrine to favor a preemptive or preventative war strategy. This strategy had been successful in 1956 and was the basis of Israeli planning leading up to the war in 1967. For the IAF this doctrine supported a strategy heavily weighted toward air superiority and support of ground operations.

### **THE BATTLE FOR AIR SUPERIORITY**

At 0745 on 5 June 1967 the IAF executed a preemptive, surprise attack which destroyed the Egyptian Air Force (EAF) and established air superiority over Egypt. With complete control of the air the Israelis were able to seize the initiative on the ground and through superior combat effectiveness defeat the Arab land forces without having to defend against enemy air forces.<sup>12</sup> In less than three hours the IAF struck 19 Egyptian airfields destroying 318 aircraft on the ground and four in the air.<sup>13</sup> The three major objectives of the attack, in order of precedence were: 1) Tu-16 and Il-28 bombers, to eliminate the

threat to Israeli cities 2) Mig-21s, the most capable threat to Israeli air operations 3) Mig -17s, Mig-19s, and Su-7s, the air threat to Israeli ground troops and armor.<sup>14</sup> All 30 Egyptian Tu-16 long-range bombers were destroyed as well the majority of the Migs. ( see Appendix 1 and 2 for order of battle and total losses)

Secondary objectives were the Egyptian airfields and air defenses. IAF fighter-bombers struck the runways and air defense radars, denying the Egyptians their use in subsequent operations. By the end of the second strike, two hours and fifty minutes after the war began, 13 of 19 airfields in the Sinai were non-operational.<sup>15</sup> Five of the six remaining airfields were struck that night. The only airfield in the Sinai left intact was El Arish, which the Israelis planned to capture for their own use.

Israel's preemptive attack was confined to Egypt. Offensive actions against other Arab forces were delayed until these forces attacked Israel. This was planned to allow the IAF time to destroy the EAF while avoiding simultaneous operations on three fronts. Syria and Jordan launched air strikes against IAF bases around noon on 5 June. Israel responded with overwhelming air power and destroyed approximately 85 enemy aircraft that afternoon.<sup>16</sup> The following morning the IAF responded to an Iraqi attack and destroyed 15 aircraft at H-3, Iraq's westernmost airfield.<sup>17</sup>

Israeli doctrine called for destroying the maximum number of enemy aircraft on the ground. This supported the offensive strategy of attrition. The IAF commander, Brigadier General Mordechai (Moti) Hod, stated to his pilots, "If you have to resort to dogfights you have failed, for you should get them on the ground."<sup>18</sup> By the end of day two, 6 June, Israel had flown approximately

1000 sorties and destroyed 415 enemy aircraft, 393 on the ground.<sup>19</sup> Israeli losses by day two amounted to 26 aircraft and 21 pilots, most of which were lost to enemy ground fire. Once air superiority was attained Israeli air power was joined with the army to destroy the Egyptian forces in the Sinai.

### **OPERATIONAL ANALYSIS OF THE IAF VICTORY**

The evolution of the Arab-Israeli conflict and the resulting Israeli strategy and doctrine form the background in which the IAF practice of operational art can best be appreciated and analyzed. Operational design consists of a number of elements that collectively ensure the accomplishment of assigned objectives by ensuring that forces and assets are employed in a coherent manner.<sup>20</sup> The six principal elements of operational design are all important to the accomplishment of assigned objectives, however, to limit the scope of this analysis only the element of operational idea and selected integral components will be addressed. The operational idea is the essence of operational design, "the what and how of the commander's vision."<sup>21</sup>

#### **Operational Idea**

The Israeli strategic vision in 1967 was to wage a preemptive, short, violent war of attrition against the Arabs to ensure Israel's survival. The Israeli strategy focused on the Egyptian Army as the center of gravity (COG). The Egyptian Army in the Sinai represented the greatest threat to Israel's survival. The destruction of the EAF, a critical vulnerability, led directly to the defeat of the COG. The destruction of the EAF was a necessary prerequisite to defeat the Egyptian Army and necessary to protect Israel's population. The EAF, by far the largest air force in the region, posed a significant threat to Israel's existence. Egyptian bombers had the capability

to strike Israeli cities and EAF tactical aircraft were capable of achieving air superiority over Israel and interdicting the Israeli Army.

