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THESIS

ASSESSING ISRAELI MILITARY EFFECTIVENESS

by

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December 2014

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ASSESSING ISRAELI MILITARY EFFECTIVENESS

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ABSTRACT

At face value, one could look at the results achieved by the Israel Defense Forces (IDF) over time, dating back from 1967 to present, and make the assumption that the IDF has not been able to consistently sustain the ability to achieve decisive military success as it did during the 1967 Arab-Israeli War. If this is the case, is it due to a decline in IDF military effectiveness? If so, what are the factors that led to this development?

This thesis argues that the presence or absence of effective combined-arms maneuver warfare determined whether the IDF achieved military effectiveness during the varying types of conflict in which it has been a participant over the past five decades. This is an important lesson for the United States military as it confronts a similarly uncertain threat environment that may include a range of challenges spanning high-intensity warfare, hybrid warfare, cyber conflict and other low-intensity conflicts. Understanding how a single organization can maintain effectiveness across a range of missions by maintaining combined-arms maneuver warfare at both the operational and tactical levels may prove crucial to understanding how U.S. forces should train and equip for the future.

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LIST OF ACRONYMS AND ABBREVIATIONS

AMAN	Agaf HaModi'in (Hebrew for “intelligence section”)
ATGM	anti-tank guided missile
IDF	Israel Defense Forces
IED	improvised explosive device
ISIS	Islamic State of Iraq and Syria
ISR	intelligence, surveillance, and reconnaissance
PLO	Palestinian Liberation Organization
PGM	precision guided munitions
RAND	Research and Development Corporation
UAV	unmanned aerial vehicle

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I. INTRODUCTION AND RESEARCH METHODOLOGY

A. BACKGROUND

In the 1967 Arab-Israeli War, Israel decisively defeated the Arab coalition of Egypt, Jordan, and Syria in less than a week. The victory resulted in Israel taking possession of the Sinai Peninsula, the West Bank, and the Golan Heights, and demonstrated that its military, the Israel Defense Forces (IDF), had emerged as the region's premier military organization (Gawrych 1996, 2). Despite the IDF's decisive success in the face of a numerically superior foe equipped with the latest Soviet technology, its subsequent major campaigns have had less overwhelming results. In 1973, Egypt, Syria, and Jordan copied the IDF's strategy and launched an offensive on two separate fronts catching the Israeli military by surprise. Had it not been for the United States providing military equipment, via emergency airlift, to offset disastrous losses during the initial phases of hostilities and the IDF's ability to rebound and regain the initiative both operationally and tactically, there was a strong possibility that Israel would have been overrun and destroyed as a state (Boyne 1998, 56). Though the IDF recovered and almost annihilated the Arab forces prior to U.S. and Soviet diplomatic intervention, the war was viewed as an Arab political victory because of the supposed cracks in the façade of IDF invincibility (Gawrych 1996, 78).

After Israel's conventional wars, it would spend the next few decades fighting non-state actors (with the brief exception of Syria during the 1982 invasion of Lebanon) including the Palestinian Liberation Organization (PLO), Hezbollah, and Hamas in the West Bank, Lebanon, and Gaza with mixed results despite possessing a better trained and equipped fighting force (Inbar and Shamir 2013, 65). Israeli actions against its adversaries would encompass the span of what the IDF describes as the "Rainbow of Conflict," which included counter terror operations against the PLO in the 1970s, hybrid warfare in Lebanon against the Syrians, PLO, and Hezbollah from 1982 to the 2000s, and against Hamas in Gaza in 2009 and again in 2014 (Johnson 2010, 2). Despite mixed operational and tactical results, the IDF has not been able to achieve a decisive victory in any of those engagements in the same fashion as the 1967 war.

At face value, one could look at the results achieved by the IDF dating back from 1967 to the present, and make the assumption that the IDF has not been able to consistently sustain decisive military success as it did during the 1967 Arab-Israeli War. If that is the case, is this due to a change in IDF military effectiveness? If so, what are the factors that led to this change?

B. SCOPE AND PURPOSE OF RESEARCH

This thesis explores how a professional military maintains effectiveness over time using the IDF as a model. This is an important topic for the United States military as it confronts a threat environment that may include a range of challenges: spanning high intensity conventional warfare, hybrid warfare, counter-terrorism, cyber conflict and other low-intensity conflicts. Understanding how a single organization can maintain effectiveness across a range of missions is crucial to optimizing how U.S. forces should train and equip for the future.

Empirically, the analysis will focus on one military over the past 50 years: the Israel Defense Forces (IDF). This is a relevant subject for analysis for a number of reasons. First, the IDF is a well trained and equipped military organization embedded within a liberal democratic society. This example parallels the U.S. military, thereby providing lessons from one case to the other. Second, it has experienced a wide range of missions, including high-, low-, and hybrid-intensity conflicts against peer competitors and non-state actors, in the last five decades. More specifically, the analysis will cover high-intensity conflict case studies that include the 1967 and 1973 Arab-Israeli Wars; low-intensity conflict case studies covering limited military operations against Hezbollah (Operation Accountability and Operation Grapes of Wrath); and lastly, hybrid conflict case studies that will focus on the 2006 war in Lebanon, and the 2009 campaign against Hamas. For the purpose of this thesis high-intensity conflict is defined as major combat operations between peer competitors; low-intensity conflict is defined as limited military action against violent, non-state actors; and hybrid conflict is defined as military operations against non-state actors/asymmetric threats that possess heavy weapons and fight (organizationally and operationally/tactically) in a similar fashion as small

conventional militaries (Johnson 2011, 109). Finally, there is significant variation on the “dependent variable,” defined as military effectiveness for a military over various operations. The goal of the study is to ascertain the causes for this variation within the IDF. The following section will expand on the concepts and methodologies employed to execute this research.

C. MILITARY EFFECTIVENESS DEFINED

In the seminal book, *Military Effectiveness Volume 1: The First World War*, military historians Williamson Murray, Allen R. Millett, and Kenneth H. Watman define military effectiveness as “the process by which armed forces convert resources into fighting power” and outline a methodological approach that can be used as a measure of analysis (1988, 2). In the book, the authors state that military effectiveness of an organization can and must be assessed at the political, strategic, operational, and tactical levels using specific criteria. The criteria these three historians developed are a critical tool in the evaluation process of this thesis’ research particularly, in identifying changes between each case study. The research will also evaluate IDF military effectiveness at the operational and tactical levels again using Murray, Millett, and Watman’s selected criteria (1988, 12–26). The research will also utilize Kenneth Pollack’s definition of military effectiveness, referred to as “the ability of soldiers and officers to perform on the battlefield, to accomplish military missions, and to execute the strategies devised by their political-military leaders” (Pollack 2002, 4). For this research, both definitions will be critical to exploring the IDF’s performance at the operational and tactical levels of war. However, it is important to remember there are enduring political and strategic considerations particular to Israel regardless of the nature of the individual conflicts that influence the IDF’s operational and tactical approaches.

D. ISRAELI POLITICAL AND STRATEGIC CONSIDERATIONS

Unlike most modern nation states that can wage war for limited political objectives, Israel’s survival has been in jeopardy in all of its conflicts; thus survival as a nation-state is the driving force behind Israeli strategy, both military and political (Rodman 2005, 2). For a majority of its 66-year existence, hostile neighboring states as

well as non-state actors have launched attacks against Israel or have operated against the IDF within Israeli held territories. Following its establishment as a state in 1948, Israel fought wars with its Arab neighbors in 1949, 1956, 1967, and 1973 and has continued to fight terrorist organizations such as Hezbollah and Hamas to the present day. Additionally, geographic, economic, political, and population constraints shape and help define the vulnerability of the Israeli's strategic options (Labarge 1988, 342; Ben-Horin and Posen 1981, 5). According to Efraim Inbar and Shmuel Sandler's article, "The Changing Israeli Strategic Equation: Toward a Security Regime," in order to confront these threats, Israel's strategy must achieve decisive victory in the shortest amount of time possible through:

1. A rapid penetration of enemy lines
2. The destruction of a considerable part of the rival's arsenal
3. The capture of territory for bargaining purposes
4. Achieving the first three elements at a reasonable price in terms of manpower and material before triggering outside intervention (Inbar and Sandler 1995, 46)

The theoretical basis of this strategy is that it is designed to mitigate Israeli strategic disadvantages, particularly limited manpower and lack of geographical strategic depth. Therefore, the IDF must penetrate enemy lines via preemptive strike or immediately counterattack if an adversary manages to invade Israeli territory (Heller 2000, 11). Unlike larger nations, such as Russia in 1941, Israel cannot "trade space for time" (Ben-Horin and Posen 1981, V). As cited by the Israeli Ministry of Foreign Affairs official webpage, the nation is merely 85 miles in width (at its widest point) and 290 miles in length. This geographic constraint limits strategic options. The IDF cannot afford to withdraw into Israel to trade space for time to regain the initiative without accepting that population centers will be occupied. By pushing combat operations into enemy territory through preemptive means or a decisive counterattack immediately after hostilities commence, the IDF removes the threat to its homeland and can secure enemy territory to push threats further away from its people as it did through the seizure of the Sinai Peninsula, Golan Heights, West Bank, and Gaza Strip. Furthermore, Israel can use

the additional territory as a bargaining chip when engaging in diplomatic negotiations. Israel returned the Sinai Peninsula to Egypt in 1982 to broker an enduring peace (Inbar and Sandler 1995, 46; Levite 1989, 32). The past success of this strategic methodology has been undeniable.

In addition to geographic constraints, Israel has faced and still does, a dangerous disparity in manpower that further constrains military options. Due to its relatively limited manpower pool, the IDF's manning relies heavily on mobilizing reservists to offset the Arab states numerical advantage. In 1967 for example, the Arab coalition numbered roughly 120 million Arabs versus 2.9 million Israelis. This numerical advantage also allows the Arab states to maintain large standing armies, which the Israeli Defense forces cannot afford to match in size (Ben-Horin and Posen 1981, 5). Israel's solution to this problem was to build a military force utilizing what Dan Horowitz describes as a "three tiered structure" consisting of a small active force which functions as the base and commands IDF units, well-trained conscripts subject to rapid mobilization to meet immediate threats, and a large reserve force (the majority of the IDF) that can be mobilized in the event of an emergency (Horowitz 1981, 15). It is imperative that this force is better trained than its Arab counterparts due to the numerical disparity and need for a quick decisive victory to minimize the impact of a large-scale mobilization on the nation's economy (Rodman 2005, 11).

In addition to this population disparity, Israel's small population causes citizens to be casualty averse, while its larger adversaries such as Egypt can afford to absorb casualties while bleeding Israel. This sentiment was captured by the late Gamal Abdel Nasser, former president of Egypt, who stated in reference to Israel that a "state whose newspapers publish on their front pages the photograph and biography of each soldier who falls in battle is unlikely to be able to cope with a war of attrition" (Kober 2005, 216). Distinguished author Michael Handel reinforced this by stressing that minimizing casualties is an "important parameter" in Israeli political strategy and former IDF Chief of Staff David Elazar famously stated prior to the Yom Kippur war in 1973 that "there is nothing worse [for Israel] than a war of attrition in which three hundred Egyptians and four Jews fall each day (Ben-Horin and Posen 1981, 21 & 39). Longer campaigns, typical

of wars of attrition, increase the likelihood of a military force sustaining more casualties. To provide context, the Israeli's considered the 18-day 1973 Arab-Israeli War as "long" (Ben-Horin and Posen 1981, 7).

