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Fighting Outnumbered: The Impact of the Yom Kippur War on the U.S. Army[1]

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Saul Bronfeld

Abstract

Recent historiography tends to overstate the impact of the Yom Kippur War (1973) on the tactical reforms initiated by General William E. DePuy, the first commander of the U.S. Army's TRADOC (1973–77), while paying insufficient attention to the ways that DePuy used the war's lessons to leverage his legendary effort to rehabilitate the Army. The war's influence on General Donn A. Starry's operational reforms was equally profound, but came by a different route: the reconstructions of the Golan Heights defense and the discussions with his close friends Major General Israel ("Talik") Tal and Major General Moshe ("Musa") Peled provided vital inspiration for the AirLand Battle doctrine.

IN the 1970s the United States Army began to undergo major changes. A very important milestone in this process was its establishment of the Training and Doctrine Command (TRADOC) on 1 July 1973. Three months later the Yom Kippur War erupted when Egypt and Syria made a surprise attack on Israel. After the fighting ended on 24 October, numerous delegations of American officers and analysts made their way to

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Saul Bronfeld is the Chairman of the Board of the Tel Aviv Stock Exchange and a part-time lecturer at the Recanati Graduate School of Management, Tel-Aviv University. He completed his M.A. (summa cum laude) in Security Studies at the Tel Aviv University in 2005 and his M.A. in Economics in 1967 at the Hebrew University in Jerusalem. He has published articles on a range of topics which include monetary policy, capital markets, and military history.

Israel to confer with the Israel Defense Forces (IDF); their goal was to try to understand the implications of the war and implement its lessons.

This article examines the influence of the Yom Kippur War on the doctrine and training of the U.S. Army between the years 1973 and 1982. It focuses, more specifically, on the war's impact on the two officers who led the changes: General William E. DePuy, the first commander of TRADOC, and General Donn A. Starry, his successor there.

In the 1970s it was difficult to find literature that dealt with any aspect of U.S. national defense policy in which the lessons of the Yom Kippur War were not cited. That conflict was perceived to have had serious implications for the doctrines of the U.S. Army and the U.S. Air Force's Tactical Air Command (TAC), which were designed to enable the outnumbered conventional forces of the North Atlantic Treaty Organization (NATO) to prevail over the Warsaw Pact armies in a European conflict. The war also had implications for the future of the tank, training methods, the role of the reserve forces, and many other subjects. Some of the wartime IDF commanders, such as Major Generals Avraham Adan and Ariel Sharon, and Lieutenant Colonel Avigdor Kahalani, became household names in the American military community; some were even known by their nicknames: "Talik" (Major General Israel Tal), "Musa" (Major General Moshe Peled), and "Tzvika" (Major Tzvi Gringold).

After the Gulf War in 1991, many articles and books addressed the changes that the Army had undergone since the early 1970s. These publications, based on earlier documents and literature as well as memoirs of officers who had been involved in the reorientation process, all point to the enormous impact of the lessons of the Yom Kippur War on the Army's thinking. Typical references to the war's impact can be found both in primary sources, such as the writings of DePuy, Starry, and Lieutenant General Don Holder, as well as in the work of researchers such as Richard M. Swain and Paul H. Herbert.

The TRADOC annual report in 1975 stated, in no uncertain terms, that, "Shortly after training and doctrine were united within TRADOC, war in the Mideast produced startling and stark facts about modern combat." The report continued: "The implications of the October War for US Army training and doctrine were so great that the historical record of TRADOC for the fiscal year 1975, can best be illuminated by beginning with this subject."[2]

One quote from Starry's memoirs adds a personal touch:

> That very early visit [to the battlefields of the Yom Kippur War] was the beginning of years of frequent visits, long discussions, and

2. *Annual Report of Major Activities FY1975*, Headquarters, U.S. Army TRADOC, Fort Monroe, Virginia, 1–10.

> considerable reflection that produced the programs to move the US army from where we were to where we knew we needed to be. For all that the United States Army stands ever in debt to Musa [Peled], the IDF Armored Corps and its intrepid leaders, to the imagination and engineering genius of Talik [Tal] and his tank designers.[3]

General Holder, who as a young Army officer played an important part in the 1982 revision of the capstone field manual (FM 100-5 Operations), boldly declared: "The change, the stimulation, the discussions, the papers, the analysis that went on following the Yom Kippur War in the United States were a greater level of tactical discussion than any that I have ever seen before or since."[4]

The impact described in the first-hand accounts was reflected in subsequent research as well. According to Richard Swain, "The 1973 Middle East War shocked the Army. In the midst of the post-Vietnam trials the fundamental weakness of the US Army was thrown into sharp relief against the graphic demonstration of the viciousness and cost of modern warfare as conducted on the Golan Heights and in the Sinai."[5]

In his seminal research, Paul Herbert devoted an entire chapter to the influence of the Yom Kippur War on the Army, claiming: "The Arab-Israeli War of October 1973 caused a reordering of TRADOC's priorities. It powerfully demonstrated to DePuy that there was no time to lose in addressing doctrinal issues first."[6] Herbert went on to state that "The [Yom Kippur] war was the catalyst that brought DePuy's training and combat developments initiatives to reaction as new doctrine."

In spite of these and many similar references in the vast literature that has dealt with the Yom Kippur War, its full impact has yet to be adequately researched. This article is the first attempt to focus on the

3. Donn A. Starry, "TRADOC's Analysis of the Yom Kippur War," unpublished address to the Military Doctrine Joint Conference, Jaffe Center for Strategic Studies, Caesarea, Israel, 14–18 March 1999, 6. Starry described Generals Peled and Tal as his close friends. When I interviewed Starry in his home in Virginia in June 2004, portraits of these two men hung on the main wall of his study, side by side with portraits of Creighton W. Abrams, George S. Patton, and Erwin Rommel.

4. Unpublished transcript, The Military Doctrine Joint Conference, Jaffe Center for Strategic Studies, Caesarea, Israel, 14–18 March 1999, 70–71.

5. Richard M. Swain, Introduction to *Selected Papers of General William E. DePuy: First Commander, U.S. Army, Training and Doctrine Command, 1 July 1973,* comp. Richard M. Swain (Fort Leavenworth, Kans.: Combat Studies Institute, U.S. Army Command and General Staff College, 1994), vii–xiii (hereafter, *DePuy Selected Papers).*

6. Paul H. Herbert, *Deciding What Has To Be Done: General William E. DePuy and the 1976 Edition of FM 100-5, Operations* (Fort Leavenworth, Kans.: Combat Studies Institute, U.S. Army Command and General Staff College, 1988), chap. 3.

lessons learned by the U.S. Army and to shed light on the changes that the military underwent as a consequence.

DePuy described the Yom Kippur War as "a marvelous excuse or springboard for reviewing and updating our own doctrine." This article's first proposition is that the historiography has inflated the war's value as a "springboard" and understated it as an "excuse." This claim is based on documents indicating that debates over the need to change the Army's traditional mobilization and training concepts occurred even before the Yom Kippur War broke out. In fact, many of the concepts that make up DePuy's doctrine were developed, conceived, and articulated prior to the Yom Kippur War. On the other hand, the historiography often understates the ways in which DePuy did utilize the lessons of the Yom Kippur War, mainly as a means to gain leverage in negotiating Army budgets and to convince the infantry generals (in the field commands and TRADOC) of the need to change training methods and increase the role of armor.

The second proposition has to do with the special relationships that Starry had with the commanders of the IDF's Armored Corps and posits that IDF officers had a significant impact of the development of Starry's Extended Battle doctrine.

The third proposition is that while they did point out the IDF's failures to implement combined arms warfare, the TRADOC leadership disregarded the IDF's poor performance in many fields, such as doctrine, deployment, and organization. It would seem that this refrain was connected to the uses that DePuy made of the lessons in his political struggles.

Finally, this article can be seen as a case study that points out the difficulties in assessing the ways in which a particular war influences the doctrines and practices of a nonparticipating army. For diplomatic reasons, the U.S. Army could not send observers to the Yom Kippur War itself, yet on 31 March 1974, after the battles ended, Israel and the United States signed an Exploitation Agreement that authorized the Army to receive all necessary data and captured equipment from the IDF. As will be seen below, the Army invested great resources in learning the lessons of the war. This is confirmed by the volumes of reports produced by the multitude of American officers and civilian analysts who visited the IDF.

It should be emphasized that the focus here is only on how the Yom Kippur War was perceived by U.S. Army officers. It is not within the scope of this article to contrast the lessons learned by the Americans with the Israeli historiography and the lessons learned in Israel.

Background—The U.S. Army after Vietnam

DePuy and Starry often expressed the view that the Yom Kippur War

came at a "fortuitous time" for the Americans. They were referring to the fact that in October 1973, the Army was just starting on a journey toward one of the most important peacetime reorientations in its history. Given the large body of research available on this subject, we will make do with a very brief summary of the main causes that forced the Army to change its orientation.

At the beginning of 1973, the United States ended its involvement in Vietnam and along with it canceled the universal draft. The 1969 Nixon Doctrine implied that the U.S. national defense posture should reemphasize the primacy of the defense of Western Europe over U.S. involvement in other parts of the globe. But this task was thrust upon an army that was suffering the aftereffects of the war in Vietnam. In addition to both professional and morale crises at all levels of the Army, the trauma of Vietnam created a crisis of confidence between the military and the public, the Congress, and the executive branch. To make matters worse, the professional crisis was reflected by sheer defeatism among Army leaders. Many officers did not believe that Western conventional forces would be able to stop a surprise thrust by the Soviets. The Army had to rehabilitate itself, to move from a conscript to an all-volunteer force, and to increase in readiness in the face of massive budget cuts that endangered the modernization of weapons systems. The Army's learning in the 1960s centered on the war in Vietnam, where major advances were made in the area of infantry tactics with respect to, especially, air mobility and fire support. However, the defense of West Europe from the many armored and mechanized divisions of the Warsaw Pact was another issue altogether. An additional difficulty involved the diversion of resources and energy to Southeast Asia, which had begun in the 1960s and had hampered the development and procurement of the advanced armored and mechanized weapons systems that were intrinsic to the West European theater.