The preemptive air strike was the creation of former IAF Commander and 1967 IDF, Chief of Staff, General Ezer Weizman, who for five years developed the plan, acquired the weapons, and trained the IAF for this specific task.<sup>22</sup> In 1962 General Weizman said of the IAF air superiority doctrine; "the primary task of this (air) force is to destroy the enemy's air force. Once this task is completed and the skies are inviolable, the Air Force will be able to devote itself to its second task, supporting the ground forces."<sup>23</sup> General Weizman's vision, articulated in the preemptive strike plan, identified the means for the IAF to contribute to the defeat of the enemy COG and ensure achievement of the ultimate political objective--survival.

#### Method of Defeating Opponent.

The preemptive surprise attack on the EAF was a *direct* attack on a key enemy strength and an *indirect* attack on the enemy COG, the Egyptian Army. By destroying the EAF the Israelis were able to:

- 1) Gain air superiority and subsequently use air power to attack enemy vulnerabilities with overpowering force and speed; striking armor, artillery, fortifications, and troop concentrations.
- 2) Maintain operational momentum and dictate the tempo of the operation.
- 3) Selectively engage the Jordanian, Syrian, and Iraqi forces and avoid a multi-front war. The IDF sequenced their attacks to concentrate against one enemy at a time, ensuring economy of effort and mass at decisive points.
- 4) Gain freedom of movement to conduct operational maneuver; initially in the Sinai and subsequently against Jordan and Syria.

#### Application of Forces and Assets (Sector of Main Effort).

The Israeli strategy called for holding the line against Jordan and Syria while the IDF destroyed the Egyptians in the Sinai.<sup>24</sup> Offensive air operations against Jordan and Syria were initiated only after these forces attacked Israel and the EAF had been destroyed. This strategy allowed the IAF to devote its limited air power against the primary objective, the EAF, before turning its attention to secondary objectives.

Israeli air power was concentrated for the surprise attack against the EAF. Every available combat aircraft was employed in the surprise attack, only 12 aircraft were held in reserve to defend Israeli airspace.<sup>25</sup> This monumental risk was considered necessary to mass enough air power to destroy the EAF. To achieve the required sortie rate the IAF maintained a 96 percent combat readiness rate for its aircraft. Remarkably, the IAF turned their fighter bombers in as little as seven minutes, up to eight times a day, to produce the approximately 1000 sorties required to destroy the EAF.<sup>26</sup>

#### Point of Main Attack.

"The point of main attack is **not** the center of gravity. Rather, it is a key to getting **to** the center of gravity."<sup>27</sup> Destruction of the EAF was the key to the enemy COG. Israeli air superiority was necessary to achieve superiority on the ground. The destruction of the EAF was an indirect approach on the single most decisive point leading to Egypt's COG. The IAF correctly employed mass, surprise, and speed at the point of main attack to achieve superiority over the enemy.

The destruction of the EAF and the achievement of air superiority enabled the Israelis to employ superior combat effectiveness against an

enemy which enjoyed superior numbers of aircraft, tanks, artillery pieces, and troops. B. H. Liddell Hart wrote of the Israeli strategy, "The whole course of the Israeli campaign, a perfect Blitzkrieg, was of particular interest to me because it was the best demonstration yet of the theory of the strategy of indirect approach, and in the subtler sense of seeking and exploiting the line of least expectation."<sup>28</sup>

### Operational Fires.

The purpose of operational fires is to achieve a decisive effect on the conduct and outcome of a major operation or campaign.<sup>29</sup> The destruction of the EAF and the resulting IAF air superiority was certainly decisive and key to the ultimate Israeli victory. The destruction of the EAF and the establishment of air superiority satisfied the three tasks for operational fires identified in U. S. Army Field Manual 100-7 (final draft).

**First**, *the destruction of critical enemy functions and facilities to deny their use to the enemy:*<sup>30</sup> The IAF destroyed the 356 of 450 EAF aircraft, effectively neutralizing the EAF, and disabled 18 EAF airfields of which five in the Sinai were subsequently seized by the IDF for Israeli use.<sup>31</sup>

**Second**, *operational fires may be used to isolate the battlefield by disrupting enemy movement:*<sup>32</sup> Without counter-air support Egyptian armor was subject to relentless IAF attack which severely limited the Egyptian ability to maneuver. The Egyptian inability to maneuver allowed the IDF to control the tempo of the operation.

**Third**, *operational fires facilitate operational maneuver:*<sup>33</sup> The destruction of the EAF supported Israeli maneuver by eliminating the enemy air threat and freeing the IAF to concentrate on support of the ground offensive. The IAF



working directly under IDF command and control wreaked havoc on Egyptian armor in the Sinai. IAF aircraft operated out of the captured EAF airfield, El Arish, which had been deliberately left undamaged.