Lastly, superpower intervention, particularly the United States, has always factored in Israel's political and strategic calculus. This is primarily due to Israeli dependency on the United States for political backing within the international community as well as military aid (Inbar and Sandler 1995, 49). In the 1973 Arab-Israeli War, the American emergency airlift possibly saved Israel from total destruction after Egypt and Syria opened a two front war. On the other hand, restraints imposed by the United States such as its refusal to support an Israeli preemptive strike once an Arab attack was identified as imminent, placed the IDF at a strategic disadvantage (Boyne 1998, 56; Van Creveld 1998, 224). The dilemma of the U.S.-alliance was summed up by former Israeli Defense Minister Moshe Dayan when he stated that if Israel launched a pre-emptive strike U.S. Secretary of State Henry Kissinger made it clear that the United States would not have provided "a single nail" in support of Israel (Ben-Horin and Posen 1981, 7). The Arabs were also aware of the strategic constraint on Israel. Former Egyptian President Anwar al-Sadat commented on U.S.-Israeli relations: "99 percent of the cards are in American hands" (Ben Horin and Posen 1981, 25).

The United States and the Soviet Union frequently intervened to maintain Cold War detente and to prevent a conflict between proxies (which Egypt and Syria were with regard to the Soviets) from escalating into a larger global conflict (Levite 1989, 37). The IDF factored the geo-strategic environment into shaping military strategy to achieve its desired objectives in the fastest time possible (Shimon Peres referred to this as a "political stopwatch") in order to limit the impact of superpower-brokered cease-fires and the possibility of losing long-term American materiel and economic support (Levite 1989, 39).

E. EXISTING IDF MILITARY EFFECTIVENESS SCHOLARSHIP

The majority of the IDF military effectiveness literature focuses on single event case studies such as the 1967 and 1973 Arab-Israeli Wars. There is a limited amount of

literature on Israel's military effectiveness across the spectrum of their wars, aside from Martin Van Creveld's, *The Sword and the Olive*. Van Creveld critiques individual IDF campaigns by identifying deficiencies as they occurred rather than utilizing Millett, Murray, and Watman's consistent effectiveness criteria as a means of identifying changes over time to determine overall organizational military effectiveness. This is surprising considering the number of conflicts the IDF has been involved in during the past half century coupled with its inability to replicate decisive victory in the same manner as it did in 1967. The following research will contribute to the military effectiveness literature while identifying lessons learned that can be applied to the U.S. military which is well trained and equipped in a similar manner and has also struggled to achieve decisive victory in its recent campaigns.

The author examined several excellent historical studies recounting single IDF cases that complemented, but did not overlap this research regarding the evaluation of IDF military effectiveness over time. This includes, but is not limited to Michael B. Oren's *Six Days of War: June 1967 and the Making of the Modern Middle East*; George W. Gawrych's "The 1973 Arab-Israeli War: The Albatross of Decisive Victory," Daniel Byman's *A High Price: The Triumphs & Failures of Israeli Counterterrorism*, and Kenneth Pollack's *Arabs at War: Military Effectiveness, 1948–1991*. Scholarly work covering more recent conflicts such as Benjamin Lambeth's "Israel's War in Gaza: A Paradigm of Effective Military Learning and Adaptation," which compared and contrasted recent IDF actions (successful and otherwise) in Lebanon 2006 and Gaza 2009 were also explored and extremely useful. Additional literature such as Mark Heller's, *Continuity and Change in Israeli Security Policy* and Ariel Levite's, *Offense and Defense in Israeli Military Doctrine* provided critical insight regarding the role unique Israeli political and strategic considerations played in shaping IDF operational and tactical approaches in an environment plagued by persistent conflict.

F. RESEARCH METHODOLOGY

The thesis research approach involves utilizing a combination of two components. The first is the method of structured focused comparison approach, which will serve as a

means to compare and contrast IDF campaigns in a longitudinal fashion (George and Bennett 2005, 67–72). The second component consists of a set of military effectiveness criteria that will be applied to each of the IDF campaigns at the operational and tactical levels of war in order to measure and identify any changes in military effectiveness that occurred over time (Murray, Millett, and Watman 1988, 12–26). This methodology accounts for and remains applicable to IDF high-intensity conflicts (1967 Arab-Israeli War and the 1973 Arab-Israeli War) low-intensity conflicts (Operation Accountability and Operation Grapes of Wrath), and hybrid-conflicts (Operation Change of Direction and Operation Cast Lead) that have become typical for the IDF in recent history, as demonstrated by Lebanon and Gaza.

The structured focused comparison approach was chosen to identify and track changes in IDF military effectiveness. This method applies analytical criteria (i.e., indicators) to a group of relevant case studies to facilitate comparison (George and Bennett 2005, 69). The data and evidence gleaned from this comparison will help answer research questions. IDF high-intensity, low-intensity, and hybrid conflicts provided the case studies for research and analysis: The 1967 and 1973 Arab-Israel War's (high-intensity conflict); limited military offensive operations against Hezbollah in 1993 and 1996 (low-intensity conflict); the 2006 war in Lebanon and the 2009 campaign in Gaza (hybrid conflict). By measuring military effectiveness through the use of specific criteria, these cases (which occurred sequentially) will be useful in identifying possible changes or perhaps trends regarding IDF military effectiveness over time.

The following military effectiveness evaluation criterion used for research and analysis is derived as written in Murray, Millett, and Watman's "The Effectiveness of Military Organizations" which is found in *Military Effectiveness Volume I: The First World War* (1988):

Operational: The ability to conduct analysis, selection, and development of institutional concepts or doctrines for employing major forces to achieve strategic objectives within the theater of war (Murray, Millett, and Watman 1988, 12).

Criteria

- To what degree is the military organization's operational methods integrated? To what degree do organizations attempt to combine combat arms to take full advantage of their strengths while protecting their weaknesses (Murray, Millett, and Watman 1988, 13)?
- To what extent are military organizations mobile and flexible at the operational level? Can the organization move rapidly in both the organizational and physical sense either in anticipated or unanticipated directions (Murray, Millett, and Watman 1988, 15)?
- To what extent are the military organization's operational concepts consistent with the strategic objectives assigned to it?" (Murray, Millett, and Watman 1988, 15).
- To what degree does the operational doctrine of military organizations place their strengths against their adversaries' weaknesses (Murray, Millett, and Watman 1988, 19)?

Tactical: The effectiveness of specific techniques used by combat units to fight engagements to secure operational objectives" (Murray, Millett, and Watman 1988, 19).

Criteria:

- To what extent are the military organization's tactical approaches consistent with their strategic objectives (Murray, Millett, and Watman 1988, 20)?
- To what extent are tactical concepts consistent with operational capabilities (Murray, Millett, and Watman 1988, 20)?
- To what extent do the military organization's tactical doctrines emphasize surprise and a rapid exploitation of opportunities (Murray, Millett, and Watman 1988, 22)?
- To what extent do tactical systems place the strengths of military organizations against their adversary's weaknesses (Murray, Millett, and Watman 1988, 25)?

Each case study will be analyzed using these operational and tactical criteria. The results of the analysis will then be utilized to determine the degree the IDF exhibited military effectiveness for the given case study.

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II. HIGH-INTENSITY CONFLICT CASE STUDIES

A. INTRODUCTION

The 1967 and 1973 Arab Israeli Wars were two high-intensity conflicts in which the IDF conducted military operations against the peer competitor militaries of Egypt, Syria, and Jordan. Though both wars were similar in that they were fought over the same territory and against similar opponents, the 1967 war served as an example of the IDF achieving high operational and tactical-level military effectiveness. The 1973 war on the other hand, witnessed the Israeli military organization not achieving a high level of military effectiveness at the operational and tactical levels of war. This was due to the IDF's disastrous performance during the initial phases of the conflict, prior to regaining the initiative and ending the war on the offense in a position to destroy the Egyptian Third Army on its southern border while pushing further into Syria (Gawrych 1996, 78; Pollack 2007, 475).

B. 1967 ARAB-ISRAELI WAR BACKGROUND

In response to Egypt closing the Straits of Tiran, publicly advocating for the extinction of Israel as a state, as well as building significant combat power along the Israeli border in the Sinai, Israel initiated a preemptive war on June 5, 1967, against the Arab coalition consisting of Egypt, Jordan, and Syria, catching all three by surprise. Within the first hours of hostilities, Israel Defense Forces aircraft struck 18 Egyptian Air Bases destroying 300 of the 450 combat aircraft in Egypt's inventory, killing over a third of its 350 pilots before those aircrews could launch (Pollack 2002, 63). Syria's and Jordan's air force also suffered destruction at the hands of the Israelis before they had a chance to respond. Immediately following Israel's achievement of air superiority, IDF ground forces, divided into division task force elements consisting of tanks, mechanized infantry, artillery, and paratroopers launched an offensive against Egyptian Army formations in Gaza and the Sinai Desert (Pollack 2007, 475) Though facing a numerically and technologically superior adversary (Egyptian forces numbered over 100,000 troops with Soviet supplied T-55 tanks compared to 70,000 Israelis armed with World War II

era Sherman tanks), the IDF outmaneuvered and decisively defeated the Egyptians resulting in Israel having total control of the Sinai Peninsula and the Gaza Strip within three days of the first hostilities (Pollack 2002, 59).

Nearly simultaneous with its assault on Egypt, Israel then attacked Jordanian forces in Jerusalem and the Syrians in the Golan Heights. As was the case with Egypt, Jordanian forces possessed more advanced military equipment and weapon systems (Jordanian forces numbered over 45,000 troops armed with M48 Patton tanks compared to 40,000 IDF troops armed with Sherman tanks and M3 Halftracks) (Pollack 2007, 480).

The IDF's expert use of maneuver warfare and tactics in an urban environment resulted in a Jordanian defeat, leaving the West Bank in Israeli hands by the morning of June 7 (Pollack 2002, 293). Lastly, Syria could not capitalize on a 30,000-man advantage (50,000 troops compared to 20,000 IDF) and defending from advantageous terrain in the Golan Heights. Though outnumbered and having to assault against Syrian infantry located in well-prepared fighting positions, the IDF prevailed and captured the Golan Height in two days of fighting (Pollack 2002, 461).

To date, Israel has not been able to replicate the decisive victory it achieved in June 1967 (Gawrych 1996, 1). In the IDF's decisive defeat of three Arab armies, the Israeli casualty figure of 2500 wounded and 700 dead was remarkably low (Oren 2002, 305). According to Israeli historian Michael Oren, the casualty rate over the course of the 1967 Arab-Israeli War was 25 to 1 in Israel's favor with Egypt suffering approximately 15,000 killed in action and thousands more wounded; Jordan suffering 700 dead and 6,000 wounded; and Syria suffering over 2000 casualties, 450 of which were fatalities (Oren 2002, 305).

C. 1973 ARAB-ISRAELI WAR BACKGROUND

Unlike the 1967 Arab-Israeli War, the Arab coalition of Egypt and Syria initiated a successful and simultaneous surprise attack against Israel in the Sinai Desert and the Golan Heights on October 6, 1973. Israel was caught unprepared with its very existence in jeopardy (Gawrych 1996, 28).