Back in 1969, in anticipation of, and then in response to, the gradual withdrawal of American forces from Southeast Asia, discussion emerged about changes the Army would have to undergo in the post-Vietnam era. This led in 1972 to an important organizational decision, which was implemented a year later, to divide the command of U.S.-based Army activities (CONARC) between two newly created commands. The Training and Doctrine Command (TRADOC) was placed in charge of developing and integrating the doctrine, training, weapons systems, and force structure. The Forces Command (FORSCOM) assumed control over U.S.-based operational units.

The major problems inherent in the doctrine of massive nuclear retaliation had already been identified back in the early 1950s, and in the early 1960s the flexible response doctrine took its place. This issue was brought to the fore again at the start of the 1970s, after a lost decade

in Vietnam, when it became clear that the United States no longer had nuclear superiority and that the conventional combat forces gap between the Warsaw Pact and NATO had increased. This reality required a fresh look at the Army's doctrines, structure of forces, and weapons systems, as well as its cooperation with the Air Force and U.S. allies.

General Creighton W. Abrams, appointed Chief of Staff of the Army in October 1972, took upon himself the mission of rehabilitating the Army and carrying it into the post-Vietnam era. The major goals Abrams set included the authorization for a sixteen-division force, the inclusion of Reserve and National Guard components in the active divisions, and the attainment of appropriations for modernization of the "big five" weapons systems, while adapting to the all-volunteer force and improving the Army's level of readiness and effectiveness.[7] Above all, Abrams saw the key to the rehabilitation as a return to basic professional military values that placed the serviceman at the center.

The rehabilitation effort within the Army was thrust upon General DePuy, the first commander of TRADOC, and General Starry, who had served under Abrams in Germany and Vietnam and headed the Armor Center from 1973 to 1976. The two generals led TRADOC in line with Abrams's broad guidelines and were given a free hand, in keeping with his usual method of delegating authority. In addition, Abrams entrusted DePuy with the responsibility of coordinating the Army's doctrine with the German Army and with Tactical Air Command (TAC), which eventually proved to be helpful in the formulation and implementation of the Army's doctrine. The authority that Abrams delegated to DePuy and Starry with the establishment of TRADOC was sufficient to create a momentum that endured even after Abrams became ill and died in September 1974.

Abrams and his aides were experienced, battle-hardened, and decorated officers. Upon taking their new positions they already had a very clear view of the changes that were needed to move forward. This article will begin by focusing on DePuy, who held dual roles: he was both the mastermind of the organizational changes under which TRADOC was established and the implementer of missions to rehabilitate and change the Army.

The next sections will present in detail DePuy's analysis of the Yom Kippur War and its translation into new doctrinal concepts embodied in the 1976 field manual. However, a fair appraisal of the influence of the Yom Kippur War on DePuy requires us to examine, first of all, what his ideas and conceptions were before the war broke out and how they evolved.

7. The "big five" weapons systems were the XM1 main battle tank, the Bradley infantry fighting vehicle, the Black Hawk utility helicopter, the Apache attack helicopter, and the Patriot air defense system.

The defining experience for DePuy was his service in the European theater in World War II. As an officer in the 90th Infantry Division, he was struck by weaknesses of the U.S. Army: notably, unrealistic training, which did not prepare the soldiers properly for the battlefield; and the appointment of unqualified officers. In his memoirs he mourned the fate of the many servicemen who had died in vain, and described how he had worked throughout his career to improve the training methods and the criteria for the promotion of officers. DePuy's other revelation during World War II concerned the tactical excellence of the German Army, which a decade later became a major partner in the defense of Western Europe.[8]

After serving with distinction for more than thirty years in the field and in staff duties at the Pentagon, DePuy was appointed the first commander of TRADOC in 1973. His strategic and tactical philosophy, before the establishment of TRADOC and prior to the Yom Kippur War, is spelled out in a speech he gave on 7 June 1973 at Fort Polk, Louisiana. In the text of the speech one can already detect themes that reappear much later in DePuy's analysis of the Yom Kippur War and in the 1976 field manual.

In the speech, DePuy presented his strategic worldview in which he argued that the traditional World War II–type mobilization had come to an end; for the first time in its history, the outnumbered U.S. Army would have to fight a "come as you are war" against a properly trained and equipped enemy. The next war would, most likely, be violent and, due to fear of nuclear escalation, short. This meant that winning the first battle would be crucial. Because of the anticipated numerical disadvantage, DePuy called for raising the professional level of the Army by 500 percent, so that each American battalion would be worth five of its enemy. He concluded the speech by demanding a revision of training methods and an adaptation to the requirements of the new era.[9]

Further elaboration of DePuy's philosophy before the Yom Kippur War can be found in a speech that he gave to the senior staff of the Combat Arms Training Board (CATB) on 3 April 1973, where he raised more issues that were to appear in his subsequent analysis of the Yom Kippur War. He told his listeners that even though antitank missiles increased the effectiveness of the infantry, particularly in defense, they did not alter the primary function of the infantry: to support the tanks. He said that even though combined arms warfare was the basic form of warfare,

8. Rornie Brownlee and William J. Mullen III, *Changing an Army—An Oral History of General William E. DePuy, USA Retired* (Carlisle Barracks, Pa.: U.S. Army Military History Institute, 1979) (hereafter, *DePuy Oral History),* chaps. II to IV.

9. DePuy, "Briefing at Fort Polk, Louisiana, 7 June 1971," in *DePuy Selected Papers*, 59–66.

he had no doubt that the tank was king of the battlefield. In his view, the infantry was there to support the tanks and to do so, the infantry needed an advanced armored fighting vehicle.[10]

It would appear, then, that before the Yom Kippur War, DePuy foresaw the lethal nature of the modern land battle and pointed to what would be required for the outnumbered U.S. combat forces to overcome the superior numbers of the Warsaw Pact: enhanced military effectiveness, achieved through realistic training; and highly maneuverable combined arms formations, centered on modern main battle tanks.

More evidence that the roots of the revision of Army doctrine preceded the Yom Kippur War can be found in the words of Lieutenant General Orwin C. Talbott, DePuy's deputy who visited the IDF in February 1974, following Abrams's direction "to find out the truth" about the war. After a long series of meetings with forty-five IDF officers, Talbott opined that "Much, perhaps most important, of what we learned [about the tactical aspects] is not new, but it needs reemphasis and confirms most of our tactics and doctrine."[11]

With this in mind, it is easy to see why DePuy and Starry stated that the October 1973 war came at a "fortuitous time" for the Army. It provided a very timely and concrete demonstration of the way in which a war might unfold in Europe.

Even though NATO forces had examined the various characteristics of a modern mechanized land battle in war games, simulations, and exercises before the Yom Kippur War, the actual battles of the Golan Heights, in the Sinai, and on the west bank of the Suez Canal supplied the Army with many important new data and insights.

In his groundbreaking research Paul Herbert pointed out that DePuy's interpretation of the Yom Kippur War had roots in his World War II experience and his service with the Army in Europe in the 1960s.[12] Herbert's conclusions seem to have been overlooked by many researchers, who have tended to inflate the impact of the Yom Kippur War on DePuy. It comes as no great surprise that the perception and ideas of a senior general were influenced by his past experience. What is somewhat unusual in the case of DePuy was his realization that the relevant experience should not be drawn from his most recent war (Vietnam) but from his first (World War II). DePuy's reversion to his World

10. DePuy, Transcript of remarks at USACATB, 3 April 1973, Historical Office, Headquarters, U.S. Army TRADOC, Fort Monroe, Virginia.

11. Orwin C. Talbott, 1973 Mideast Briefing, February 1974, 1, Talbott Papers, U.S. Army Military History Institute (MHI), Carlisle, Pennsylvania. This briefing seems to be an early presentation of the Talbott Report that was submitted to General Abrams in March and was circulated to the leadership of the Department of Defense, the Joint Chiefs of Staff (JCS), the Army, and the Air Force.

12. Herbert, *Deciding What Has To Be Done*, 34–35.

War II experience was not shared by a large group of senior infantry officers, who wanted to base the defense of Europe on lessons learned in the airmobile battles in Vietnam.[13]

The similarities between the Yom Kippur War and a future war along the inter-German border did not escape DePuy and many military planners. Following are the main strategic, operational, tactical, and technical characteristics of the Yom Kippur War that made it, in the eyes of U.S. military leaders, a very relevant case study.

First, the strategic posture of NATO was similar to that of Israel after the 1967 war. In both cases, the political constraints left the offensive initiative in the hands of the enemy (the Soviets in Europe and the Arabs in the Middle East). An additional parallel was that NATO policy, like Israel's, did not tolerate a loss in the opening battles. Israel has never allowed itself to lose the first battle, and the United States, which in the past did lose many, could not allow this to happen in post–World War II Europe. The time limitation placed on combat was another common factor: Israel fought its wars realizing that international politics would allow it only a brief window of opportunity to win. The United States also had to take into consideration the fact that political pressure might force it into a ceasefire at a point at which the U.S.S.R. had seized pieces of Western territory.

Second, in the opening stages of the war, the IDF was surprised due to successful Arab deception and misinterpreted intelligence information. The United States had been caught off guard in a number of twentieth-century conflicts and took a serious interest in studying the reactions of the surprised side.

Third, the IDF's planning of the first battle was based on Forward Defense, which translates literally from Hebrew as "not a single inch may be lost." A similar constraint was imposed by the German government on NATO, which meant that the main defensive operations must be conducted on a narrow band along the inter-German border. The German government refused to consider alternative defense doctrines such as deep defense or mobile defense.