#### Operational Deception.

The Israeli success in the Six Day War was largely dependent on operational deception, particularly in the execution of the surprise attack on the EAF. The IAF was able to manipulate the enemy's perceptions and expectations and by doing so effected the enemy's operational reactions. The IAF deception plan was based on superior intelligence--detailed knowledge of Egyptian capabilities, command and control, tactics, and decision making processes.

The IAF, for two years prior to the war, executed a deception plan to manipulate EAF perceptions and mask the surprise attack as a training operation. The IAF routinely launched large numbers of aircraft in the morning over the Mediterranean then returned to Israel low-level below EAF radar.<sup>34</sup> This operation had become so typical the EAF hardly paid attention when at 0745 on 5 June 1967, the IAF launched the surprise attack. IAF aircraft following the exact timing and route, flew west over the Mediterranean, descended below radar coverage and, rather than return to Israel, entered the Nile Delta and struck Egyptian airfields from the west. Israel was to the northeast and Egyptian defenses were oriented for an attack from that direction. Israeli feints in the past had reinforced that perception.

The timing for the attack was also designed for maximum surprise and effectiveness. Egyptian readiness was at its height at sunrise. By 0745 (0845 Cairo time) all EAF patrols had landed and the EAF had lessened their alert

status. Virtually all eleven airfields in Upper Egypt were hit at precisely the same moment.<sup>35</sup> Egyptian military commanders typically arrived at their offices at 0900 and were still enroute when the attack commenced. The EAF High Command was paralyzed and unable to respond effectively.<sup>36</sup>

#### Operational Sequencing.

Operational sequencing refers to the arrangement of major tactical and operational events to achieve operational objectives.<sup>37</sup> The Israelis utilized the element of operational sequencing successfully to concentrate their limited air power against one Arab enemy at a time beginning with the EAF. Additionally, the IAF achieved the air superiority objective prior to initiating the secondary mission of ground support. These sequential events ensured the proper concentration of force was applied to specific operational and tactical objectives, in the proper priority, to defeat a numerically superior enemy.

#### Synchronization.

Synchronization is "the arrangement of military actions [by one's own forces] in time, space, and purpose to produce maximum relative combat power at a decisive place and time."<sup>38</sup> The IAF ability to strike the EAF airfields simultaneously and destroy the bulk of their aircraft on the ground was a product of superior intelligence, planning, and training. The factors of preemption and surprise in this attack were powerful multipliers which created a synergistic effect and overwhelmed the EAF.

Once air superiority was attained Israeli air power was joined with the army to destroy the Egyptian, Syrian, and Jordanian Armies. IAF fighter-bomber squadrons were employed primarily in support of the army against

armor, artillery, troop movements, and fortifications. IAF squadrons were tied directly to army command and control and were thoroughly integrated into the ground war.

### **LESSONS FOR THE PRESENT DAY OPERATIONAL ARTIST**

The IAF preemptive attack to destroy the EAF and achieve air superiority in the Six Day War provide a number of valuable lessons for the present day operational commander. First and foremost is the necessary link of operational art to strategy and doctrine. A sound strategy and a consonant doctrine are force multipliers. Strategy provides the ways and means of achieving political and military ends while doctrine provides the distilled insights and wisdom gained from collective experience with warfare.<sup>39</sup> Doctrine facilitates clear thinking and assists the commander in determining the proper course of action under the prevailing circumstances.<sup>40</sup> The IAF thoroughly analyzed their experience in two wars and conducted a net assessment of their own and enemy strengths and weaknesses. The result of this insightful analysis was a strategic vision of the operational realities facing Israel and an operational idea to defeat Egypt and the other Arab forces in turn.

Given this strategic vision the IAF leadership determined that air superiority and ground support were the air power applications most needed to achieve victory. A thorough analysis of IAF capabilities and the enemy threat led to the selection of specific aircraft, weapons, and tactics to achieve strategic and operational objectives. Limited by resources, the IAF perfected the use of just one aircraft type, the fighter-bomber, to support both the air superiority and ground support missions.

In today's environment of declining force structure, multi-mission platforms designed to counter a variety of threats make fiscal and operational sense. More emphasis on the tactical weapons and less on mission specific platforms may be appropriate. At the operational level of war the commander needs a flexible, multi-capable force able to strike the full spectrum of potential threats.