In the Sinai, the Egyptians launched five divisions, consisting of 40,000 men and 800 tanks across the Suez Canal into Israeli territory (Laffin 1982, Kindle e-book Chapter 7). In the Golan Heights, the Syrian Army assaulted IDF defensive positions manned by 200 infantry in strongpoints and 177 tanks with 40,000 troops and close to 1500 tanks (Rabinovich 2004, Kindle e-book Chapter 13). The Israelis, though caught by surprised, were initially optimistic that they would be able to repeat their tactical and operational performance in the 1967 Arab-Israeli War. This attitude they had was a result of the lightning quick fashion they had achieved decisive victory previously against a numerically and technologically superior Arab coalition. Decisive victory achieved in such little time also bred Israeli arrogance regarding the necessity of combined-arms warfare and instead promoted the idea that the IDF could be successful by solely relying on armor and combat aircraft (Rabinovich 2004, Kindle e-book Chapter 12).

Unfortunately for the IDF, Egypt and Syria had adapted and invested heavily in Soviet surface-to-air missiles along with the Sagger anti-tank guided missile (ATGM) that were utilized in high numbers to mitigate the Israeli qualitative advantage in aircraft and armor (Rabinovich 2004, Kindle e-book Chapter 12; Gawrych 1996, 20). As a result, the IDF was soundly defeated on the battlefield during the first days of the war. Israeli jets were shot down in large numbers and IDF armored formations, without significant infantry or artillery support, were bludgeoned by ATGM ambushes initiated by Sagger-equipped Arab infantrymen resulting in the loss of 200 tanks in the first 48 hours (Gawrych 1996, 20 & 33). As a result, the IDF division in the Sinai that was fighting off the Egyptian onslaught to buy time for the reserve division's mobilization, was rendered nearly combat ineffective while the Syrians came close to overrunning the IDF in the Golan Heights (Rabinovich 2004, Kindle e-book Chapter 12).

Despite success during the initial phases of the conflict, Egypt and Syria each reached what Clausewitz referred to as their respective "culminating points of attack," in which they were over-extended and vulnerable to counter-attack. Israel rapidly recovered on the Syrian front once the Golan Heights was designated as the priority effort (Gawrych 1996, 52; Rabinovich 2004, Kindle e-book Chapter 3).

As a result of the Israeli's re-allocating the bulk of its forces and resources to the Syrian front, the IDF overwhelmed Syrian lines, causing Syrian leadership to plead for Egypt to push further east into the Sinai in order to relieve pressure on the Syrian's (Gawrych 1996, 55; Pollack 2002, 494). Egypt agreed, and its ground forces left the protection of their surface-to-air missiles and moved deeper into the Sinai. The Egyptian shift to the offensive allowed Israeli combat aircraft to pummel Egyptian forces that led to the destruction of 250 tanks at a cost of 20–25 IDF tanks (Rodman 2005, 33). Additionally, the IDF reinstituted combined-arms, by utilizing infantry and/or artillery to counter and suppress Sagger missile teams (Pollack 2002, 113; Van Creveld 1998, 234). Israel reached its high point when it identified and exploited an operational gap in Egyptian lines leading to multiple Israeli divisions crossing the Suez Canal and eventually encircling the Egyptian Third Army. A U.S. and Soviet-imposed ceasefire on October 28, 1973 saved the Egyptians, who were under siege, and officially ended the conflict (Rabinovich 2004, Kindle e-book Chapter 33).

Though Israel was able to recover, the 1973 Arab-Israeli War was not an Israeli decisive victory (Gawrych 1996, 75). Failures in intelligence delayed mobilizing reservists to reinforce outnumbered IDF positions in the Sinai and Golan Heights. Overreliance on armor and combat aircraft at the expense of a combined-arms approach early on in the conflict, cost the Israelis 2800 killed, 7500 wounded, and 500 taken prisoner (Gawrych 1996, 75).

D. OPERATIONAL EFFECTIVENESS

During the 1967 Arab-Israeli War, the Israeli Defense Forces displayed operational-level military effectiveness against the Egyptian, Syrian, and Jordanian armed forces by expertly linking every military resource at its disposal. This included coordination between intelligence, combat aircraft, tanks, mechanized infantry, parachute infantry, and artillery, which allowed the IDF to impose its will on enemy forces (Gawrych 1996, 2). The IDF also excelled operationally by successfully executing a preemptive offensive, remaining organizationally mobile and flexible, and ensuring it exploited organizational strengths

while covering its weaknesses (Oren 2002, 172; Van Creveld 1998, 184). These measures facilitated a decisive victory in a period of only six days.

Thorough planning and intelligence support was a critical factor in facilitating the destruction of the Arab air forces, allowing IDF ground forces to operate free of an airborne threat and mitigating the Israeli numerical disadvantage within the first hours of combat. Through intelligence gathering efforts prior to the initiation of hostilities, the IDF was able to glean critical information such as the entire Egyptian Air Force order of battle, and the location and composition of individual squadrons (i.e., fighter aircraft vs. bomber aircraft), which facilitated the prioritization of sorties based on which platforms were the greatest threat (Van Creveld 1998, 183). Furthermore, the IDF was aware of the Egyptian Air Force's daily operational schedule encouraging planners to have Israeli aircraft strike at dawn, when enemy aircraft were returning to base after air patrols and parked in the open while its pilots were at breakfast and unit commanders were commuting to work (Oren 2002, 172; Van Creveld 1998, 184).

Regarding the combined-arms approach, the IDF excelled in 1967 particularly during its engagements with the Egyptian Army in the Sinai desert. Immediately following the Israeli assault on Egyptian Air Bases, the IDF utilized its division-sized combined-arms teams (known as "Ugdah") consisting of tanks supported by mechanized infantry, artillery, combat engineers, parachute infantry, and combat aircraft, to attack Egyptian ground forces in the Gaza Strip and the Sinai Desert (Gawrych 1996, 2). Operating without the fear of an Egyptian air attack, IDF forces utilized advantageous desert terrain to maximize its mobility and proficiency in exercising "blitzkrieg" warfare (the word invented to describe lightning attack utilizing combined-arms teams) against Egyptian fixed defenses, most notably in areas such as Rafah and Abu Ageila, where armor, infantry, and paratroopers worked in concert to facilitate an Israeli breakthrough into the Sinai (Rodman 2005, 29; Gawrych 1996, 2).

The IDF, as an organization, remained flexible and mobile at the operational level in 1967, particularly through its ability to shift forces rapidly from one front to another, as the battlefield conditions changed. To reflect this fact 25 percent of Israeli forces fought on multiple fronts, demonstrating the speed in which forces could be redeployed

in theater as well as the adaptability of the IDF to fight in a desert environment on one day then transition to an urban or mountainous environment the next (Van Creveld 1998, 195). For example, Israeli paratroopers operating against Egyptians in the Sinai were repurposed in less than 48 hours to support operations against the Jordanians in the West Bank (Van Creveld 1998, 195).

Unlike the Israeli decisive victory achieved in 1967, the 1973 Arab-Israeli War was a conflict in which the IDF failed to display operational-level military effectiveness at the outset. Due to a poor intelligence assessment and the lack of combined-arms warfare early in the conflict the IDF was initially operationally ineffective, but it was able to recover and exhibit effectiveness by adapting its operational approach (Rabinovich 2004, Kindle e-book Chapter 5; Gawrych 1996, 52). Described by the United States Naval War College as “interaction reassessment and adaptation,” this is a critical facet of the Israeli and IDF strength.

The inability of AMAN (Hebrew for “intelligence section”), the IDF’s intelligence organization, to determine that an Arab attack was imminent despite several indicators was a strategic and operational-level failure (Rabinovich 2004, Kindle e-book Chapter 5). The lack of an accurate intelligence assessment prior to hostilities despite noting a Syrian military buildup in areas outside the Golan Heights, and Egypt’s increase in the volume of emergency ammunition and engineer equipment required to breach and scale the sand dunes on the west bank of the Suez, immediately placed the IDF at an operational-level disadvantage (Rabinovich 2004, Kindle e-book Chapter 5).

Israeli overconfidence was another reason the IDF was ineffective at the operational level of war (Gawrych 1996, 24). IDF leadership disregarded much of the evidence that indicated a combined Arab attack was imminent because of faulty assumptions and arrogance about its Arab counterpart’s ability to wage war (Rabinovich 2004, Kindle e-book Chapter 12). Due to the success enjoyed by Israeli armor and aircraft in 1967, the IDF moved away from the combined-arms approach and instead focused their operations around tanks and aircraft, with infantry and artillery playing a minimal, “mop up role” (Gawrych 1996, 18). In the first days, this doctrinal shift had disastrous consequences, particularly for the IDF’s tank corps, when armored formations

received heavy casualties as a result of their inability to have organic infantry or artillery assets suppress anti-tank guided missile teams. As a result, the IDF lost 200 tanks in the Sinai during the first 48 hours of hostilities (Pollack 2002, 112).

Fortunately for Israel, its initial operational mistakes left the IDF bloodied but not defeated, allowing for rapid recovery. The IDF reversed the battlefield momentum by prioritizing its efforts with regard to the two fronts it was engaged (Gawrych 1996, 52). The Sinai Peninsula was one of the few regions that afforded Israel strategic depth allowing the IDF to trade space (over 150 miles) for time before Israeli population centers would be under Egyptian threat, whereas the prospect of Syrian troops occupying the Golan Heights, which was significantly closer to Israeli population centers across the Jordan River, was a different matter entirely, therefore the IDF made the defeat of the Syrians its main effort (Gawrych 1996, 52; Rabinovich 2004, Kindle e-book Chapter 3). It was at this point the IDF conducted a multi-division attack consisting of armor and mechanized infantry against two Syrian divisions in the central portion of the Golan Heights. The IDF destroyed the Syrian flank, leading to the destruction of the entire Syrian front (Pollack 2002, 494). This effectively eliminated the Syrian threat, and allowed Israel to concentrate on driving the Egyptians out of the Sinai (Gawrych 1996, 55).

E. TACTICAL EFFECTIVENESS

Much like its performance at the operational level, the IDF displayed tactical-level military effectiveness during the 1967 Arab-Israeli War. The IDF's approach at the tactical level was in line with Israel's strategic objectives, particularly with regard to the "rapid penetration of enemy lines" and "destruction of a considerable part of the rival's arsenal" via preemptive strike (Inbar and Sandler 1995, 46; Levite 1989, 7). This was the case during the preemptive airstrikes when each pilot participating was directed to maintain radio silence while flying towards Egyptian airfields (Oren 2002, 170). Though maintaining radio silence is common operating procedure to preserve the element of surprise, this directive was unique because Israeli pilots were to observe radio silence regardless if they had mechanical failure, or got lost en route to their targets, even if it meant ejecting or crashing (Oren 2002, 170). Any distress calls, especially while flying

over Egyptian territory, may have lost the element of surprise, alerting Arab forces, and consequently shifting battlefield momentum. This possibility concerned the IDF and Prime Minister Levi Eshkol who feared loss of surprise via preemption might threaten Israel's survival due to the combined Arab response (Oren 2002, 168).