Fourth, the armed forces of Egypt and Syria were supplied with modern Soviet arms and were trained according to Soviet doctrine by Soviet advisers (even though they did not always operate in accordance with Soviet doctrine). Israel flew U.S. fighters, employed U.S. surface-to-air missiles, and used U.S. tanks, armored personnel carriers (APCs), and

13. Ibid., chap. 4. DePuy's arguments with the upper echelons of the Army were not restricted to that issue alone. He found himself at odds even within the community of armor officers, where one school of thought favored the use of light tanks as a major weapon system. See Lewis Sorley, *Thunderbolt—General Creighton Abrams and the Army of His Time* (New York: Simon and Schuster, 1992), 338.

artillery pieces. The battles of the Golan and in the Sinai were giant testing grounds that allowed a comparison of the effectiveness of the weapons systems and their tactical employment by both sides, which was, naturally, the primary interest of the U.S. Army.

Fifth, the topography and the weather of the Golan Heights (unlike those of the Sinai) are quite similar to some sections of the inter-German border.

Finally, the Yom Kippur War was a war of the (surprised) few against the (surprising) many, and therefore, the success of the IDF in fighting outnumbered constituted a ray of hope for the American planners. The encouragement and inspiration derived from the eventual success of the surprised and outnumbered Israelis had an important impact on American planners during the era of the Cold War.

It is no wonder, therefore, that the Yom Kippur War turned into a focal point for the many questions that were placed before the Army when it was on the verge of undergoing major changes and preparing for a modern "heavy" war in Europe. As Starry stated in an interview for this essay: "Terrible as it was for Israel, for us it was a fortuitous field trial, because there were all the lessons to learn."[14]

This article does not seek to deal with the entire gamut of changes that took place in the Army, a large and comprehensive topic. It will concentrate on two issues that are directly tied to the Yom Kippur War:

> (1) Identifying the "net" contribution of the war's lessons to the Army's new doctrine, which will be described in detail in the next section. This is not an easy task, as the new doctrine reflects a synthesis of the prewar thinking of Abrams, DePuy, and Starry; the lessons of the Yom Kippur War; and the inspirational impact of the Bundeswehr's doctrine.
>
> (2) Distinguishing between the impact of the war on Active Defense, the new tactical doctrine; and its subsequent impact on the Extended Battle operational doctrine. This topic is very closely related to the different ways in which the war influenced DePuy (the developer of the new tactics and the great rehabilitator of the Army after the Vietnam imbroglio) and Starry (who developed the Army's first operational doctrine after the tactical foundations were laid by DePuy).

14. Author's interview with General Starry, 16 June 2004, Fairfax Station, Virginia.

Lessons of the Yom Kippur War According to General DePuy: The Tactical Level

With the outbreak of the Yom Kippur War, General Creighton Abrams, the Army's Chief of Staff, ordered TRADOC to analyze the war and its implications for the military. Many officers and civilian analysts paid visits to the IDF after the war, and DePuy based his reports on their findings. They analyzed various aspects of the war, first and foremost the performance of the Soviet and American weapons systems, the organization and tactics used, and the impact of training. Based on the findings of these visiting officers and analysts, DePuy and his staff presented their analysis and its implications for the Army (the "lessons"). The lessons, as DePuy perceived them, were reflected in the 1976 field manual, the training revolution, and other actions DePuy undertook to change the Army.

The first visitors to the IDF, right after the war, were General Starry, the Commander of the Armor Center; Brigadier General Robert J. Baer, head of the new main battle tank project (XM1); and Colonel John Prillaman from the Armor School. They were followed by General Talbott, DePuy's deputy; the staff of the U.S. Military Operational Survey Team (USMOST); and Brigadier General S. L. A. Marshall. DePuy also received reports prepared by the U.S. Air Force and the U.S. Marine Corps.[15] His first report, referred to in this article as the "Letter to Abrams" of 15 January 1974, was written soon after the cessation of combat and included five pages of lessons and recommendations. The second report, hereinafter the "Implications Report," was much more comprehensive (thirty-six pages) and was presented a year later.[16] What follows are the five main lessons learned by DePuy and described in the two above-mentioned reports.

The *first* lesson, which appeared at the top of the list in the "Implications Report," dealt with the lethality of the modern battlefield, which was revealed in the Yom Kippur War. DePuy attributed this to a combi-

15. General William E. DePuy, "Letter to General Creighton W. Abrams," 14 January 1974, in *DePuy Selected Papers*, 69–74 (hereafter, "Letter to Abrams"). It is very likely that while writing the letter to Abrams and subsequent reports, DePuy also used the many reports that were prepared by various branches of the U.S. military and the IDF. Especially noteworthy are the eight-volume Combined Arms Combat Development Activity (CACDA) Report, published in June 1974, and the seven-volume Weapons Systems Evaluation Group (WSEG) Report, which appeared in October-November 1974, both still classified as of 2006. For a comprehensive list of reports that were available to the military, see Weapons Systems Evaluation Group, *Assessment of the Weapons and Tactics used in the October 1973 Middle East War* (WSEG Report 249), October 1974, Arlington, Virginia, Appendix B.

16. General William E. DePuy, "Implications of the Middle East War on US Army Tactics, Doctrine and Systems," n.d., in *DePuy Selected Papers*, 75–111 (hereafter, "Implications Report"). Herbert dated this report February 1975.

nation of the improved accuracy and range of modern tanks, guns, and antitank weapons and the large quantity of weaponry (4,000 Arab tanks and 2,000 Israeli tanks, in addition to thousands of APCs, artillery tubes, antitank weapons, and air defense systems). To demonstrate this phenomenon, he pointed out that Egyptian and Syrian tank losses in the eighteen days of battle were similar to the numbers of American tanks deployed in Europe. He concluded that the Army was neither sufficiently prepared nor sufficiently supplied for the expected losses during the first sixty to ninety days of battle in Europe.[17] The most modern tanks deployed by the IDF and the Arab armies were the U.S. M-60A1 and the Soviet T-62, respectively. After making a comparative analysis, DePuy reached the conclusion that the M-60A1 and the T-62, were, by and large, "a fair match," which meant that the outnumbered U.S. forces in Europe would not enjoy a qualitative advantage. He ventured that the T-62 might even have an advantage on European battlefields, where the ranges are closer than in the Middle East.

The *second* lesson, discussed at the beginning of the "Letter to Abrams," reflected the Israeli Air Force's loss of air supremacy and its failure to support the IDF's ground forces due to the effectiveness of the Arab air defenses. DePuy argued that the Army needed to achieve very close operational coordination with the Tactical Air Command and had to be prepared for situations in which it would not receive close air support (CAS) due to the effectiveness of the enemy air defenses. In addition, he suggested strengthening the Army's mobile air-defense systems.[18] It is not surprising that this topic was prominent in DePuy's mind: during World War II and afterward, American land battles had been fought with massive air support, which proved critical, especially in the battles in which the Army fought outnumbered.

The *third* lesson learned was described by DePuy as follows: "Perhaps the most startling aspect of weapons systems performance during the Arab-Israeli war has to do with the impact of training on battlefield results."[19] In the "Letter to Abrams," DePuy dealt extensively with the training of the tank crews in general and tank commanders in particular. Improving their quality and performance was to become a major goal for DePuy in his years as commander of TRADOC. An important document points to the contribution of Paul F. Gorman (then a brigadier general and Deputy Chief of Staff for Training and Schools) to the lessons learned from the war. The long and detailed memorandum that Gorman submitted on 8 January 1974 is full of praise for the methods of training of the IDF's tank crews and commanders. He attributed the IDF's staying

17. DePuy, "Implications Report," 77–79.
18. DePuy, "Letter to Abrams," 70–71; DePuy, "Implications Report," 89–92.
19. DePuy, "Letter to Abrams," 73; DePuy, "Implications Report," 76.

power in battles in which its tanks were outnumbered by eight to one, to the excellence of the tank crews, specifically gunners. He offered the IDF as a model for the U.S. Army and lamented the forlorn state of American armor due to poor training and personnel policies. Gorman's memorandum and Starry's reply are the first indications of the use that DePuy, Starry, and Gorman would make of the lessons learned from the Yom Kippur War in their training revolution.[20]

The *fourth* implication, which DePuy termed "the most important lesson of the war," was that the combat elements had to train for covered and concealed movement, which makes better use of the terrain and minimizes their exposure, and for the extensive use of suppressive fire against enemy antitank weapons (as the Wehrmacht did in Europe during World War II).[21] According to DePuy's motto, on the modern battlefield "what can be seen can be hit, what can be hit can be killed."

The *fifth* lesson was that the only tactics capable of dealing with the lethality of the modern battlefield were combined arms teamwork—armor, artillery, mechanized infantry, helicopters, engineers, and air defense—which required appropriate training. Nevertheless, DePuy emphasized that the Yom Kippur War did not change the status of the tank as the leading weapon system in land battle, and argued that the British and Soviets had reaffirmed this view. Here DePuy directly challenged those in the United States and other NATO countries who downplayed the future of the tank as a result of reports of heavy losses of Israeli tanks to Arab antitank weapons.[22] Without entering into a detailed discussion of the debate over the future of the tank, it is worthwhile to note DePuy's letter to U.S. Senator John C. Culver on this subject. To support his view, DePuy quoted the Israeli data that appeared in the report of the Weapons Systems Evaluation Group (WSEG), such as that 85 percent of all tanks (Israeli and Arab) that were hit were destroyed by tank cannons, while only 7 to 24 percent of Israeli tanks

20. Paul F. Gorman, "How to Win Outnumbered," 8 January 1974, Historical Office, Headquarters, U.S. Army TRADOC, Fort Monroe, Virginia. It is likely that this early memorandum had a major influence on DePuy's "Letter to Abrams" and "Implications Report," since in Gorman's memorandum one can identify several themes that were repeated in later texts of DePuy and Starry, among them a historical analysis of battles that demonstrates the ability of outnumbered forces to win (including a reference to Robert A. Helmbold's research); and a discussion of the superior combat performance of the IDF units using Soviet T-55 tanks and the way in which the Yom Kippur battles refuted scenarios forecast by models and simulations. See also Major General Donn A. Starry, "Letter of Brigadier General Paul F. Gorman," 28 January 1974, Historical Office, Headquarters, U.S. Army TRADOC, Fort Monroe, Virginia.