Sound operational planning and diligent intelligence are essential to achieve surprise and air superiority. General Hod, Commander of the IAF, said of the planning for the surprise attack: "Sixteen years of planning had gone into those initial 80 minutes. We lived with the plan, we slept on the plan, we ate the plan. Constantly we perfected it."<sup>41</sup> The complexities of modern warfare make this requirement for continual reassessment, thorough intelligence, and iterative planning even more important today.

The Israeli leadership concept required IAF commanders to be decisive, innovative, flexible, and aggressive. Original thought and boldness were encouraged throughout the chain of command. Once higher headquarters implemented the planned operation, commanders were responsible for execution without additional direction from above. This concept of command and control(C<sup>2</sup>), a precursor to the present day USAF operational tenet of centralized control and decentralized execution, enabled the IAF to achieve agility throughout the theater of operations.

This C<sup>2</sup> concept in today's joint environment is best achieved by utilizing the Joint Force Air Component Commander (JFACC) concept. A single air component commander can best integrate the air power of all the services in support of the overall objectives of the campaign plan. The JFACC

provides the link between strategic and operational objectives and the tactical application of combat power.<sup>42</sup> The JFACC concept provides an ideal environment to ensure the Joint Force Commander's vision is successfully carried out with respect to air power and its potential to achieve campaign objectives.

## **CONCLUSION**

Israel's strategic vulnerability, small population, and limited resources required a substantial military qualitative advantage to avoid destruction. The sound practice of operational art ensured this qualitative advantage was present. A clear understanding of the concepts of operational art provided a framework for superior planning and the execution of air power to achieve the operational, and in turn, strategic objectives necessary to win the Six Day War. This operational art framework, complemented by a coherent strategy and doctrine, led the IAF to an accurate assessment of the threat and a realistic plan to defeat the EAF. Adherence to sound operational art concepts was also evident in execution of the plan. The speed, precision, surprise and lethality of the strike, by design, served to overwhelm a numerically superior force. The entire IAF understood the mission and the commander's vision to achieve the mission, and worked in unison to achieve victory.

# APPENDIX I

## AIR ORDER OF BATTLE IN THE MIDDLE EAST ON 5 JUNE 1967

COUNTRY (size of AF)	COMBAT AIRCRAFT	TRANSPORTS	HELICOPTERS
ISRAEL (8,000)	25 Vautours 72 Mirage III Cs 20 Super Mysteres 40 Mystere IVs 40 Ouragans 60 Fouga Magisters	25 Noratlas 10 C-47s 6 Statocruisers	11 S-58 15 Alouette IIIs 12 Super Frelons 6 Alouette IIs 3 S-55s
total	257	41	47
EGYPT (20,000)	30 Tu-16s 40 Il-28s 130 Mig-2 80 Mig-19s 100 Mig-17s 50 Mig-15s 20 Su-7s	70 Il-14s 20 An-12s 8 C-47s	12 Mil Mi-6s 10 Mil Mi-4s 10 Mil Mi-8s
total	450	98	32
SYRIA (9,000)	6 Il-28s 20 Mig-21s 20 Mig-19s 60 Mig-17/15s	10 Il-14s 6 C-47s	10 Mil Mi-4s 4 Mil Mi-1s
total	106	16	14
JORDAN (2,000)	18 Hunter MK6s		3 Alouettes
total	18		3
IRAQ (10,000)	12 Tu-16s 10 Il-28s 60 Mig-21s 15 Mig-19s 50 Hunter MK9s 15 Mig 17s 20 T-52 Jet Provost	10 An-12s 10 Il-14s	6 Wessex 9 Mil MI-4s 4 Mil Mi-1s
totals	182	20	19

Source: le Moniteur de l'Aeronautique 1966-67, in Rodney S. Crist, "Air Superiority : A Case Study." p. 25.

## APPENDIX II

### AIRCRAFT LOSSES DURING THE SIX DAY WAR

ISRAEL		EGYPT	
9 Mysteres		95 Mig -21s	
6 Fouga Magisters		85 Mig-15/17s	
5 Vautours		30 Tu-16s	
4 Ouragans		27 Il-28s	
6 Mirage IIIs		25 Mig-19s	
1 Noratlas		24 Il-14s	
		12 Su-7s	
		8 An-12s	
		8 Mi-6s	
		4 Mi-4s	
35*		318**	
JORDAN	SYRIA	LEBANON	IRAQ
18 Hunters	32 Mig-21/19s	1 Hunter	12 Mig 21s
1 Allouette	20 Mig-17/15s		5 Hunters
	3 Mil Mi-4s		3 Il-28s
	2 Il-28s		2 Il-14s
	2 Il-14s		1 Tu-16s
19	59	1	23

\* reflects total of first two days, 40 IAF aircraft destroyed in the entire Six Day War

\*\* reflects total of first two days, 431 EAF aircraft destroyed in the entire Six Day War

note: compilation of several sources, numbers are approximate

Sources: le Moniteur de l' Aeronautique, 1955-1967, in Rodney S, Crist, Air Superiority: A Case Study, p 25. Trevor Z. Dupuy, Elusive Victory, p.333.