On the ground, the IDF's tactical maneuvers avoided fixed defensive positions, which would have slowed momentum and created more casualties, to achieve the element of surprise. In the battle of Abu Ageilah in the Sinai, Brigadier General Ariel Sharon flanked a division level defensive position by sending an armored battalion through sand dunes, terrain the Egyptian's considered "impassable" and therefore left unguarded to attack the division's rear (Pollack 2002, 68). Paratroopers then conducted air assaults behind enemy fortifications and attacked artillery units, which prevented Egyptian soldiers manning the trench lines from calling for artillery support when IDF armor and artillery fired upon them. With the Egyptian forces being fixed by tank and artillery fire, Sharon directed his infantry brigade to flank the northern portion of the trench line which led to the enemy forces suffering a 50 percent casualty rate (Pollack 2002, 68). This tactical approach was also successful in the West Bank. IDF mechanized and light infantry, supported by Sherman tanks and strike aircraft, fixed Jordanian forces in their defensive positions located on favorable terrain (a ridgeline). While attacking from the front, additional IDF ground elements assaulted the flanks (Pollack 2007, 481). While both examples serve as an excellent demonstration of tactical proficiency, it was only possible due to the IDF's organizational construct that valued combined-arms teams working in concert to achieve the desired objective (Rodman 2005, 29; Gawrych 1996, 2).

The complete tactical success enjoyed by Israeli forces in 1967 would not be repeated in 1973 (Gawrych 1996, 1). Similar to the inconsistency it suffered at the operational level, the IDF started out as tactically ineffective but it was able to regain the initiative by rapidly adapting tactical improvements, which facilitated what Abraham Rabinovich called, "the most remarkable turnabouts in military history" (Rabinovich 2004, Kindle e-book Preface). During the initial phases of the war, the IDF operated under the assumption it would easily defeat the Egyptian and Syrian militaries as it did in 1967 and impulsively responding to early Arab tactical gains by rushing into anti-tank

ambushes without conducting an adequate reconnaissance or coordinating a combined-arms attack (Gawrych 1996, 53). This led to Israeli ground units responding piecemeal, typically tanks unsupported by infantry or artillery, and being defeated by Sagger anti-tank guided missile teams, armor, and artillery (Van Creveld 1998, 228). This was evident during one particular attack where three IDF brigades attempted to counterattack individually rather than consolidating, and attacking as a division-sized entity, resulting in the loss of 200 tanks (Pollack 2002, 112–113).

The ability of the IDF to adapt to the new Arab tactics that revolved around the use of the Sagger ATGM, contributed to Israel having the ability to seize the initiative and reverse battlefield momentum. The answer to the problem was to reinstitute the use of combined-arms teams, specifically infantry and artillery, that would be valuable in keeping Egyptian missile teams from firing accurately at advancing Israeli armor through suppressive fires (Pollack 2002, 113; Van Creveld 1998, 234). This approach took away a significant tactical advantage from the Egyptians and enabled the IDF to keep the Egyptian Army on the defensive for the rest of the war.

F. CONCLUSION

The IDF was operationally effective during the 1967 war because it integrated intelligence support, combat aircraft, armor, mechanized infantry, paratroopers, and artillery when developing the operational approach that led to the decisive defeat of the combined Arab militaries in a period of only six days (Gawrych 1996, 2). Additionally, the IDF demonstrated operational-level flexibility by having the ability to shift forces from one front to another (i.e., paratroopers from the Sinai to Jerusalem) in order to take advantage of opportunities as they presented themselves as well as to apply the appropriate amount of resources to the problem given Israel's resource and manpower constraints (Van Creveld 1998, 195). Tactically, Israel was effective in achieving its desired objectives due to IDF combined-arms teams having the ability to outmaneuver their Arab counterparts on the battlefield. IDF armor and infantry, supported by air and artillery assets, avoided enemy strengths, by using flanking movements rather than frontal assault against fixed defensive positions. This combined-arms methodology

allowed a numerically inferior force to win decisively on the battlefield (Rodman 2005, 29; Gawrych 1996, 2).

In 1973 however, the IDF began the conflict operationally and tactically ineffective after being surprised by the combined Egyptian and Syrian assault along two fronts (Gawrych 1996, 28). At the operational level, the IDF intelligence agency, AMAN, failed to predict a combined Arab attack in the Sinai and the Golan Heights despite the presence of several indicators (Rabinovich 2004, Kindle e-book Chapter 5). Another mistake was that the Israelis assumed the decisive victory achieved in 1967 would be easily replicated without the need for combined-arms warfare. This led to the wrong doctrinal focus of achieving Israeli objectives through the primary use of armor or aircraft while infantry and artillery filled a secondary role (Gawrych 1996, 7–8). This doctrinal shift proved disastrous when IDF armor became susceptible to the Sagger ATGM due to the fact infantry and artillery assets were not integrated into tank formations (Gawrych 1996, 18).

Despite its disastrous start, the IDF was able to regain the initiative by prioritizing its efforts and maximizing limited resources rather than trying to fight with the same amount of resources on both fronts. This enabled Israel to defeat the Syrian threat first, then shift focus towards the Egyptian military, which led to Israel concentrating sufficient forces to fix and outflank formations (Gawrych 1996, 52).

As was the case at the operational level, initially the IDF was tactically ineffective before reversing momentum through battlefield adjustments and thereby ending the 1973 Arab-Israeli War tactically effective. An example of the IDF's initial tactical ineffectiveness occurred during the opening hours of the war when Egypt crossed the Suez Canal into the Sinai. Instead of identifying the threat composition's through reconnaissance or coordinating a combined-arms response, IDF armor units reacted by heading directly towards the threat, leading to several units being destroyed via anti-tank ambushes (Van Creveld 1998, 228). After suffering heavy casualties, IDF units at the tactical level once again embraced combined-arms warfare. The duel threat enabled the Israelis to overcome the Sagger's lethality to unsupported tanks (Pollack 2002, 113; Van Creveld 1998, 234).

During both cases, the use of proficient combined-arms warfare was the critical factor in determining whether or not the IDF demonstrated military effectiveness at the operational and tactical levels. Well-integrated combined-arms maneuver allowed the IDF to achieve victory over a numerically superior force in 1967, and it staved off defeat after initial surprise by numerically superior force in 1973 (Gawrych 1996, 2; Pollack 2002, 113). The lack of combined-arms maneuver, however, is what placed Israel in a precarious position and lacking it, created the only situation in which the IDF came close to suffering defeat (Gawrych 1996, 7–8).

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III. LOW-INTENSITY CONFLICT CASE STUDIES

A. INTRODUCTION

Operation Accountability and Operation Grapes of Wrath were two low intensity conflict cases in which the IDF attempted to prevent Hezbollah from using Lebanese territory to fire rockets into Israel (Jones 2007, 97). The Israeli government also wanted to destroy the organization's infrastructure through a limited military approach consisting of stand-off attacks, delivered via aircraft or artillery, without the support of ground forces (Jones 2007, 94). Israel's intent behind a military offensive based solely on airstrikes and artillery fire missions, was to minimize IDF exposure to enemy fire due to domestic sensitivity to Israeli casualties as well as to encourage the Lebanese population to turn against Hezbollah because of the collateral damage that would inevitably accompany IDF airstrikes and artillery delivered shells (Petrelli 2005, 680). Operation Accountability, initiated in 1993, was an operational and tactical disappointment that ended with a ceasefire and Israel failing to achieve its objectives. Israeli failure in 1993 led to the same problem set resurfacing in 1996, when Hezbollah once again fired rockets from its bases in Lebanon into Israeli territory. Operation Grapes of Wrath was Israel's retaliation and it was essentially the same plan and approach as Operation Accountability. Not surprisingly, it concluded with a ceasefire as a result of the IDF being operationally and tactically ineffective (Byman 2011, 238).

B. OPERATION ACCOUNTABILITY (1993) AND OPERATION GRAPES OF WRATH (1996)

After the 1980s, the IDF transitioned from high intensity warfare conflicts against peer competitors to low intensity conflicts. This began shortly after the Israeli invasion of Lebanon in 1978 and 1982, which aimed to halt PLO attacks that originated there (Inbar and Shamir 2013, 65). Though the IDF was able to drive the PLO from Lebanon, the Lebanese Shi'a Muslims viewed their presence as an occupation. Growing resentment facilitated the creation of the terrorist organization known as Hezbollah (Byman 2011, 918).

Despite the IDF's reputation as the best-trained and equipped military in the region, Hezbollah used guerrilla combat to challenge Israeli forces in their occupation of Southern Lebanon (Jones 2007, 94). This led to small-scale tactical responses from the IDF throughout the latter part of the 1980s and early 1990s. Eventually, Hezbollah began launching rockets against northern portions of Israel in response to the IDF's continued presence in Southern Lebanon. These hostilities led to two limited IDF responses known as Operation Accountability in July 1993 and Operation Grapes of Wrath in April 1996 (Jones 2007, 97). In both cases, the IDF sought to destroy Hezbollah's ability to fire rockets into Israel through the targeting of the terrorist organization's infrastructure in Lebanon. Additionally, the IDF took the unorthodox approach of not utilizing ground forces to target Hezbollah, and instead limited its military options to airstrikes and artillery fire as a result of domestic political pressure to limit Israeli military casualties (Van Creveld 1998, 305). Israel also wanted to use this methodology to influence the Lebanese populace to halt active and passive support of Hezbollah due to the terrorist organizations' propensity to utilize locals as human shields in densely populated, urban environments (Inbar and Shamir 2013, 77). The Israeli rationale was that collateral damage would inevitably occur as a result of Hezbollah tactics and this would turn the population away from the terrorist group (Jones 2007, 94).

Unfortunately, Israel failed to neutralize Hezbollah's infrastructure or coerce the Lebanese to turn against Hezbollah. Instead both operations led to internationally imposed ceasefires, six days into Operation Accountability and 16 days into Operation Grapes of Wrath (Byman 2011, 924). The terms of the ceasefires dictated that the IDF stop attacking Lebanese civilians and Hezbollah cease shooting rockets in to Israel. The ceasefire in 1993 was ultimately not adhered to and led to the IDF initiating Grapes of Wrath in 1996. Following the imposition of the agreement ending that conflict, both sides continued to violate the terms of the ceasefire which eventually led to Israel withdrawing from southern Lebanon in 2000 (Byman 2011, 925).

Both operations were essentially the same with regard to the IDF operational and tactical approach, the desired end states, and the operating environment, which is why the effectiveness of both military actions will be analyzed as a single case study.

C. OPERATIONAL EFFECTIVENESS

At the operational level, the Israel Defense Forces were ineffective in their effort to destroy Hezbollah's ability to launch rocket attacks against Israeli targets. This was due to the IDF's operational approach that focused on deterrence through the use of military force to coerce the population in turning against the terrorist organization (Inbar and Shamir 2013, 77). Both operations lacked combined-arms integration when carrying out military operations, and the IDF had to develop an operational plan that minimized the opportunity for friendly casualties. Unfortunately, the Israeli's chose the wrong operational approach (Van Creveld 1998, 305).

To accomplish this, the IDF focused on destroying terrorist targets (i.e., infrastructure, command and control capabilities) within Hezbollah controlled areas of Lebanon (Byman 2011, 922). Though the IDF conducted numerous airstrikes and artillery fire missions against Hezbollah targets that resulted in the deaths of 75 terrorists and 120 Lebanese (with almost 500 being wounded) and further displaced 300,000 residents during Operation Accountability, the operation failed to curb rockets from being fired or to separate Hezbollah from the Lebanese population (Byman 2011, 922). When Operation Grapes of Wrath was launched three years later, the IDF adopted the same operational approach with similar results given the fact Israeli military action occurred over a 16-day period. During the April 1996 military operation, the IDF killed an estimated 24 Hezbollah fighters, 154 Lebanese civilians and displaced 400,000 Lebanese residents (Byman 2011, 924). This operation also ended in a U.S.-imposed ceasefire between belligerents but it failed to separate Hezbollah from the Lebanese or quell rocket attacks against Israel. In fact, Hezbollah did not lose a single rocket launcher during that time period (Gabrielsen 2014, 260).