21. DePuy, "Implications Report," 84–86.

22. Ibid., 86–88 and 106–11. For an opposing view, see Elizabeth Monroe and A. H. Farrar-Hockley, *The Arab-Israeli War, October 1973,* Adelphi Papers 111 (London: International Institute for Strategic Studies, Winter 1974), 31.

that were destroyed were hit by other antitank weapons.[23] A very colorful account of the debate over the future of the tank was written by George F. Hofmann and Starry, who mocked the absurd level of enthusiasm over the impact of antitank missiles and described serious proposals, fashionable in the Pentagon after the 1973 war, to place missiles in every household in West Europe to fight off oncoming Soviet tanks.[24]

One should not conclude from this, however, that Starry underestimated the value of antitank weapons. He considered them important in their ability to strengthen the defensive power of forces deployed along the front lines, thereby allowing creation of beefed-up tank formations as a mobile reserve. Yet, under no circumstances did he believe that antitank devices should be considered the single major defensive system, or that they should substitute for the maneuvering battalions of tanks.

DePuy meticulously noted the Soviet weapons systems that had been employed and that had surprised the Israelis and the Americans. These included multifaceted defense against chemical, biological, and radiological (CBR) warfare; intense use of night vision equipment; and electronic communications jammers. In addition to the main lessons that have been recounted above, DePuy was convinced that American forces had to be prepared to fight against such modern systems on European battlefields, arguing that they served as a reflection of Soviet tactics.[25] Concurrently, DePuy noted the great effectiveness of the American Maverick missiles and MK84 smart bombs that were supplied to the IDF in the last days of the war.[26]

In the conclusion of the "Implications Report," DePuy gave a synopsis methodically detailing the interdependence between operational con-

23. General W. E. DePuy, "Letter to Senator John C. Culver," 12 May 1975, in *DePuy Selected Papers*, 165–69. Starry's figures on the percentage of Israeli tank losses due to antitank missiles and rockets were even lower: only 8 to 10 percent. See Robert J. Sunsell, "The Abrams Tank System," in *Camp Colt to Desert Storm—The History of U.S. Armored Forces*, ed. George F. Hofmann and Donn A. Starry (Lexington: University Press of Kentucky, 1999), 439. The Egyptians, on the other hand, claimed that 70 percent of the tanks that were abandoned by the IDF were disabled by Sagger antitank missiles and RPGs, yet have not released the reports from which the data were taken. See Trevor N. Dupuy, *Elusive Victory: The Arab-Israeli Wars 1947–1974* (New York: Harper and Row, 1978), 590–91. The conflicting data stem from ambiguity regarding definitions of the hits and of the stage of the war.

24. George F. Hofmann and Donn A. Starry, introduction to Hofmann and Starry, *Camp Colt to Desert Storm*, xxi–xxii. For a comprehensive survey of the debate on the role of antitank missiles, see Robert Kennedy, "The American Debate on Conventional Alternatives for the Defense of Europe," in *Alternative Conventional Defense Postures in the European Theater*, vol. 3, *Force Posture Alternatives for Europe after the Cold War*, ed. Hans Günter Brauch and Robert Kennedy (London: Crane Russak, 1992).

25. DePuy, "Letter to Abrams," 72; DePuy, "Implications Report," 105.

26. DePuy, "Implications Report," 91–92.

cepts, weapons systems technology, and the lessons learned in the Yom Kippur War. It is clear from the report that DePuy was satisfied with most of the future arsenal of the Army: the tanks, artillery, antitank weapons, advanced mortars, and attack and reconnaissance helicopters. With that, he pointed to the need to replace the aging M-113 APC, whose tactical performance, according to the Israelis, was poor, with a modern mechanized infantry combat vehicle (MICV),[27] and the need to reinforce the inadequate divisional air defense systems.[28]

Two broader observations can be made regarding the "Letter to Abrams" and the "Implications Report."

First, the lessons that DePuy learned from the Yom Kippur War were mostly tactical, concentrating in great detail on the performance of the weapons systems of both sides and on the training of the soldiers who operated them. For example, the "Implications Report" dedicates two full pages to the way in which a tank company using combined arms tactics should take a defended hill. The two reports (and other documents as well as his memoirs) pay hardly any attention to the strategic and operational levels of the Yom Kippur War. The lone exception appeared in the brief overview of the "Letter to Abrams," in which DePuy explained that the main cause for the IDF's difficulties in 1973 was the massive use of advanced antitank and antiaircraft weapons and not the element of surprise.[29]

The concentration on tactics characterizes DePuy's thoughts and writings throughout his career. His memoirs of World War II and of Vietnam testify to this, as do his speeches that stress, relentlessly, the importance of field craft (constructing and locating of positions and trenches, infantry squad drills, use of suppressive fire, realistic training, and so forth).

DePuy's outlook was summarized well by Roger S. Spiller:

> If training could act as a vital additive in combat overcoming the weight of numbers, DePuy believed that superior weapons whose effects were properly orchestrated were even more important to the new equations of modern battle. Superior training and superior weapons meant superior tactics; superior tactics tilted battle in one's own favor. Wars are made of tactics, the war on the

27. DePuy, "Letter to Abrams," 73; DePuy, "Implications Report," 105, 108–11; and General W. E. DePuy, "Letter to Mr. R. W. Komer," 25 April 1975, *DePuy Selected Papers*, 157–58.

28. DePuy, "Implications Report," 110.

29. DePuy, "Letter to Abrams," 70. DePuy's claim is by no means universally accepted. See Uri Bar-Joseph, *The Watchman Fell Asleep: The Surprise of Yom Kippur and its Sources* (Albany: State University of New York Press, 2005), 201–34.

> ground of the battalion and company-grade officer—those composed the totality of war as DePuy then saw it.[30]

A further insight into DePuy's tendency to focus on tactical issues appears in an unpublished manuscript dated August 1974. In the draft of the first chapter DePuy admitted that strategy was what changed the history of the human race, while tactics were secondary. At the same time, he felt the need to correct a historiographical distortion and recount the history of the battalions and brigades, since the story of campaigns, in his view, had already been fully told.

The manuscript indicates that DePuy saw tactics as a sort of a neglected stepchild that had to be nurtured in the age of outnumbered U.S. conventional forces. What the Army needed, in DePuy's view, was better tactics and thoroughly trained individuals and units.[31] One must remember that DePuy's defining experience was the war in Europe, and the greatest impression that war had on him can be summed up in his ironic comment that "In Normandy, the 90th Division was a killing machine—of our own troops!"[32]

DePuy's focus on weapons systems and their tactical applications earned him a lot of criticism, ranging from that of William S. Lind in 1977 to Shimon Naveh's assessment two decades later. Lind expressed doubts about the validity of the assumptions that underlie Active Defense and opined that the new doctrine was the wrong reform. He claimed that only a departure from the attrition-firepower mentality, toward a maneuver doctrine, would enable the outnumbered to fight and win. Naveh described DePuy's ideas as "shallow" and said they "led to the distorted assumption that by employing sound tactics alone, the strategic objectives could be accomplished."[33] Naveh was generous enough to suggest that this "shallowness" stemmed from DePuy's sense of urgency, but did not feel that this justified his neglect of a proper operational doctrine. It is interesting to notice that Soviet military planners were not as critical of Active Defense. As C. N. Donnelley, a British Sovietologist, pointed out, the Soviets believed that "In Active Defense NATO

30. Roger J. Spiller, "In the Shadow of the Dragon: Doctrine and the US Army after Vietnam," *RUSI Journal* 142 (December 1997): 45.

31. William E. DePuy, "Modern Battle Tactics, Chapter 1: Strategy versus Tactics," in *DePuy Selected Papers*, 137–39.

32. DePuy Oral History, 202.

33. William S. Lind, "FM 100-5 Operations: Some Doctrine Questions for the United States Army," *Military Review* 57 (March 1977): 54–65; Shimon Naveh, *In Pursuit of Military Excellence–the Evolution of Operational Theory* (London: Frank Cass, 1977), 253–55.

has found an effective answer to Warsaw Pact Operational strategy. Therefore, that operational strategy has had to be changed."[34]

Yet, DePuy's sense of urgency must be understood in the context of Abrams's very clear instruction to get the Army ready as soon as possible to "fight the war and to keep the peace."[35] Considering the state of the Army after Vietnam, it is not surprising that DePuy's endeavor to rehabilitate the "Hollow Army" and defend Western Europe stressed the speedy repair of the Army's building blocks—the tactics and weapons systems of companies, battalions, and brigades. One can appreciate his priorities by remembering that the military technology for operational-level doctrine did not exist in the mid-1970s and was not yet deployable even a decade later.[36] Thus, DePuy's main consideration, in today's terms, was "time to market." Urged by Abrams, he gave the highest priority to training and equipping the outnumbered forces that would have to deal with the first echelon of the Warsaw Pact, while obeying the Forward Defense dictate. Why should he worry about coping with the second and third echelons before the U.S. had the forces and doctrines to prevail over the first? Lind, Naveh, and many other critics of DePuy's focus on the tactical aspects of doctrine have a case, but given the circumstances of the early 1970s, it is doubtful whether shortcuts could have been made in the difficult task of rebuilding the Army.