## Notes

<sup>1</sup>Michael Howard and Robert Hunter, Israel and the Arab World: The Crisis of 1967, Adelphi Papers, no. 41 (London: International Institute for Strategic Studies, 1967), 6.

<sup>2</sup>Ibid, 7.

<sup>3</sup>Trevor N. Dupuy, Elusive Victory: The Arab Israeli Wars, 1947-1974 (New York: Harper & Row 1978), 137.

<sup>4</sup>Dupuy, 221.

<sup>5</sup>Richard B. Parker, "The June 1967 War: Some Mysteries Explored," Middle East Journal, Spring 1992, 178.

<sup>6</sup>Randolph S. Churchill and Winston S. Churchill, The Six Day War (Boston: Houghton Mifflin, 1967), 29.

<sup>7</sup>Dupuy, 228.

<sup>8</sup>Howard and Hunter, 25.

<sup>9</sup>Moshe Dyan, quoted in Dupuy, 230.

<sup>10</sup>Eric M. Hammel, Six Days in June: How Israel won the 1967 Arab-Israeli War (New York: Maxwell Macmillan, 1992), 60.

<sup>11</sup>Ibid, 58-60.

<sup>12</sup>Dupuy, 335.

<sup>13</sup>Ibid, 333.

<sup>14</sup>Rodney S. Crist, "Air Superiority a Case Study," Unpublished Research Paper, U.S. Naval War College, Newport, RI: 1988, 5.

<sup>15</sup>Hammel, 171.

<sup>16</sup>Churchill, 86-8.

<sup>17</sup>Ibid.

<sup>18</sup>Robert R. Rodwell, "Three Hours-and Six Days," Air Force Magazine, October 1967, 59.

<sup>19</sup>W. J. Kotsch "The Six Day War of 1967," U. S. Naval Institute Proceedings, June 1968, 75.

<sup>20</sup>JMO Department, "Operational Design--The Fundamentals," in Operational Art: A Book of Readings, U. S. Naval War College, Newport RI: January 1996, 2.



<sup>21</sup>Ibid, 9.

<sup>22</sup>Ezar Weizman, On Eagles' Wings (New York: Macmillan, 1976), 221.

<sup>23</sup>Ezar Weizman, quoted in Crist, 13.

<sup>24</sup>Churchill, 72.

<sup>25</sup>Weizman, 223

<sup>26</sup>B. H. Liddell Hart, "Strategy of a War," Military Review, November 1968, 80.

<sup>27</sup>JMO Department, "Operational Design: The Operational Scheme," in Operational Art: A Book of Readings, U. S. Naval War College, Newport RI: January 1996, 6.

<sup>28</sup>B. H. Liddell Hart, 82

<sup>29</sup>Ibid, 7.

<sup>30</sup>Dept. of the Army, Field Manual 100-7, Decisive Force: The Army in Theater Operations (1994 Final Draft), in Jay W. Hood, "Operational Fires and the Joint Force Commander," Unpublished Research Paper, U. S. Naval War College, Newport, RI 1995, 5.

<sup>31</sup>Dupuy, 333.

<sup>32</sup>Dept. of the Army, Field Manual 100-7, Decisive Force: The Army in Theater Operations (1994 Final Draft), 6.

<sup>33</sup>Ibid, 7.

<sup>34</sup>Hammel, 165.

<sup>35</sup>Churchill, 78.

<sup>36</sup>S. L. A. Marshall, Swift Sword: The Historical Record of Israel's Victory, June 1967 (New York: American Heritage, 1967), 24.

<sup>37</sup>JMO Department, "Operational Design: The Operational Scheme," 9.

<sup>38</sup>Ibid, 12.

<sup>39</sup>Office of the Chairman, the Joint Chiefs of Staff, Joint Warfare of the Armed Forces of the United States, Joint Pub 1 (Washington, D. C.: 10 January 1995), vi.

<sup>40</sup>Ibid.

<sup>41</sup>Churchill, 92.

<sup>42</sup>Marcus Hurley, "JFACC Taking the Next Step," Joint Force Quarterly, Spring 1995, 60.

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