The most significant reason the IDF was operationally ineffective during both Operation Accountability and Operation Grapes of Wrath was the lack of a combined-arms approach as the foundation of the operational plan. Instead of taking advantage of maneuver warfare, their organizational strength, the IDF relied exclusively on airstrikes and artillery fire. The IDF referred to this technique as "counterfire" (Jones 2007, 94). This approach proved ineffective because Hezbollah operated unconventionally and

therefore could not be decisively engaged by artillery fires or airstrikes and instead operated as pairs or individuals to fire rockets in “under a minute” and then intermingle with the local populace immediately before the IDF could effectively react (Helmer 2006, 56). For the IDF to possibly counter Hezbollah’s strategy, Israeli infantry should have been incorporated as part of the plan to find, fix, and destroy rocketeers or to relay accurate targeting data to aircraft or artillery crews in a timely manner.

Political constraints imposed due to domestic fears of high casualty rates forced the IDF to develop an operational approach that relied on artillery fires and airstrikes (Petrelli 2005, 680). Strangely, the IDF was a victim of its increasing technological prowess. The IDF had the ability to strike targets without fear of suffering heavy casualties via a credible Hezbollah response (i.e., air defense systems to counter Israeli aircraft or the technology to enable accurate counter-artillery fires) (Inbar and Shamir 2013, 77). Hence this operational approach was attractive because it appeared to apply an Israeli strength against an enemy weakness. However, it proved to be an inappropriate response given the results of the two campaigns (Petrelli 2005, 680).

Aside from the IDF not incorporating ground elements as the main effort in Operation Accountability or Operation Grapes of Wrath, its operational effectiveness was limited due to a militarily ineffective plan and a strategic level disaster. A plan that hinged on collateral damage causing the Lebanese population to withdraw passive and/or active support for Hezbollah as a result of IDF airstrikes and artillery fire was extremely optimistic and professed ignorance of the international outcry against bombing of civilians (Byman 2011, 928). This approach produced the opposite effect, particularly in Operation Grapes of Wrath as Daniel Byman noted in *A High Price: The Triumphs & Failures of Israeli Counterterrorism*. “Although Israel killed few fighters, it did kill many civilians, including children and these deaths were captured on film. And again, instead of rejecting Hezbollah the operation increased its popularity among the non-Shi’a Lebanese” (Byman 2011, 238). Rather than breeding resentment or contempt for Hezbollah, the Lebanese reserved those feelings for the IDF. Israel not anticipating this negative reaction among the populace, as well as the international community, surprised many military researchers, one of whom stated that IDF actions “seemed especially

designed for Israel bashers. What could be better fodder than pictures of thousands of civilians abandoning their homes to the sound of Israeli cannons (Helmer 2006, 56; Byman 2011, 928)?”

D. TACTICAL EFFECTIVENESS

Though the IDF was better-trained and possessed better weapon systems than its Hezbollah counterparts, it was not tactically effective during Operation Accountability or Operation Grapes of Wrath for several reasons. First, the IDF’s tactical approach to solving the Hezbollah rocket-firing problem had international level consequences. Second, the IDF’s tactical concepts did not take full advantage of the organization’s capabilities. Third, Israel failed to seize the initiative or exploit battlefield opportunities at the tactical level that would have supported achievement of operational and strategic level objectives (Helmer 2006, 56; Byman 2011, 928).

The decision to utilize only combat aircraft or artillery strikes during Operation Accountability and Operation Grapes of Wrath to target Hezbollah rocketeers had negative consequences. Given the densely populated, urban environment in which Hezbollah operated from, the use of artillery shells and airstrikes to target small groups or individuals proved to be unsuccessful because of the small targets’ signatures and because of the high probability of collateral damage (Helmer 2006, 56; Byman 2011, 929).

Though the Israelis believed collateral damage would be beneficial, it proved to limit tactical and operational effectiveness while having negative strategic and political consequences. This was especially evident during Operation Grapes of Wrath when an IDF artillery strike hit a United Nations compound in the Lebanese city of Qana and killed 100 Lebanese civilians seeking refuge (Helmer 2005, 58). According to the IDF, the fire mission was initiated due to reports that Hezbollah was firing rockets in the vicinity of the compound. Unfortunately the artillery shells hit the compound due to a targeting error. The UN verified the claim regarding the presence of Hezbollah, but it condemned the attack by stating the IDF fired 17 shells to target two to three individuals that were near a known refugee area (Byman 2011, 237). This led to a media outcry and

an internationally imposed ceasefire that failed to thwart future rocket attacks against Israel, and painted the IDF as reckless. Operation Grapes of Wrath had the opposite strategic effect because it boosted Hezbollah's credibility among the Lebanese (Byman 2011, 237–238; Jones 2007, 95).

E. CONCLUSION

During both Operation Accountability and Operation Grapes of Wrath, the IDF was operationally and tactically ineffective when trying to halt Hezbollah rocket fire or influence the Lebanese population to turn away from the Shi'a terrorist organization. To the contrary, the IDF's approach caused the Lebanese population to support Hezbollah's efforts against Israel (Byman 2011, 237–238; Jones 2007, 95)

At the operational level, both operations were ineffective due to the IDF decision to rely exclusively on air and artillery strikes to achieve the Israeli objective of reducing Hezbollah rocket fire and separating the Lebanese population from the terrorist group (Jones 2007, 94). This approach was adopted due to Israeli aversion to heavy casualties and the assumption that air attacks could be effective in destroying Hezbollah targets (Petrelli 2005, 680). Israeli leadership also hoped it would be effective in turning the Lebanese population against Hezbollah due to the inevitable collateral damage that would result. Both assumptions proved false, and the lack of ground forces being integrated into the operational plan prevented Israel from having the option to physically hold the areas of Lebanon in which rockets were being launched or to root out Hezbollah personnel operating among the populace (Van Creveld 1998, 305).

At the tactical level, the IDF was unable to prevent rockets from being fired into Israel or inflicting severe damage to Hezbollah via airstrikes due to the fact that Israeli aircraft were trying to engage targets with small signatures (i.e., an individual and a donkey carrying rockets) from high altitudes (Helmer 2006, 56). IDF ground forces, if present, may have been effective in finding, fixing, and hitting Hezbollah targets through either maneuver warfare or through the relaying of accurate targeting data to aircrews or artillery fire direction centers. Unfortunately, this was not the case leading to two

separate ceasefires that proved inadequate in keeping the peace (or rockets from landing in Israel) for the long term (Byman 2011, 237–238; Jones 2007, 95).

Once again, the lack of integrated combined-arms in Israel's effort to deal with Hezbollah rocket fire prevented the IDF from exhibiting military effectiveness at either the operational or tactical level during the two low intensity conflicts and actually led to international condemnation (Byman 2011, 237). The Israeli desire to avoid casualties through standoff fires failed in achieving Israel's stated objectives and instead pushed many Lebanese to support Hezbollah (Byman 2011, 237–238; Jones 2007, 95). Additionally, the IDF's inability to deal with the Hezbollah problem led the Shi'a terrorist group to repeat rocket attacks against Israel a decade later, though with a better trained and equipped force that would fight more like a conventional army than a typical terrorist organization (Kober 2008, 15).

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IV. HYBRID CONFLICT CASE STUDIES

A. INTRODUCTION

Operation Change of Direction (Lebanon 2006) and Operation Cast Lead (Gaza 2008/2009) were two conflicts in which the Israel Defense Forces conducted military action against a non-state actor that possessed heavy weaponry and fought in a somewhat similar fashion to conventional militaries (Kober 2008, 15; Johnson 2011, 109). Though both conflicts were hybrid in nature, the IDF approached both problem sets differently, resulting in Israel not achieving its objectives in Lebanon while achieving success two years later in Gaza. The IDF was operationally and tactically ineffective against Hezbollah during Operation Change of Direction, though it achieved military effectiveness against Hamas in Operation Cast Lead as a result of modifications to its operational and tactical approach (Lambeth 2012, 85 and 102–103).

B. OPERATION CHANGE OF DIRECTION (LEBANON 2006)

On July 12, 2006, Hezbollah launched rocket attacks against Israeli military and civilian targets in the vicinity of the Lebanese border. While the rockets were landing in Northern Israel, Hezbollah fighters operating along the border ambushed an IDF patrol, resulting in the deaths of two Israeli soldiers and the abduction of two others, who were then immediately brought into Lebanon (Kober 2008, 3; Inbar and Shamir 2013, 80). On July 13th, the IDF initiated a poorly thought out response that became a 34-day military operation against Hezbollah targets in Lebanon. There were several stated objectives for the operation which included recovering the kidnapped soldiers, eliminating Hezbollah's ability to launch rocket attacks into Israel, degrading its command and control capability, and destroying organizational infrastructure along the Israel-Lebanon border in order to facilitate Israel establishing a security zone that would serve to deter further attacks into Israeli territory (Johnson 2010, 55; Inbar and Shamir 2013, 80).

Military historian and former IDF pilot Benjamin Lambeth described the IDF's 2006 operation in Lebanon as "the most inconclusive performance by the IDF in its many tests since 1948; for the first time, a major Middle East conflict ended without producing

a clear resolution in Israel's favor" (Lambeth 2012, 85). The operation had initial promise, when Israeli fighter jets destroyed the majority of Hezbollah's long-range rocket launchers as well as Hezbollah headquarters located in Beirut within the first 24 hours (Kober 2008, 4). Unfortunately, the IDF was not able to capitalize on its initial success when it haphazardly sent in unprepared ground forces across the border in an effort to destroy Hezbollah targets operating in Southern Lebanon. The IDF took this action after standoff attacks failed to achieve their objectives, or to suppress short-range rocket attacks Hezbollah unleashed after its long-range capability was mitigated (Kober 2008, 5). Israel also underestimated the fighting ability of Hezbollah fighters who numbered over 3,000 and possessed heavy weapon systems such as ATGMs found in conventional armies (Inbar and Shamir 2013, 81). Israeli officers and soldiers, accustomed to conducting small unit police actions against Palestinian terrorists in the Israeli occupied territories, met their match when Hezbollah fought as a peer competitor rather than their Palestinian counterparts (Kober 2008, 15). Additionally, the IDF no longer possessed the proficiency to conduct large unit operations when maneuvering as brigade- and division-size elements as it did in 1967 and 1973, nor did it have the ability to execute adequate close air support to ground forces (Berman 2012, 133; Johnson 2011, 41). Lacking these capabilities, Israel's failure to execute combined-arms maneuver warfare at the operational and tactical levels, its inability to adapt to changing enemy tactics, techniques, and procedures in a short time period, led to the 34-day operation ending with none of the prisoners recovered, (having died of wounds while in captivity) and Hezbollah's command infrastructure intact. More rockets were being launched into Israel by the time combat operations ended August 14, than were launched at the beginning and a majority of Israeli's viewed the conflict as "a failure" (Berman 2012, 33). Following the war, IDF Chief of Staff, Lieutenant General Dan Halutz resigned after a series of investigations and after action reviews examining why the IDF performed so poorly (Lambeth 2012, 89–90). Consequently, Hezbollah emerged politically victorious despite the fact it suffered more casualties (700 dead, 1000 wounded) than the IDF (121 dead, 600 wounded) simply because it "survived" a conflict with the most powerful military in

the region as well as preventing Israel from achieving its stated objectives (Inbar and Shamir 2013, 81).