The *second* observation is that DePuy's analysis of the IDF is marked by an uncritical approach. It is hard to explain how such a very experienced general neglected to mention the many major failures of the IDF both before and during the Yom Kippur War. DePuy did refer to an unbalanced Israeli force structure that was heavy in tanks and aircraft but very light in infantry, artillery, and field intelligence; he also noted that Israel was surprised by the Arab attack, but he did not treat the surprise as a very important issue. Yet, fundamental flaws of planning, strategy, and organization plagued the IDF: the traditional Israeli national security doctrine that was rooted in pre-1967 strategic circumstances was no longer relevant, the IDF had no written and agreed-upon operational doctrine, it proved unable to learn appropriate lessons from the 1967

34. C. N. Donnelley, "The Soviet Operational Maneuver Groups: A New Challenge for NATO," *Military Review* 63 (March 1983): 52.

35. Creighton W. Abrams, "Readiness: To Fight a War, To Keep the Peace," *Army* 23 (October 1973), 18–20. Note the very frequent usage of "now," "today," and "present" on p. 20. It is safe to assume that for Abrams, urgency stemmed from consequences of the energy crisis in the early 1970s and Soviet aggression, and from the need to reach tangible milestones in the Army's rehabilitation.

36. See U.S. Congress, Office of Technology Assessment, *Technologies for NATO's Follow-On Forces Attack Concept—Special Report* (Washington: U.S. Government Printing Office, July 1986), 7. Some critical technologies were hardly deployable even in the 1991 Gulf War.

war, and it was ignorant of both the U.S. experience in Vietnam and that of the IDF in the War of Attrition (1968–70) regarding Soviet antiaircraft and antitank weapons. The high command made serious mistakes: a breakdown in the highest echelon in Southern Command necessitated the de facto relief of its commanding general, a trigger-happy brigade commander on the Golan Heights misdeployed the command's only operational reserve, and, finally, logistical control over the supply of artillery shells was lost. Yet DePuy mentioned none of these.

He did assert that the IDF suffered from a lack of field intelligence and did not use helicopters for reconnaissance and antitank missions, but these are considered by other authors to be less important than the numbing shocks inflicted by the surprise attack.[37] It is hard to believe that DePuy was not cognizant of these failures and others, and one can only speculate that he thought either that these lessons were not relevant to the U.S. Army or that highlighting them would have undermined the validity of his lessons.

DePuy ended the "Implications Report" with the following words:

> Our interest in the Arab/Israeli War, all the analyses, and all the discussions are not just an intellectual exercise. True, it is fascinating for soldiers, but there is a purpose to this study and the purpose is that we want our schools, our combat developers and those involved in training, to remember these lessons and to relate them to our concepts. All that we do must relate to these very important lessons, crosswalked to our concepts, and result in the best weapons, the best tactics and the best techniques for the US Army to enable it to win the first battle of the next war while fighting outnumbered.[38]

Implementation of War Lessons in the Tactical and Training Doctrines

TRADOC's work under DePuy gave birth to a new field manual, FM 100-5 Operations, that was published in July 1976 and formulated the new doctrine for the defense of Europe. Analysis of the field manual immediately reveals that many of its basic concepts originated in the "Implications Report," yet were also part of DePuy's ideas prior to the Yom Kippur War.

The concluding sentence of the "Implications Report" stated that TRADOC must develop "the best tactics and the best techniques for the

37. DePuy, "Implications Report," 111; DePuy, "Letter to Abrams," 73. For a detailed discussion of the shocking effects of the surprise attack, see Bar-Joseph, *The Watchman Fell Asleep*, 201–34. For a very critical review of Israel's performance, see Major General Israel Tal, "Israeli Defensive Doctrine: Background and Dynamics," *Military Review* 58 (March 1978): 22–37.

38. DePuy, "Implications Report," 111.

US Army to enable it to win the first battle of the next war while fighting outnumbered." The Army's mission to win in Europe was the main goal of the doctrine developed by DePuy's work at TRADOC and was named the doctrine of Active Defense.

What follows is a list of the basic concepts of the 1976 field manual that had appeared earlier in the "Implications Report." They can be divided into three levels:

> 1. Strategic Constraints: *fighting outnumbered, forward defense, winning the first battle.*
>
> 2. The doctrine that enables the outnumbered to win in the first battle (as the Israelis did in the Yom Kippur War) in spite of strategic constraints: *Active Defense.*
>
> 3. The doctrine toolbox includes the following concepts which help the practitioners of *Active Defense* to move forces and improve the force ratio in the area of the main thrust of the Soviets: *Concentration of Combat Power, Combined Arms Team, Need to See the Battle, High Quality Officers and Soldiers, Cover and Concealment, Suppression, ECN [electronic counter measures] Environment.*

In fact, the "Implications Report" seems to have been an early draft of the field manual's third and most important chapter, entitled "How to Fight." It instructed an armored division commander how to defend a sixty-kilometer-wide front. The operational doctrine involved funneling forces from the flanks to give support to the defenders in what was revealed to be the main effort of the attacking force. The name given to this doctrine, "Active Defense," reflected DePuy's view that the main responsibility of the defending generals was to move their units and improve the force ratio at critical points. The doctrine is neither an attempt to defend static lines nor a call for mobile defense, using territorial depth.

Even if DePuy did not explicitly state this in his reports, Active Defense is, in a sense, his vision of the "Kahalanization" of the defense of Europe. The outstanding defensive battle of Lieutenant Colonel Kahalani and his tank battalion (the 77th of the 7th Armored Brigade) in the northern part of the Golan during the first days of the Yom Kippur War was, in fact, the model that DePuy presented to American forces in Western Europe.[39]

Parallels between the battles on the Golan Heights and the anticipated operations in Western Europe have been made explicitly by Starry and many others. Following is one example:

39. Avigdor Kahalani, *The Heights of Courage: A Tank Leader's War on the Golan* (Westport, Conn.: Greenwood Press, 1984).

> At the operational level of war, the Army developed and adopted a doctrine of Active Defense based largely on the perceived "lessons" of the battle for the Golan Heights, fought in the earliest days of the 1973 war. In many ways, the battle for the Golan Heights mirrored the US Army's image of how it would have to fight a war in Central Europe. American doctrinaires viewed the all-out assault model of Syria, a Soviet client, as a reflection of Soviet doctrine. For that reason, the Americans drew lessons more readily from the battle for the Golan than from the action on the Suez front, where the Egyptians conducted a deliberate attack, with limited objectives—a mode of attack considered by some as uncharacteristic of Soviet doctrine.[40]

The centrality of the battles on the Golan in the minds of Army planners can also be seen in a very long interview with Kahalani that was published in *Military Review* in October 1979. Both Kahalani and the interviewer point out the similarities between the defensive battle of the 77th Tank Battalion and the Active Defense doctrine.[41] It would not be an exaggeration to say that Kahalani became a popular war hero not only in Israel, where he was given the highest military decoration, but also in the U.S. Army.[42]

The Training Revolution

The revolution in the methods of training that were instituted following the establishment of TRADOC was influenced, like the Active Defense doctrine, by the experiences and prior views of DePuy and his senior aides, as well as by their familiarity with the IDF. Admiration for the professionalism of the IDF's combatants was already evident in the Gorman memorandum of January 1974.[43] DePuy's ten-day trip to Israel in August 1976 brought the level of respect to new heights. During the visit DePuy met with the leadership of the IDF, toured Yom Kippur War battlefields, surveyed training facilities, and viewed exercises. The aim

40. George E. Knapp, "Anti-Armor Operations on the Golan Heights, October 1973," in *Combined Arms in Battle*, ed. Roger J. Spiller (Fort Leavenworth, Kans.: U.S. Army Command and General Staff College Press, 1992), 27–34. A similar view appears in Jonathan M. House, *Combined Arms Warfare in the Twentieth Century* (Lawrence: University Press of Kansas, 2001), 239–40.

41. Geoffrey G. Prosch, "Israeli Defense of the Golan: An Interview with Brigadier General Avigdor Kahalani, IDF," *Military Review* 59 (October 1979): 2–13. The interviewer, a classmate of Kahalani's, conducted the interview when Kahalani attended the U.S. Army's Command and General Staff College.

42. Starry's introduction to the English version of Kahalani's book *The Heights of Courage* and Harold Coyle's bestseller *Team Yankee: A Novel of World War III* (Novato, Calif.: Presidio, 1987) both contributed to Kahalani's fame in America.

43. See note 20.

was to study the IDF's training methods, but other topics were raised—primarily dealing with weaponry and drills.

DePuy returned to the United States full of praise for the methods that the IDF used for selecting and promoting officers and noncommissioned officers (NCOs), and for training its fighters. In the report summarizing his visit, he wrote: "there is no other army like [the IDF] in the world—there probably never has been such an army." DePuy was highly impressed with the way in which the IDF turned the best privates into tank commanders and the best tank commanders into platoon leaders and so on up to corps commanders. He characterized it as a culture that made operational excellence the main criterion for promotion.

DePuy calculated that by the time an Israeli tank platoon leader assumed his first command, he had had six months of general training, ten months of tank training, and five months of experience in field units, in contrast to a mere three months at Fort Knox, Kentucky, for his American counterpart. Moreover, most of the training of the IDF soldiers was done in the field, in a realistic setting including the lavish use of live fire. He was especially impressed with infantry exercises and with combined arms exercises at the battalion level. According to DePuy, no NATO force had training facilities and training scenarios comparable to those of the IDF. DePuy observed cadets at the squad commander school being trained to attack a built-up area and stated that "the exercise was the most realistic and professional I have ever seen." Also impressive to DePuy was the fact that all combat engineers completed infantry training first.