C. OPERATION CAST LEAD (GAZA 2009)

On December 27, 2008 Israel initiated Operation Cast Lead to target Hamas, a Palestinian terrorist organization operating in Gaza, numbering over 20,000 and receiving military training and equipment support from Hezbollah, Iran, and Syria (Lambeth 2012, 107–108; Johnson 2011, 103). Though not as well trained as the Lebanon based terrorist organization Hezbollah, Hamas was similar in that it represented a hybrid threat because it possessed heavy weaponry (i.e., anti-tank missiles, IEDs, and mortars) and fought as a conventional army in its utilization of its tactics, techniques, and procedures (Johnson 2011, 109).

Operation Cast Lead was a response to Hamas launching rockets mortars into Israel during its withdrawal of military forces and civilian settlers from Gaza in 2005 in accordance with the Israeli government's "land for peace" strategy (Lambeth 2012, 94). Though Israel had withdrawn from Gaza, allowing the Palestinians to have self-governance, tension remained due to Israel's continued control of access to the territory via air, ground, and sea movement. Israeli restricting of the movement of people and commercial goods as well as its control of the electrical and water supply in Gaza also served as a point of contention for Gaza residents (Amnesty International 2009).

As a result of Palestinian grievances and reportedly encouraged by Hezbollah's success against the IDF in Lebanon, Hamas began to fire mortar rounds and launch short-range rockets into the Israeli state beginning in 2007. The IDF responded by launching raids into Gaza causing further escalation as Hamas fired more projectiles into Israel (Lambeth 2012, 109). Eventually, the increased rocket attacks against Israel pushed the Israeli government to plan for Operation Cast Lead.

The operation commenced on December 27, 2008 with IDF air assets initiating a surprise aerial assault on Hamas targets throughout the Gaza Strip. For a period of eight days, Israel attacked targets identified months before the operation as well as targets of opportunity that presented themselves to IDF airborne surveillance assets (Lambeth 2012,

96). Both facets of the air power campaign set the conditions for a preplanned ground offensive that commenced on the evening of January 3rd. as a result of lessons learned in Lebanon two years earlier, the IDF had made a doctrinal shift back to maneuver warfare. The IDF attacked enemy flanks and rear areas, keeping Hamas off-balance while providing targeting data for its airborne counterparts, enabling them to deliver highly accurate and devastating munitions (Johnson 2011, 109). This continued until Israel initiated a ceasefire on January 18, 2009.

Operation Cast Lead was an operational- and tactical- level success. All of the IDF's stated objectives, inflicting severe structural damage to Hamas and its military assets; a decrease in the daily rocket fire; and increasing deterrent effects were achieved while suffering only nine dead and 207 wounded, while killing 709 Hamas personnel, wounding over 4,000, and capturing 120 (Inbar and Shamir 2013, 83). Rocket fire originating in Gaza had been reduced significantly when compared to the number of rockets launched prior to Operation Cast Lead. Israeli air and ground operations destroyed 1200 rockets destroyed (Lambeth 2012, 102–103). The IDF's success was so pronounced that Hamas immediately conducted an inquiry on why it performed so poorly, leading to several commanders being relieved of their duties (Byman 2011, 202).

D. OPERATIONAL EFFECTIVENESS

At the operational level, the IDF was ineffective during Operation Change of Direction. This was due in large part to the implementation of an operational approach that was inappropriate given the objectives and an IDF ground force that was trained and conditioned to conducting police actions in the Israeli occupied territories rather than coordinated combined-arms warfare (Kober 2008, 14). The IDF operational approach utilized during the 2006 war in Lebanon was a result of new operational doctrine released in April of the same year that focused on accomplishing mission objectives through a combination of combat aircraft conducting stand-off attacks and high-technology assets (i.e., unmanned aerial vehicles) with limited ground force involvement (i.e., small units and/or special operations forces conducting raids/providing targeting data vice battalion/brigade/division conducting large scale combined-arms maneuver operations).

IDF leadership, most notably the IDF Chief of Staff Dan Halutz, believed that ground based maneuver warfare was antiquated based on the assumption that hostilities between Israel's Arab neighbors was minimal (Berman 2012, 126; Inbar and Shamir 2013, 81).

The IDF ground force doctrinal focus on fighting Palestinian terrorists in the urban, occupied territories, as opposed to combined-arms warfare, in the varying terrain of Lebanon became apparent immediately in what was later described by Daniel Byman as a "half-hearted and poorly conducted" operation (Byman 2011, 256). The IDF's lack of training and preparation for a large-scale ground offensive was evident when IDF tank crews took incorrect routes, became lost, and failed to properly screen their movements when they crossed into Lebanon making the crews targets of opportunity for Hezbollah (Berman 2012, 133). The IDF also underestimated the capabilities of its Hezbollah enemy who fought more like a conventional military as opposed to its Palestinian adversary. Hezbollah heavy weapons teams, particularly those armed with ATGMs, exposed the IDF's lack of proficiency in integrating combined-arms maneuver, when they attacked Israeli troops from prepared defensive positions (Kober 2008, 5). The lack of Israeli combined-arms integration between its infantry, armor, and engineer headquarters elements was demonstrated during one engagement in which an armor and infantry brigade command team (operating out of the same structure) failed to coordinate their unit's actions (i.e., dismounted infantry clearing Hezbollah ATGM teams in order to facilitate rapid armor movement through the battle space) resulting in 11 dead and 50 wounded (Berman 2012, 133).

The Israel Defense Forces took lessons learned in 2006 and were able to achieve operational-level military effectiveness in their execution of Operation Cast Lead. The IDF developed an operational approach that was consistent with Israel's strategic objectives, and incorporated combined-arms maneuver against a hybrid enemy force well supported by superior intelligence collecting efforts (Lambeth 2012, 96). This methodology enabled the IDF to achieve success against a hybrid opponent in a matter of 23 days with minimal loss of life, while inflicting a severe blow to Hamas' infrastructure and ability to conduct further attacks against the IDF or Israeli civilians (Inbar and Shamir 2013, 84).

Israel's operational plan focused on inflicting severe damage to Hamas's organizational infrastructure and degrading its capacity to launch rockets into Israel rather than seeking an unrealistic objective such as destroying the terrorist group in its entirety. The IDF accomplished this by breaking down Operation Cast Lead into phases, the first of which was an eight-day air campaign that focused on destroying previously identified targets such as rocket launchers, rocket storage facilities (many of which were located underground), logistics tunnels, as well as the homes of Hamas commanders (Lambeth 2012, 96). Along with standoff attacks against pre-planned targets that inflicted a severe blow to Hamas organizational infrastructure and rocket firing capacity, the IDF utilized unmanned aerial vehicles (UAV) and other airborne surveillance systems over the entire Gaza Strip to identify targets of opportunity both visually and through signal intercept. These intelligence, surveillance, and reconnaissance (ISR) actions then facilitated the destruction of additional Hamas targets when the information was transmitted to IDF airborne "hunter-killer" assets such as fixed-wing fighter aircraft and attack helicopters (Lambeth 2012, 96).

Following the eight-day air campaign, the IDF followed up with a combined-arms ground assault into Gaza. Unlike Operation Change of Direction, Operation Cast Lead was developed with a ground phase from the very beginning, which had the purpose of destroying Hamas personnel and infrastructure targets, as well as identifying targets that could be destroyed via airstrikes such as rocket firing points and storage areas (Lambeth 2012, 99). The ground portion of the operation involved four IDF brigades (two infantry, one paratrooper, and one armored brigade) supported by engineers, electronic warfare assets, field artillery, UAVs, and aircraft assigned to ground headquarters elements for the purpose of providing immediate, dedicated close air support (Lambeth 2012, 99). Unlike Lebanon, the IDF ground actions were well-integrated and focused on speed and maneuver that enabled success on the battlefield against hybrid opponents. For example, Hamas looked to inhibit IDF ground movement through the use of landmines and improvised explosive devices (IED), some of which were the Iranian supplied explosive formed penetrator variety (Johnson 2011, 109). The IDF operational approach utilizing combined-arms allowed the Israeli's infantry and armor commanders to mitigate this

threat by having artillery or aircraft strike suspected IED sites and detonate the explosive obstacles. They also coordinated with an engineer element that utilized line charges or armored bulldozers to clear the route (Lambeth 2012, 116–117). Additionally, by maneuvering quickly through the battle space, Hamas did not have the opportunity to fortify defenses and had to constantly adjust to IDF actions. These operational methods were in contrast to how Israel got bogged down in Southern Lebanon two years earlier (Lambeth 2012, 117).

E. TACTICAL EFFECTIVENESS

The IDF's tactical-level effectiveness during Operation Change of Direction was no better than its operational-level effectiveness. As was the case at the operational level, the IDF's proficiency at the tactical level suffered atrophy as a result of over 20 years of small-unit, police action training and operations (Kober 2008, 14). This was particularly evident with regard to IDF ground force tactics, which proved poor during the 2006 war in Lebanon. IDF troops, being conditioned to fighting Palestinians in the occupied territories, would often take cover in buildings after being engaged by Palestinian terrorists in hit and run style attacks. The IDF repeated this tactical response in Southern Lebanon, and Hezbollah capitalized by using ATGMs to destroy the buildings occupied by the IDF, which resulted in heavy casualties (Byman 2011, 257).

Tactical actions during Operation Change of Direction, further demonstrated Israeli regression with regard to tactical execution. The IDF committed basic tactical errors such as moving a tank battalion across open terrain without infantry and artillery support against an enemy force that possessed heavy weapons and fought from well-prepared and concealed bunkers (Byman 2011, 258). Additionally, the IDF utilized a smoke screen, but due to the fact that it had been over five years since the battalion had incorporated the use of smoke in its training, the smoke screen disappeared after only a few minutes leaving the tank force exposed to Hezbollah fires, resulting in heavy casualties (Berman 2012, 133). These mistakes led one IDF officer to comment, "Anyone dumb enough to push a tank column through Wadi Saluki should not be an armored brigade commander, but a cook" (Byman 2011, 258). The IDF's failure to properly

utilize and integrate armor and infantry against Hezbollah was also apparent throughout the duration of the ground campaign and resulted in over 40 IDF tanks damaged with 30 crewmen killed against an enemy that lacked tanks (Berman 2012, 137). The root causes of this poor performance, according to IDF after action reviews, included poor tank crew training (particularly reservists), lack of proficient combined-arms integration among tank crews and infantry (which proved to be required when facing an enemy equipped with anti-tank guided missiles as the IDF learned in the latter part of the 1973 Arab Israeli War), and the lack of IDF proficiency in the utilization of heavy weapons such as mortars (Berman 2012, 136). Training in the use of heavy weapons suffered due to the fact they were not needed when conducting police actions in the urban areas of Gaza or the West Bank (Kober 2008, 41). Unfortunately, the use of mortars would have been effective in Lebanon especially for suppressing Hezbollah ATGM crews and personnel fighting from prepared defensive positions. Doing so would have allowed IDF units to maneuver more effectively, particularly without the availability of effective close air support (Johnson 2011, 41).