In addition to the issue of training, DePuy examined topics dealing with various weapons systems and drills: the Golan strongpoints, the employment of helicopters, the breaching of mine fields, and unjammable communications systems. He also concerned himself with micro-issues such as webbing and even helmet straps.[44]

It should be noted that the areas in which IDF training methods seemed to make the biggest impact on DePuy were those that he had already identified as Achilles' heels in the U.S. Army and that both he and Gorman had sought to change radically. He expressed his views on this in his oral history:

> Now TRADOC did a lot in that direction, both in the officers' school system, in the NCO school system, in the training centers, and even in the Army Training and Evaluation Programs (ARTEPs)

44. General W. E. DePuy, "Letter to General Fred C. Weyand," 18 August 1976, in *DePuy Papers*, 199–205, quotations on 199 and 202. DePuy's sentiments were shared by Starry, Gorman, Talbott, and other Army officers who visited the IDF and met its leadership. About twenty years earlier, similar observations were made by another famous American military figure; see S. L. A. Marshall, *Sinai Victory* (New York: William Morrow, 1958), 233–53.

> for unit commanders. It partakes to a very great extent of the Israeli system. The Israeli system is almost purely training. They don't have the time or the structure to educate for some future war. They only have time to train for this war, or the one they think could start tomorrow morning. So, it is a very austere, efficient, concentrated, and highly focused effort. I think it is also appropriate and necessary because of the complexity of modern weapons. I don't think that any other approach can cope with the modern battlefield and modern weapons."[45]

After DePuy's visit with the IDF, the cooperation between the two armies increased in training and other areas. TRADOC translated into English ten training circulars dealing, inter alia, with efficiency tests (including examinations for tank crews, artillery units, and armored units) and exercises for M-60 tank crews. TRADOC staff examined the many topics detailed in DePuy's report, such as attacking and defending strongpoints, devices and techniques for breaching mine fields, Nomex (fire-proof) suits for tank crews, and many other items.[46] The list comprised 24 topics including a large number of peripheral items (all in addition to the 162 topics mentioned in the "Implications Report").

DePuy's respect for the IDF was closely tied to his fundamental outlook: He saw training as the main task of every commander and very harshly criticized the unrealistic training methods used during World War II and the ways in which commanders were selected and promoted.[47] He viewed the IDF's methods as the fulfillment of his vision, just as the war proved to him the very strong connection between realistic training and tactical excellence on the battlefield.

The war and the meetings with the IDF afterward served to reaffirm DePuy's views regarding the need for a revolution in the training of individuals and units. The IDF gave DePuy, Starry, and Gorman insights and models to which the Army could aspire, but the revolution in training did not start with the war and did not stem solely from it. Its roots went much deeper. They lay in the tragic experiences of the U.S. Army in World War II, Korea, and Vietnam. Nevertheless, the Yom Kippur War and the IDF were important sources of inspiration for the Army and con-

45. DePuy Oral History, 187.

46. The lack of mine-clearing equipment kept haunting the U.S. military up to the Gulf War in 1991, when the Israelis gave the U.S. Marine Corps forty mine plows and nineteen large metal rollers that helped to breach the Iraqi mine fields. See Michael R. Gordon and General Bernard E. Trainor, *The General's War: The Inside Story of the Conflict in the Gulf* (Boston: Little, Brown and Company, 1995), 291–99.

47. For another example of the harsh criticism of the training methods that the Army used before the reform by TRADOC, see General William DePuy, "Keynote Address—TRADOC Leadership Conference (Fort Benning, Georgia)," 22 May 1974, in *DePuy Selected Papers*, 113–20.

tributed to the desire to increase its effectiveness by upgrading the professionalism of its leaders and soldiers.

Summary—Influence of the Yom Kippur War on the Tactics of the U.S. Army

For DePuy, the most important revelation of the Yom Kippur War involved the lethality and intensity of modern warfare that required new doctrines and weapons systems. Yet, most of the lessons that were learned from the Yom Kippur War were far from revolutionary and reaffirmed already existing ideas of Abrams, DePuy, and Starry. This conclusion should not really come as a surprise, since in many respects, the war was fought according to World War II paradigms; the weapons systems had, of course, improved in the thirty years that had passed, but the basic template for warfare was the same.

The historiography concerning the changes that the Army underwent in the 1970s inflated the influence of the war on the Army by neglecting to mention that Abrams, DePuy, and Starry sought to implement many ideas that they had conceived before October 1973. Starry confirmed this when he described his first visit to the IDF in January 1974:

> So, armed with that [his personal experience], with the list of lessons that Musa's [General Peled's] analysts drew up, and some other things (the helicopter thing I sort-of put in on my own) *I came back to Fort Knox almost convinced that we had it about right* [emphasis added]. I don't think we estimated quite properly the intensity and the density of the battlefield, or the intensity of the fight. In accord with the decisions we were going to make, both (the intensity and the density of the battlefield) were much greater than anything we had anticipated. But we had it about right.[48]

The insight that a future war in Europe would be short and intense and would not allow the United States to fight it as it did past conflicts *did not* come from the Yom Kippur War. This stands out clearly in the speech that DePuy gave at Fort Polk in June 1973. Neither were many of the other main lessons of the war new to DePuy and Starry. The concept that winning land battles would require combined arms warfare was, perhaps, an innovation for the IDF after the 1967 war, but *not* for the U.S. Army. The need to deal seriously with antitank weapons became apparent to the IDF in the Yom Kippur War, yet for the U.S. Army, the tactical and strategic impact of antitank weapons was a main issue before October 1973. DePuy's concept that tanks were the main weapons systems for land battle, even in the age of advanced antitank devices, also pre-

48. Author's interview with General Starry, 16 June 2004.

ceded the war. The importance and complexity of the air dimension of the land battle was definitely not a new revelation of the Yom Kippur War to veterans of World War II, Korea, and Vietnam. Nevertheless, the lessons of the 1973 conflict rendered far more acute the need to enhance the Army's capabilities to execute combined arms tactics and to increase the cooperation between land forces and the Tactical Air Command. Spiller, who considered the war lessons to be more of a springboard than an excuse for changing the Army, expressed this conclusion very succinctly: "All told the October War has the effect of *organizing* knowledge in the absence of operational theory. What has been until now a collection of undifferentiated suppositions and disparate intentions were given substance and an *organized* framework from which specific reforms could be undertaken. In the process, a new professional metaphor had been created that the Army could employ to communicate both within and beyond itself."[49]

Even the revolution in training that DePuy and Gorman initiated was derived primarily from their own past experience. From the point of view of DePuy, the Yom Kippur War and the IDF's training methods and facilities only proved his claims of all these years —that the human element is the deciding influence in battle and that realistic training and good leadership would enable the outnumbered to win.

From the above, we see that the historiography has tended to overstate the image of the war as a "springboard." Although the Yom Kippur War was a highly significant reference point that demonstrated many important facets of modern land warfare, it did not change, in any essential way, the tactical concepts of the heads of TRADOC. It is fair to say that the war sharpened—but did not revolutionize—previous realizations regarding the lethality and intensity of modern land battles and the need for a proper doctrine for America's outnumbered forces.

Nevertheless, TRADOC utilized the Yom Kippur War lessons for other purposes, and the importance of these "excuses" has been underestimated in the historiography. The brilliant victory of the IDF in 1967 and the unprecedented recovery from the surprise Syrian-Egyptian attack in 1973 endowed the IDF with the image of a war machine worthy of emulation, an image that DePuy used in his struggle to change the Army—on Capitol Hill and within the military.[50] The cuts in the Defense budget, which resulted from the Vietnam syndrome, had a highly

49. Spiller, "In the Shadow of the Dragon," 46–47 [emphasis added].

50. Apparently the endorsement of the IDF was important for DePuy. He repeated it often, not only in order to add weight to his political efforts, but also because he was genuinely interested in discussing early drafts of the 1976 field manual with IDF leaders. Early in 1976, during a three-day seminar with an IDF delegation at Fort Knox, Kentucky, a draft of the field manual was reviewed. General Peled, who was at that time the commander of the IDF Armored Corps, led the delegation.

adverse effect on the ability to develop and procure modern weapons systems and to recruit NCOs and technicians. DePuy's analysis of the Yom Kippur War strengthened the case that Abrams had made in his battle to get funding for his "big five" weapons systems and the sixteen-division force. A very clear example of this was DePuy's relentless activities to convince the Administration and Congress to fund a replacement for the M-113 APC that could match the revolutionary Soviet armored infantry fighting vehicle (BMP) and fight along with the excellent German armored infantry fighting vehicle (MARDER).[51]

Another way in which DePuy exploited the lessons of Yom Kippur was in convincing the Army leadership that TRADOC's efforts were well placed. Although the need for change was felt strongly, the implications of his new doctrine threatened the infantry community. DePuy's vision assigned the major role in the land battle to armor at a time when Army leadership was comprised largely of Vietnam veterans for whom assault and attack helicopters were decisive weapons systems.[52]

Finally, DePuy used the lessons to start a new chapter of closer cooperation between the Army and the Air Force's Tactical Air Command. The need to upgrade the cooperation between the two services had become clear during the Vietnam War, but the Yom Kippur War added urgency to the need for this step.[53]

General Starry and the Operational Lessons of the Yom Kippur War

The publication of the 1976 field manual was a watershed in the reorientation that the Army underwent in the three years following the establishment of TRADOC. The previous sections have discussed DePuy's doctrine, which was essentially tactical and did not deal with operational aspects of the defense of Europe. This shortcoming evoked criticism by military and civilian experts, prompting the bothersome question of whether, even if it were in the power of Active Defense to stop the first echelon of the Warsaw Pact by conventional means, it would also be in its power to stop the follow-on echelons until the arrival of NATO's reserves.

51. General W. E. DePuy, "Letter to Mr. R. W. Komer," 24 April 1975, in *DePuy Selected Papers*, 157–58.

52. Herbert, *Deciding What Has To Be Done*, 39–45 and 51–59. DePuy stated this explicitly: "I started working on them [Infantry School and Armor School] before the Arab-Israeli war, as a matter of fact, all it did was kind of help me argue my case." See Commanding General's Remarks at the Field Artillery Review Conference at Fort Sill, 19 June 1974, 2, Historical Office, Headquarters, U.S. Army TRADOC, Fort Monroe, Virginia.

53. Herbert, *Deciding What Has To Be Done*, 68–70.

In 1981, at the end of his tenure as commander of TRADOC, Starry admitted that when the 1976 version of FM 100-5 was written, he and the other Army leaders did not fully understand the implications of the old issues of the follow-on echelons.[54] He recounted in his memoirs that the problem turned into a more tangible issue for him when, upon assuming command of V Corps in Germany in 1976, he began implementing Active Defense.

He conducted terrain walks for his officers in the space where they planned the deployment and maneuver of forces and weapons systems, fire support, logistics, and command and control. In parallel, a simulation model was built for the war games that were used as an inspiration for these walks. In September 1976, the first turning point in morale that Starry was hoping for occurred: it was epitomized in the comment of a brigade commander who said, "you know boss, I honestly believe that with a little luck we can beat them, and that it will happen right about here." A short time later the belief in the effectiveness of the new doctrine began spreading to the commanders in the corps, and Starry felt that he had realized the first stage of his plan. Now Starry was able to turn to the unsolved theater strategy problem of dealing with three additional echelons that were deployed up to European Russia.

According to his memoirs, Starry began to consider the pressing operational issues through the knowledge and insights he had gained in his twenty-five years of service, most of it before the start of the Yom Kippur War.

His *first* insight was that NATO's political leadership would never allow the Army to use tactical nuclear weapons.

The *second* insight was that the Army had, as yet, no real answer for a conventional surprise attack. Even though the NATO doctrine spoke of stopping the first thrust and responding with a counterattack, the scarcity of ready forces and the Forward Defense directive of the German government made winning impossible. In Starry's words, it became just "liturgy."

The *third* insight stemmed from the research of Dr. Robert A. Helmbold at the end of the 1950s. Helmbold attempted to refute the "Lanchester Laws," which contended that outnumbered forces would always lose. He analyzed 1,000 tactical battles and showed that as long as the force ratio did not exceed six to one and the defenders took the initiative, they had a fair chance of winning. Starry believed that Helmbold's findings were very relevant for the defense of NATO's Central Front.

It should be noted that all of these observations were operational in nature and went above and beyond the tactical lessons presented above.

54. Donn A. Starry, *Exit Interview by Dr. Melone*, n.d., circa 1981, 8–9, Historical Office, Headquarters, U.S. Army TRADOC, Fort Monroe, Virginia.

Starry was fully aware of the problems that plagued the Army after Vietnam, and Abrams saw him as an important partner in its rehabilitation and reorientation.[55]

The Yom Kippur War had an important influence on the cognitive process by which Starry incorporated his above-mentioned insights into an operational doctrine. His memoirs describe the way that the Army's first operational doctrine was conceived:

> In May, 1977 I returned to Israel's battlefields to revisit action at the operational level and then translate that experience to Europe's environment. This led to a concept for extending the battlefield in time (the campaign) and distance (the theater of operations).[56]

Starry's visit to the Golan in May 1977 turned, according to the American literature, into a formative event in the development of the Army's operational art. One writer went so far as to describe Starry's visit to the Golan as an "epiphany."[57]

In his letter to Dr. Richard Swain, Starry recalled that an incident on the Fulda Gap, on 10 February 1977, had had a large influence on his operational thought and on his ties to the IDF. The Fulda Gap, located in the central part of the inter-German border, was considered by the Army as a very likely avenue for a Warsaw Pact thrust, aiming toward the main urban and industrial areas of West Germany. When General Peled, whom Starry described as "my guide in my many visits to Israel and one of my closest friends," traveled to Frankfurt, where Starry headed V Corps, the two planned to visit the corps and a training facility. Early in the morning Starry received a report that a mass of Soviet armored fighting vehicles had been deployed opposite American units in Fulda without anyone detecting it. (In hindsight it appears that a Soviet armored division moved, unobserved, hundreds of kilometers from its base in Dresden to the border in complete communications silence, over three nights.) Upon receipt of the report about the appearance of Soviet armor, Starry rushed to the border (along with Peled) and successfully managed the crisis, which ended peacefully.

55. Donn A. Starry, Letter to Dr. Richard M. Swain, 7 June 1995, 13–16, Historical Office, Headquarters, U.S. Army TRADOC, Fort Monroe, Virginia (hereafter "Starry's Letter to Swain"). This part of Starry's letter also portrays the defeatism that still prevailed in the Army in 1976. The letter seems to be an early draft of Starry's chapter "Reflections," which ends the anthology of Hoffman and Starry, *Camp Colt to Desert Storm*, 531–61.

56. Starry, "Reflections," 551.

57. James Kitfield, *The Prodigal Soldiers* (London: Brassey's, 1997), 151–55. It appears that the author confused Starry's visit in May 1977 with his first visit in January 1974.

The incident at Fulda sharpened Starry's understanding that the Army needed to uncover and attack the follow-on echelons. His friend Peled invited him to visit Israel again in order to re-examine the battles on the Golan Heights and their lessons. Arriving in Israel in May 1977, Starry was taken again to the Golan by Generals Peled and Raful Eitan and their staffs, where they replayed the battles on the Golan in great detail, from various vantage points. Starry recalled:

> That invitation led to my return to Israel in May 1977. There, from the Northern Command observation post in the hills above Kuneitra, and from battle positions of the 7th and 188th brigades, Musa Peled, Raful Eitan and their comrades described the Golan battle once again, almost minute by minute. They described again the layout of Syrian forces, echelon after echelon after echelon. Just like the Soviets said it should be done. Musa Peled traced for me the attack route of his division onto the flank of the Syrian Army. Listening, I tried to transpose what they were describing onto V Corps terrain east from the Vogelsburg to the Thuringerwald in East Germany, with German weather, German visibility, German foliage, German elevations superimposed.[58]

Starry went on to show how these descriptions served to illuminate the bigger picture:

> Listening to the Israeli description of echeloned Syrian forces on the Golan Heights, seeing the ground, understanding the flow of battle there, all served to illuminate the follow-on echelon problem. We started work [with the Israelis] on surveillance and target acquisition capabilities that would allow the defender to "look over the hill," finding and following follow-on echelons and helping direct attack, largely Air Force fighters, against them. One result of that initiative was IDF deployment of SCOUT and MASTIFF—unmanned aerial vehicles with surveillance sensors aboard, deployed and used with great success by the IDF in Operation Peace for Galilee, the 1982 invasion of Lebanon.[59]

In addition, Starry's memoirs point to the way in which TRADOC set priorities over time. Because there were no available technologies for dealing with the follow-on echelons right after the establishment of the command, TRADOC preferred to concentrate on the introduction of the "big five" and the many tactical issues concerning the defense against the first echelon. Better weapons systems, realistic training, and the Active Defense tactical doctrine were the force multipliers that were applied during DePuy's watch. Starry implemented more advanced force multipliers in the form of emerging technologies, which were supposed

58. "Starry's Letter to Swain," 17.
59. Ibid., 8.

to find and hit the second Soviet echelons; and AirLand Battle (maneuver warfare) doctrine, which was supposed to be more decisive than Active Defense.

The Yom Kippur War also strengthened Starry's old belief that "few" could defeat "many" if at a certain stage of the battle they seized the initiative. He wrote that the best illustration of this view was the counterattack of Peled's division on the second day of the Yom Kippur War.[60] Eventually, he pressed to have Peled's portrait hung on the International Commanders Wall in Fort Knox (next to those of Abrams, Patton, Rommel, and Tal).[61]

On 1 July 1977, Starry succeeded DePuy as the commander of TRADOC, giving him the opportunity to deal with the yet unsolved problem of how to attack the follow-on echelons. The NATO attack was meant to delay and disrupt the Soviet thrust and to provide the necessary time to move NATO's forces to the area of the main battle. Attacking in depth demanded, above all, technological breakthroughs that would provide the commanders of the U.S. forces with, first, advanced intelligence and target acquisition systems and, second, the ability to attack and hit targets at ranges up to 300 kilometers.[62] Armed with the lessons from his May 1977 visit to Israel, Starry initiated a search for the necessary technologies and appointed a senior TRADOC officer, Colonel Frederick M. Franks, Jr., to review the research and development that was being carried out in the laboratories and research institutes of the armed forces and the defense industry.[63] Starry was introduced to the technological alternatives for conducting the deep battle by Dr. Joseph Braddock of BDM Corporation, who carried out a study of emerging military technologies in 1974–75. The study was funded by the Defense Nuclear Agency, but it focused on technologies that would enable the outnumbered NATO forces to prevail in a conventional war. In 1976 Dr. Braddock was a member of a Defense Science Board panel that concluded that some of the emerging technologies could be integrated into an operational system for countering the Soviet second echelon.[64]

60. Ibid., 10.

61. Donn A. Starry, "The Legacy of Drummers, Warriors and Storytellers," *Army Magazine* 52 (July 2002).

62. "Starry's Letter to Swain," 24–25.

63. Donn A. Starry, Oral History Review by John L. Romjue, 19 March 1993, 43, Historical Office, Headquarters, U.S. Army TRADOC, Fort Monroe, Virginia.

64. Starry, Oral History Review by Romjue, 35. See also "Starry's Letter to Swain," 25–26. For a wider picture of emerging technologies in the 1970s and their historical background, see Richard H. Van Atta et al., *Transformation and Transition: DARPA's Role in Fostering an Emerging Revolution in Military Affairs*, vol. 2, *Detailed Assessments* (Alexandria, Va.: Institute for Defense Analysis, November 2003), III 9–III 13 and IV 5–IV 10.