In contrast to Operation Change of Direction, during Operation Cast Lead Israeli aircrews and ground troops executed their tasks at the tactical level with a high level of proficiency, enabling Israel to achieve its objectives (Inbar and Shamir 2013, 82). The IDF's tactical approach, much like its operational approach, was heavily influenced by lessons learned during the Lebanon campaign two years previous to the military operation in Gaza. This led to immediate changes in Israeli warfighting tactics, techniques, and procedures against hybrid opponents such as Hamas (Johnson 2011, 99). An example of this was a new tactic to minimize collateral damage when engaging the enemy who was operating from civilian infrastructure. Hamas frequently used civilians as "human shields" in order to place the IDF in a no-win situation (Inbar and Shamir 2013, 83). If the IDF chose to engage Hamas in these areas, there was a strong possibility that non-combatants would be killed and injured, leading the international community to condemn Israeli actions. If the IDF decided to avoid engaging Hamas, the terrorist organization would be free to attack troops or launch rockets into Israel. In order to work around this dilemma, the IDF adopted a technique they referred to as "roof knocking"

(Johnson 2011, 132). In David E. Johnson's, *Hard Fighting: Israel in Lebanon and Gaza*, he describes the typical situation in which "roof knocking" was utilized when attacking a building Hamas commandeered for military purposes. Upon the IDF identifying a building as a target, intelligence personnel began calling its residents to inform them that military action was about to be taken and they needed to vacate the premises. Hezbollah reacted by placing the inhabitants on the roof as "human shields" in order to halt the impending IDF attack. Israeli attack helicopters reacted by firing a missile at the corner of the dwelling to avoid civilians, but caused them to flee. Concurrently, IDF personnel monitoring the engagement via UAV feed, counted the number of civilians on the rooftop and verified that the same number of people exited. Once this was confirmed, an orbiting Israeli fighter plane delivered precision-guided munitions (PGM) on the building, destroying it and producing secondary explosions, which validated the structure was storing munitions (Johnson 2011, 132). This tactical approach enabled the IDF to minimize civilian casualties and also degrade Hamas's ability to wage war, which were both Israeli objectives (Inbar and Shamir 2013, 84).

The use of superior firepower was another example of IDF tactical effectiveness due to its positive, deterrent effects. A senior IDF official echoed this sentiment when he said a main objective of Operation Cast Lead, was to "hit Hamas disproportionately and thereby create an image that Israel is ready to go berserk in response to rocket fire from Gaza" (Lambeth 2012, 97). Efraim Inbar and Eitan Shamir described the IDF tactical execution of this guidance, particularly its initial air campaign, as an Israeli version of "shock and awe" reinforced by the fact that 88 combat aircraft hit 100 Hamas targets in a two and a half minute time period and dropped over 100 bombs during the first hour of the war, leading the IDF to believe Hamas was "paralyzed" (Inbar and Shamir 2013, 83). This disproportionate firepower was not limited to rocket sites, infrastructure or weapons caches; future Hamas officers participating in a graduating ceremony felt the IDF's wrath when five missiles hit the parade ground as they marched, killing over 225 Hamas personnel and wounding over 700 (Inbar and Shamir 2013, 83).

The IDF's use of overwhelming fire power enabled Israel to achieve its objectives in Gaza, and deterred other non-state actors regarding the potential consequences of

firing rockets into Israel. Hezbollah, who had emerged from its earlier conflict with Israel as a political victor, acknowledged that it did not want to be on the receiving end of Israeli firepower when it immediately disavowed responsibility for a rocket that was fired into Northern Israel during Operation Cast Lead (Lambeth 2012, 105). The Lebanon based terror organization was otherwise quiet during the Gaza conflict and did not make any attempt to exploit a situation in which the IDF was preoccupied with Hamas (Lambeth 2012, 105; Johnson 2011, 123).

F. CONCLUSION

In 2006, the IDF demonstrated operational and tactical ineffectiveness during one hybrid case (Operation Change of Direction) and operational and tactical effectiveness during the other (Operation Cast Lead). In Operation Change of Direction, the IDF operational and tactical approach prevented Israel from achieving its desired objectives due to a reliance on standoff fires and a poorly thought out and executed ground plan that utilized troops conditioned to conduct police actions rather than fighting a well-trained and well-armed enemy (Lambeth 2012, 85). Two years later, the IDF took lesson learned from Lebanon in 2006, and instituted a well-integrated, combined-arms operational and tactical approach that led to Israeli success against Hamas in its 2008/2009 campaign (Inbar and Shamir 2013, 84).

At the operational level, the IDF failed to heed the lesson it should have learned during Operation Accountability and Operation Grapes of Wrath when it initiated military operation in Lebanon, specifically the assumption that aerial delivered standoff fires would be sufficient in achieving its desired objectives (Inbar and Shamir 2013, 77). Once it became apparent that ground forces would be necessary to deal with the short-range rocket threat, the IDF sent men into battle not prepared for the hybrid threat they would face due to a doctrinal shift that assumed Israel would never fight a peer or near peer competitor (i.e., Egypt or Syria) again (Berman 2012, 126; Inbar and Shamir 2013, 81). This was demonstrated by the inability of IDF infantry and armor brigade headquarters to coordinate the mutual support required to operate and survive in an

environment where ATGM teams were present, despite the fact the IDF headquarters entities were working out of the same building (Berman 2012, 133).

At the tactical level, the IDF failed to execute basic maneuver tasks with proficiency, such as ineffective smoke screens to mask the movement of IDF tanks traveling across open terrain that led to avoidable casualties. Additionally, IDF soldiers lacked proficiency in the use of heavy weapon systems, such as mortars, which would have been effective in suppressing Hezbollah personnel fighting from prepared fighting positions. Both deficiencies contributed to the IDF suffering heavy casualties leading to the organization's tactical-level ineffectiveness (Berman 2012, 133).

Operation Cast Lead, on the other hand, was an example of the IDF exhibiting military effectiveness at both the operational- and tactical- levels. Operationally, the IDF re-embraced combined-arms warfare and ensured that all elements of the IDF arsenal were well integrated into the operational approach utilized against Hamas (Lambeth 2012, 96). Regarding its objectives, Israel was able to inflict severe damage to Hamas and minimize the number of rocket attacks originating from the Gaza Strip by utilizing airpower to set the conditions for a preplanned IDF ground assault. The ground assault was well integrated with airborne close air support platforms and intelligence, surveillance, and reconnaissance assets that ensured Israeli armor and infantry brigades maintained momentum of maneuver through target and obstacle identification (Johnson 2011, 109).

At the tactical level, the IDF demonstrated military effectiveness by utilizing combined-arms. The "roof knocking" tactic was effective in both countering Hamas's use of human shields and destroying vital pieces of enemy infrastructure (Johnson 2011, 132). Additionally, the IDF's use of accurate and superior firepower to destroy Hamas targets, particularly during the opening hours of the conflict, validated the high-level of tactical effectiveness used in degrading Hamas organization infrastructure and ability to carry out additional rocket attacks against Israel. Furthermore, the devastating effect caused by IDF tactical actions served as a powerful deterrent to other non-state actors that had the capability to strike Israel with indirect fire weapons (Lambeth 2012, 105; Johnson 2011, 123).

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V. CONCLUSION

A. COMBINED-ARMS: THE KEY FACTOR LEADING TO CHANGE IN IDF MILITARY EFFECTIVENESS

Based on the analysis of the case studies presented in this thesis, the critical component that has caused changes in levels of IDF military effectiveness over time in its high intensity, low intensity, and hybrid cases was the presence or absence of combined-arms warfare. At the operational and tactical levels, the implementation of a combined-arms approach led to success in the 1967 Arab-Israeli War by ensuring Israeli strengths were exploited and weaknesses protected (Oren 2002, 172; Van Creveld 1998, 184). When the IDF shifted to relying on an armor and combat aircraft approach in 1973 as a result of the easy victory in 1967, the Israeli's suffered a significant setback that almost led to the demise of Israel as a nation state. The IDF was able to reverse operational and tactical momentum when it reinstituted combined-arms maneuver warfare midway through the conflict (Pollack 2002, 113; Van Creveld 1998, 234).

The lack of combined-arms warfare in the low intensity conflicts led to Israel being unable to marginalize Hezbollah as a threat or minimize rocket attacks into Northern Israel. The lack of IDF ground forces, along with Israel's desire to minimize casualties, placed the onus for destroying Hezbollah infrastructure and rocket launch sites solely on combat aircraft and artillery batteries (Helmer 2006, 56; Byman 2011, 929). Without infantry or tanks fixing and destroying Hezbollah personnel, providing accurate targeting data, or physically holding terrain utilized to fire rockets, both Operation Accountability and Grapes of Wrath were doomed to fail. If Hezbollah was under Israeli air attack, all it had to do was wait it out and resume its activities once the skies were clear (Helmer 2006, 56).

In the 2006 hybrid operation in Lebanon, ill-prepared ground forces were poorly integrated at the last moment, causing Israel to fail in achieving its desired objectives. IDF ground forces were conditioned to conduct police actions in the occupied territories rather than combined-arms warfare, which led to operational and tactical level ineffectiveness when facing a hybrid opponent in Hezbollah that fought more effectively

than its Palestinian counterparts did during the Intifadas (Lambeth 2012, 85). Additionally, IDF ground elements were unable to integrate successfully their efforts and suffered heavy casualties as a result (Berman 2012, 133).

Israel's military operation in Gaza, during the latter part of 2008/beginning of 2009, further demonstrated that combined-arms maneuver warfare is critical to military effectiveness. Without IDF infantry, armor, artillery, combat aircraft, and intelligence gathering platforms working in concert, it was very possible that Israel could have suffered the same result in Gaza in 2009 that it did in 2006 Lebanon (Lambeth 2012, 96).

Simply stated, combined-arms warfare is essential in an organization achieving military effectiveness at the operational- and tactical- level regardless of whether or not it is engaged in high-intensity, low-intensity, or hybrid conflicts. The implementation of combined-arms ensures an organization can maximize its combat power in an effective and efficient manner. This is the case whether or not an organization is fighting a peer competitor or hybrid threat if the goal is to damage an enemy's warfighting capability and organizational infrastructure.

B. IMPACT OF DOMESTIC CASUALTY AVERSION

It is important to note many of the IDF's wars and operations, particularly its low-intensity and hybrid conflicts (especially Operation Change of Direction), were heavily influenced by Israeli domestic pressure to minimize casualties. This was due to the Israeli public's sensitivity to the heavy IDF casualties suffered during the 1973 Arab-Israeli War and to a lesser extent, the casualties suffered during Israel's 18-year occupation of Lebanon in which over 600 troops perished in what the Israeli public referred to as "Lebanese Mud" (Lambeth 2012, 87). This negatively impacted how the IDF approached the war operationally as well as tactically and was the primary reason the IDF relied on airpower delivering standoff attacks with minimal ground troops as the means to achieve its objectives. IDF sensitivity to casualties was so pronounced that according to Major General Elazar Stern, Chief of IDF Manpower Branch, "Every casualty was reported to the chief of staff and there was a case in which an entire battle was stopped because of one casualty" (Kober 2008, 11). Using the 2006 war in Lebanon as an example, during

the Battle of Bint Jbeil an IDF infantry company suffered eight killed in action, which led to the engagement being described as “disastrous” despite the fact an infantry company typically numbers over 100 personnel (Kober 2008, 12). Given that reaction, it was no surprise that the desire to minimize casualties heavily influenced the manner in which ground combat leaders led their troops into battle against Hezbollah.

IDF ground forces were not the only elements of Israeli combat power whose effectiveness has been negatively impacted by domestic sensitivity to casualties. Israeli pilots were told to fly at high altitudes in an effort to avoid small arms fire during Operations Accountability, Grapes of Wrath, and Change of Direction. This included helicopter gunships, which were relegated to casualty evacuation and logistical support, because those assets were prohibited from offensive oriented missions due to “fear of casualties” (Kober 2008, 11). Unfortunately, combat aircraft flying at high altitudes when conducting strike missions against small targets (i.e., Hezbollah short ranged rockets and Hezbollah personnel) significantly impacted the accuracy. This also made close air support of IDF ground forces inefficient which essentially forced ground troops to rely on organic fires for suppression missions (Lambeth 2012, 91).

Though the IDF appears to have moved away from relying solely on standoff attacks in favor of combined-arms maneuver warfare as a result of poor performance during several campaigns against Hezbollah in Lebanon, casualty aversion may remain an important consideration for Israeli political and military leadership when crafting operational and tactical approaches. Despite the fact that Operation Cast Lead was a success, due in large part to Israel integrating combined-arms in all facets of military planning, it will be interesting to see if this approach continues in the event the IDF suffers heavy casualties in future engagements or will revert back to standoff attacks for domestic political reasons.

C. RELEVANCE OF IDF EXPERIENCE TO THE U.S. MILITARY

The Israel Defense Forces is an organization that is comparable to the United States military. It is the author’s belief that both organizations are well-trained and equipped and have struggled against asymmetric and hybrid threats in recent history.

Therefore, generalizations and lessons learned from the analysis of the case studies covered in this paper are relevant to both parties. The key lesson learned is that utilizing a combined-arms approach, specifically the integration of airpower and ground forces at the operational and tactical levels, is appropriate and often necessary, irrespective of the nature of the conflict. Regardless of whether one is fighting a peer or near-peer competitor, or well-resourced non-state actors such as Hezbollah or the Islamic State of Iraq and Syria (ISIS), attempting to achieve objectives that focus on destroying or significantly degrading an enemy's warfighting capability through standoff attacks or airstrikes, without utilizing ground forces to effectively maneuver against the enemy, will most likely not succeed. The RAND Corporation's, David E. Johnson shares this viewpoint when he surmised that there were many lessons that the United States military could draw from the IDF's experience in Gaza and Lebanon, specifically that "there are no single-service solutions to the challenges posed by hybrid adversaries. Israel's training, organizational, and doctrinal changes after the Second Lebanon War, and particularly changes in air-ground-ISR integration, paid off in Operation Cast Lead for the IDF." He viewed the IDF changes as a prerequisite for the United States military to enable the organization to succeed on the battlefield against hybrid opponents (Johnson 2011, 176). Coincidentally, the United States military is currently relying solely on airstrikes against ISIS targets in Syria and Iraq in an effort to alleviate pressure on Iraqi forces and to degrade the hybrid organization's military capacity. Unfortunately, the media reports indicate that U.S. airstrikes are ineffective given the fact ISIS continues to gain ground and seize territory in both Syria and Iraq (Karimi and Spark, 2014). Without U.S. ground forces maneuvering against the hybrid threat, it is likely that ISIS will continue to gain ground if the United States continues to utilize airpower as its only military option.

Finally, another facet of the IDF experience that the United States military should consider is ensuring its forces are trained and equipped to fight hybrid threats like Hezbollah and Hamas. This is important due to the fact that the United States has spent the majority of the last 13 years conducting counterinsurgency operations against the Taliban and Iraqi based insurgency groups. The nature of these particular wars has

influenced the way the U.S. military has fought, particularly in Afghanistan where large scale (brigade level and higher) operations with armor and mechanized infantry maneuvering against an enemy force was less relevant as small units operating out of patrol bases, conducting counterinsurgency operations. Israel learned that focusing on counterinsurgency, at the detriment of training for maneuver warfare, has consequences when facing a well-trained and equipped foe, as demonstrated in this thesis' analysis of Operation Change of Direction. On a positive note, there are reports that U.S. division-sized units (specifically armored and mechanized infantry divisions) are "going back to the basics" in a similar fashion as their Israeli brethren did after 2006. U.S. Army leaders are ensuring that combined-arms warfare principles as well as equipment are being utilized in hybrid warfare scenarios (Johnson 2011, 126). One U.S. Army division commander justified this approach when he said, "We don't have any crystal balls.... You'll never know what assets you'll need on the ground to protect American interests" (Gould, 2014).

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LIST OF REFERENCES

- Amnesty International. 2009. *Israel/Occupied Palestinian Territories: The Conflict in Gaza: A Briefing on Applicable Law, Investigations and Accountability*. London: Amnesty International Publications. January 19.
<http://www.amnesty.org/en/library/info/MDE15/007/2009>.
- Ben-Horin, Yoav, and Posen, Barry. 1981. *Israel's Strategic Doctrine*. Washington, DC: RAND.
- Berman, Lazar. 2012. "Capturing Contemporary Innovation: Studying IDF Innovation against Hamas and Hizballah." *Journal of Strategic Studies* 35: 121–14. doi: 10.1080/01402390.2011.608933
- Boyne, Walter J. 1998. "Nickel Grass: It Was Justifiably Called "the Airlift that Saved Israel." *Air Force Magazine*, December.
- Byman, Daniel. 2011. *A High Price: The Triumphs & Failures of Israeli Counterterrorism*. Oxford: Oxford University Press.
- Byman, Daniel. 2011. "The Lebanese Hizballah and Israeli Counterterrorism." *Studies in Conflict and Terrorism* 34: 917–941. doi: 10.1080/1057610X.2011.621114.
- Gabrielsen, Iver. 2013. "The Evolution of Hezbollah's Strategy and Military Performance, 1982–2006." *Small War & Insurgencies* 25, no. 2: 257–283. doi: 10.1080/09592318.2014.903636.
- Gawrych, George. 1996. "The 1973 Arab-Israeli War: The Albatross of Decisive Victory." *Leavenworth Papers*, no. 21: 1–97.
- George, Alexander L., and Bennett, Andrew. 2005. *Case Studies and Theory Development in the Social Sciences*. Cambridge: The MIT Press.
- Gould, Joe. 2014. "1st AD Plans Wide-Ranging Exercise to Meet Uncertain World: April War Games Will Run Gamut from Combined-Arms to COIN." *Army Times*, October 13.
<http://www.armytimes.com/apps/pbcs.dll/article?AID=2014310130045>
- Heller, Mark A. 2000. *Continuity and Change in Israeli Security Policy*. Oxford: Oxford University Press for The International Institute for Strategic Studies.
- Helmer, Daniel I. 2006. "Flipside of the COIN: Israel's Lebanese Incursion between 1982–2000." *The Long War Series Occasional Paper 21*, Fort Leavenworth, KS: Combat Studies Institute Press.

- Horowitz, Dan. 1993. "The Israeli Concept of National Security." In *National Security and Democracy in Israel*, edited by Avner Yaniv, 11–53. Boulder, CO: Lynne Rienner.
- Inbar, Efraim. 1983. "Israeli Strategic Thinking after 1973." *Journal of Strategic Studies* 6: 36–59. doi:10.1080/01402398308437140.
- Inbar, Efraim, and Shamir, Eitan. 2013. "Mowing the Grass": Israel's Strategy for Protracted Intractable Conflict." *Journal of Strategic Studies* 37: 65–90. doi: 10.1080/01402390.2013.830972.
- Inbar, Efraim, and Sandler, Shmuel. 1995. "The Changing Israeli Strategic Equation: Towards a Security Regime." *Review of International Studies* 21, no. 1: 41–59.
- Johnson, David E. 2011. *Hard Fighting: Israel in Lebanon and Gaza*. Arlington, VA: RAND.
- Johnson, David E. 2010. *Military Capabilities for Hybrid War: Insights from the Israel Defense Forces in Lebanon and Gaza*. Arlington, VA: RAND.
- Jones, Clive. 2007. "Israeli counter-insurgency strategy and the war in South Lebanon 1985–97." *Small Wars & Insurgencies* 8: 82–108. doi: 10.1080/09592319708423186.
- Karimi, Faith, and Smith-Spark, Laura. 2014. "ISIS militants march on despite airstrikes, international outrage." *CNN*, October 13. <http://www.cnn.com/2014/10/13/world/meast/isis-developments/>
- Kober, Avi. 2005. "From Blitzkrieg to Attrition: Israel's Attrition Strategy and Staying Power." *Small Wars & Insurgencies* 16: 216–240.. doi: 10.1080/09592310500080005.
- Kober, Avi. 2008. "The Israel Defense Forces in the Second Lebanon War: Why the Poor Performance?" *Journal of Strategic Studies* 31: 3–40. doi: 10.1080/01402390701785211
- Laffin, John. 1982. *The Israeli Army in the Middle East Wars 1948–1973*. Oxford: Osprey. Kindle e-book. <http://www.amazon.com>
- Lambeth, Benjamin S. 2012. "Israel's War in Gaza: A Paradigm of Effective Military Learning and Adaptation." *International Security* 37, no. 2, 81–118.
- Levite, Ariel. 1989. *Offense and Defense in Israeli Military Doctrine*. Jerusalem: The Jerusalem Post.

- Millett, Allan R., Williamson Murray, and Kenneth H. Watman. 1988. "The Effectiveness of Military Organizations." In *Military Effectiveness Volume I: The First World War*, edited by Alann R. Millett and Williamson Murray, 1–30. Cambridge: Cambridge University Press.
- Oren, Michael B. 2003. *Six Days of War: June 1967 and the Making of the Modern Middle East*. New York: Presidio Press.
- Peres, Shimon. 1975. *Military Aspects of the Israeli-Arab Conflict*, edited by Louis Williams. Tel Aviv, Israel: University Publishing Projects.
- Petrelli, Niccolo. 2013. "Deterring Insurgents: Culture, Adaptation and the Evolution of Israeli Counterinsurgency, 1987–2005." *Journal of Strategic Studies* 36: 666–691. doi: 10.1080/01402390.2012.755923.
- Pollack, Kenneth. 2007. "Air Power in the Sixth Day War." *Journal of Strategic Studies* 28: 471–503. Accessed July 24, 2014. doi: 10.1080/01402390500137382.
- Pollack, Kenneth M. 2002. *Arabs at War: Military Effectiveness, 1948–1991*. Lincoln, NE: University of Nebraska Press.
- Rabinovich, Abraham. 2004. *The Yom Kippur War: The Epic Encounter that Transformed the Middle East*. New York: Schocken Books.
- Rodman, David. 2005. *Defense and Diplomacy in Israel's National Security Experience: Tactics, Partnerships, and Motives*. Brighton, UK: Sussex Academic Press.
- Van Creveld, Martin. 1998. *The Sword and the Olive: A Critical History of the Israeli Defense Force*. New York: Public Affairs.

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