Like DePuy before him, Starry consulted with the IDF and noted that the Israelis agreed with him regarding the need for sensors that would enable pinpointing of targets deep behind enemy lines. Moreover, they also offered their solution: remotely piloted vehicles (RPV) called "Scout" and "Mastiff." Starry also commended the IDF in this area and ridiculed an unsuccessful U.S. effort to develop Aquila, an RPV that was poorly designed and in the end "looked like a B-52 and cost twice as much."[65] In an interview with the author of this article, Starry commented that the need for sensors in Europe was more acute than on the Golan because of the heavy fog that is prevalent throughout Europe.

The new systems, based on emerging technologies, enabled an operational doctrine that synchronized the engagement of the follow-on echelons with defense against the first echelon. There was also a need to put doctrinal and organizational muscle on the technological skeleton. This is what Starry dealt with during his entire TRADOC tenure, which ended in the summer of 1981. The operational doctrine that he presented was called Extended Battle and constituted the core of the 1982 field manual. The advanced version of the doctrine, termed AirLand Battle, was later described as the conceptual basis for the planning of Operation Desert Storm in 1991. The implementation of Starry's doctrine required a concerted effort: upgrading cooperation with TAC; convincing General Bernard W. Rogers, NATO's Supreme Allied Commander; and getting the support of Congress. In addition, it required the elimination of two traditional NATO "no's": the ban on a pre-emptive attack on Warsaw Pact forces and the ban on counterattacking in the territory of East Germany. Cancellation of these two bans was needed in order to create the uncertainty that would deter Soviet planners.[66]

The recognition of the need to attack the follow-on echelons of the Warsaw Pact was not new, yet Starry was a trailblazer in initiating the development of the necessary joint doctrine and establishing a new level of cooperation with TAC. His initiative emanated from his basic approach that viewed doctrine as the moving force behind the development of weaponry, training, and organization. At the same time, Starry had a very realistic outlook regarding the time frame necessary to implement a major doctrinal change. Yet, his realism did not discourage him from conveying a doctrine that was based on emerging technologies, which took more than a decade to materialize.

It should be noted that notwithstanding his strategic vision, in his formative years Starry was very much occupied with tactical affairs. Dur-

65. Starry, Oral History Review by Romjue, 35. For a wider picture of U.S. attempts to develop RPVs in the 1960s and 1970s and the reciprocal relationship with Israel regarding mini-RPVs, see Van Atta et al., *Detailed Assessments*, VI 7—VI 11.

66. Starry, Oral History Review by Romjue, 38–39.

ing his first tenure at TRADOC, he was DePuy's senior partner in the study and implementation of the tactical lessons of the Yom Kippur War, especially those dealing with weapons systems and their operators. Starry, the armor general, was the first American officer to visit the IDF at the end of the war, and he personally checked hundreds of damaged Arab and Israeli tanks. By the end of 1974, he had started to teach the tactical lessons of the war at Fort Knox. His early analysis of the war was very similar to that of DePuy. With DePuy, Starry took a very active part in writing the 1976 field manual.

The Yom Kippur War was an important and useful point of reference for the Army, which had deliberated at length on the tactical problem of fighting outnumbered. In addition, it supported many tactical concepts that were held by the leaders of TRADOC. However, the way in which the war influenced the operational doctrine of the U.S. Army was more subtle. From Starry's memoirs it appears that the war had a distinct impact on his operational thought in two main spheres: the *first,* and more direct from a cognitive standpoint, is that the war reaffirmed his operational notion that without initiative, outnumbered forces are doomed to lose. In the conditions that pertained on NATO's Central Front, this meant that TRADOC's Active Defense was not good enough. The decisive counterattack of Peled's division on the Golan was the proof of this insight, to which Starry returned repeatedly.

The *second* sphere is much more complex and deals with the influence of the Yom Kippur War, as well as the meetings with IDF commanders, on the development of Starry's operational vision. The operational problem for the defense of Europe, although not new, became crystal clear to Starry during the Fulda Gap incident discussed above. His reconstructions of the 1973 battles with Eitan and Peled ignited the idea of Extended Battle in his mind. Starry repeatedly articulated the stimulating influence of the numerous discussions he had had with Israeli friends and cohorts, which contributed greatly to the formulation of the new doctrine. The operational problem in Europe was clear before the war, yet the solutions came only afterward, with the assistance of his Israeli colleagues and the emerging technologies.

Starry's analysis of the war, like that of DePuy, is not without fault: he pointed repeatedly to the counterattack by Peled's division as a model for an operational maneuver, yet ignored the crossing of the Suez Canal by the divisions of Sharon and Adan, which was a greater operational feat than Peled's counterattack and turned the tide of the war. An effective counterattack from the flank, as accomplished on the Golan, was the bread and butter of the German Army in the two World Wars, and Starry could have found many examples of such maneuvers. Moreover, he claimed that Peled's attack was shut down because Israel "learned that

Soviet airborne divisions were moving to marshalling airfields."[67] Yet, Israeli studies reveal that the attack stalled due to poor planning by the Israeli side and the very effective defense by the retreating Syrian forces.[68]

Conclusion

The Yom Kippur War influenced changes in the U.S. Army in two distinct stages. In the *first* stage, the period of DePuy, the highest priority was given to the rehabilitation of the morale of the Army and its professionalism, which had sunk into a profound crisis due to the Vietnam War. In parallel, the Army had to struggle to modernize its major weapons systems and adjust to becoming a downsized, all-volunteer force. DePuy's strategy for changing the Army can be labeled "occupational therapy." TRADOC started to rebuild the Army in keeping with the mission of defending Western Europe against the vast armies of the Warsaw Pact. The rebuilding included a new tactical doctrine (Active Defense), a revolution in training and education, and the introduction of the "big five" weapons systems. At this stage, the Army invested heavily in learning the lessons of the war, mainly those relevant to the development of weaponry and tactics, and it used them in order to gain support for the changes within the military itself, in the Administration, and in the Congress.

This article points out that, while being a very important reference point, the lessons of the war did not change the core ideas of Abrams, DePuy, Starry, and Gorman, which can be traced back to their experiences during World War II and afterward. The Yom Kippur War reaffirmed many ideas held by the heads of TRADOC and convinced them that they were leading the Army in the right direction—one that conformed to the political, economic, and military realities of the post-Vietnam era.[69]

On the one hand, the intensity of the battles of the Yom Kippur War came as a very unpleasant surprise to the American planners. On the other hand, the Israeli victory strengthened their belief that realistic training, good leaders, and combined arms warfare would enable an outnumbered NATO to defeat the "many" of the Warsaw Pact.

67. "Starry's Letter to Swain," 11.

68. See the prize-winning paper by Lieutenant Colonel Moshe Shnied, "The Counter Attack by the 146th Division—An Unexploited Success," *The Wisdom of Action* [in Hebrew], IDF Command and Staff College, March 2004.

69. For the war's influence on the development of the new XM1 tank, and on the upgrading of the old M-60 tank, which was not discussed in this article, see Starry, "TRADOC's Analysis of the Yom Kippur War," 9. See also Sunsell, "The Abrams Tank System," 445–47.

In addition, the U.S. Army capitalized on the lessons of the war in order to obtain funding for the modernization of major weapons systems and to resist attempts to cut the Army's budget. The lessons of the 1973 war were also used to dramatize the need for a change within the military: first to enlist the support of infantry generals for the training reform and for a doctrine that enhanced the role of armor; and second, to bring about closer cooperation with TAC, which was essential for combined arms land warfare. The Army repeatedly pointed to the endorsement of its new doctrine by the IDF and the Bundeswehr, two militaries whose support was important in light of the declining esteem of the U.S. Army during the 1970s.[70] The Bundeswehr's endorsement was important not only for political reasons, but also because effective NATO operations required that the two main powers of NATO should implement matching doctrines.

The *second* stage of the rehabilitation, the period dominated by Starry, was a consolidation phase. The practical and purposeful work during the DePuy era created the tactical infrastructure that enabled Starry to deal with operational problems. DePuy's Active Defense doctrine had numerous limitations—as many critics have noted—yet it was ultimately the engine that powered the process of change and rehabilitation.

Starry, who succeeded DePuy as head of TRADOC in 1977 and steered the first American operational doctrine for the defense of Europe, was a great admirer of the IDF and its Armored Corps commanders—Peled and Tal. In his memoirs he described the discussions with them as central to the development of his operational doctrine. These conversations, focused on the replaying and analysis of the Golan battles, gave Starry the inspiration that was later translated into the first operational doctrine for U.S. forces in Europe.

Thus, we should note the high praise of the IDF and its commanders by the American officers who studied the lessons of the war. The IDF was an important source of inspiration for the Army in demonstrating that the outnumbered could win. The IDF's performance also backed the claim of the American officers that the human factor was the key to victory.

The high regard for the IDF by the Americans was accompanied, in the view of this author, by an uncritical approach. This research does not attempt to judge the validity of the American analysis of the war, yet the American disregard for many of the IDF's deficiencies—beyond its failure in combined arms warfare—requires some explanation. It is unlikely that this myopia with regard to the IDF failures stemmed from

70. It should be pointed out that the factors that influenced DePuy's doctrine may have been even more intertwined and complex than this article reveals, since many of the attributes of the IDF and the Bundeswehr that DePuy wanted the Army to emulate were rooted in the Wehrmacht that he encountered in World War II.

a lack of diligence of the American officers, or from "brainwashing" on the part of their Israeli friends. One might well speculate that DePuy and Starry feared that rigorous criticism of the IDF would weaken the arguments that they were leveraging on behalf of their reforms. Their use of the war's lessons seems to reflect a kind of cherry-picking that was intended to support the reforms that they sought to implement, based largely on their past experience.