

Palestinian Military Performance in the 1982 War

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With the evacuation of the PLO from Beirut, and the dispersal of its forces among eight Arab countries, an entire historical phase in its existence is over. After 17 years of armed action, the PLO organizations face radically changed political, and military conditions, affecting their future choice of methods and programs. As the continuing showdown in Lebanon indicates, the military option is still very open to all parties in the conflict; but what shape it can take for the PLO is unclear. What is clear, however, is that there are many lessons to be drawn from the PLO's military experience during the 1970s in general, and in the 1982 war in particular. Over the years, there has been very little in Western or Palestinian literature on Palestinian military experience; so in tackling the issue it is more rewarding to deal with those aspects that offer material for discussion. More specifically, a choice has been made to discuss operational aspects rather than the strategic or tactical ones.¹ The choice of

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¹ "Strategy," in military terms, means the general method chosen to confront a particular enemy, and the management of allocated resources at the national level. "Tactics" refers to how individual soldiers or units fight in the field. The operational level lies in the middle, it oversees implementation of the general strategy in the battlefield.

the operational level, rather than the strategic or tactical is due to several reasons. First, despite the PLO's general military strategy in terms of attacking targets inside Israel's current borders, or enhancing its military strength in Lebanon in response to internal Lebanese developments and external diplomatic moves, the PLO had not formulated or even improvised a strategy to confront an anticipated or actual Israeli invasion. Second, Palestinian military strategy before the war was mainly defensive, designed to confront the sort of military operations mounted against Palestinian targets by Israeli forces since 1978: air strikes, commando raids, company or battalion size assaults, or extended confrontations such as the 1978 invasion up to the Litani River and the artillery duels in the summer of 1981. Third, the fragmented nature of the forces of the PLO's component organizations and the Lebanese National Movement meant that there was never a common military strategy. Fourth, at the tactical level, there was extremely little standardization among Palestinian units, and many lessons were learned (both negative and positive) from operational performance.

There are other important factors which make an operational evaluation more relevant, given the absence of any significant strategic planning by the Palestinian command. 1. By the summer of 1982, the size and armament of Palestinian forces had reached proportions that required increased proficiency in handling larger units in several battle zones simultaneously. 2. The peculiar situation of being in control of large sections of the country and its population demanded the ability to concentrate military strength when needed. 3. These factors made classic guerrilla small-band tactics impracticable, so operational capabilities had to step in as a substitute for the non-existent overall strategy. 4. The quick disintegration of the command network and the rapid advance of the Israeli forces left large numbers of Palestinian fighters in the field; too many in number and too used to large units to revert effectively to guerrilla warfare, but bereft of sectoral or operational command. Actual military strength and geo-political considerations had required the PLO to acquire the intermediate level between its general military strategy and its traditional military tactics: in other words, operational command.

Operational performance involves direction of combat, the size and armament of combat units, logistic and support services, the size and role of particular arms such as artillery and armor, and "battlefield tactics." Grasp of such requirements implies successful use of available human and material resources within the chosen strategy or "mode of operation," and

proper choice of armament, training, organization, and deployment of forces, proper planning, and efficient management of forces during combat.

The Palestinian Context: Methodological Overview

Any evaluation of Palestinian military performance encounters several complexities. One is the scarcity of reliable, detailed and comprehensive data. Israeli and Palestinian sources tend to exaggerate or belittle, or to give partial presentations. Adequate and appropriate criteria need to be developed to measure military performance in the specific context of the Israeli-Palestinian confrontation. There has been extraordinarily little critical, analytical writing on both historical and contemporary Palestinian military experience.² Western literature tends to underestimate Palestinian action, whereas Arab or Palestinian writing generally avoids penetrating, critical analysis, often under the pretext of "maintaining security." Both Western and Arab writers tend to err methodologically by using rigid models and criteria, measuring Palestinian military performance against either regular armies or dogmatic interpretations of guerrilla warfare or "people's" war. The military (as well as economic, social, political and cultural) criteria and models which have evolved from the experience of other countries or liberation movements are not necessarily applicable to the Palestinian situation. The Vietnamese, Chinese, Soviet or Western military experiences instruct the Palestinians, but cannot be used as a rigid measure. Universally applicable military principles, such as economy of force, definition and maintenance of objectives, and attainment of numerical superiority, also need to be translated into specific principles of local relevance, governed by the specific military, political, psychological, economic and historical features of the country or movement concerned.

²Recent examples (articles): Brig. Saad Sayel, "The Military Action of the Palestinian Revolution and Prospects for Development," *Shu'un Filastiniya*, no. 105, August 1982; Col. Hasan Abu Lubdah, "The PLA is a Shield and Sword for the Revolution," *Shu'un Filastiniya*, no. 114, May 1981; Maj. Wasif 'Urayqat, "Palestinian Artillery," *Shu'un Filastiniya*, no. 115, June 1982; (books): Bard O'Neil, *Armed Struggle in Palestine* (Boulder, CO: Westview Press, 1980); Youssef Rajab al-Ruda'i, *The Palestinian Revolution of 1936* (Beirut: Arab Studies Institute, 1983), in Arabic. Older writings are: Abu Hamam, *The Resistance in Military Terms* (Beirut: Dar al-Tali'ah, 1969), in Arabic; Naji Alloush, *Concerning the General Strategic Line of Our Movement and Revolution* (Beirut: Dar al-Tali'ah, 1974), and *Towards a New Palestinian Revolution* (Beirut: Dar al-Tali'ah, 1974), in Arabic; Munir Shafiq, *Some Military Principles of the Palestinian Revolution* (n.p., n.d.), in Arabic.

There would seem to be little need to prove that "Operation Peace for Galilee" meets all the standards of a *war*. Yet some Israelis and Westerners prefer to refer to it as a "large-scale operation," largely for political reasons: Israel was only "punishing" undisciplined "bands of terrorists," not seeking to destroy the infrastructure of a nation. Had the Israeli forces been able to reach Beirut without serious resistance, its description as a "search-and-destroy" operation might hold. However, the quantitative military commitment on both sides, and the scope of Israel's political objectives substantiate the use of the term *war*.³ "Operation Peace for Galilee" had specific, far-reaching political aims that went well beyond any immediate military gains. Israel's political goal was the destruction of the PLO, including its social, cultural and economic institutions, and Palestinian national aspirations. The cumulative size of Israeli forces sent into action against the PLO (even accounting for those units earmarked for offensive or preventive action against the Syrian forces) was greater than any "large-scale operation" would justify. The direct and indirect costs to Israel's economy show a high-level of sustained commitment. The Israeli invasion force reached a total size of 120,000, with 1,600 tanks, 1,600 armored personnel carriers, 600 guns or multiple rocket launchers (including at least 500 self-propelled howitzers or field guns), with massive air and naval support. Israeli casualties, estimated at 322 dead and 1,900 wounded through mid-August 1982, point to a war effort comparable to that of 1956 and 1967.⁴ Direct and indirect costs to Israel's economy are estimated at \$2.5-4 billion. Israel had to employ a significant percentage of its standing army and reserves to fight a militarily feeble and politically contemptible Palestinian enemy. The battlefield covered the main areas of Palestinian military and population concentration in Lebanon. For the Palestinian forces, and the Lebanese and Palestinian population in the south and Beirut, the invasion tapped their full military capabilities, medical, social and other institutional resources and capabilities.

In the 1982 war, both sides declared a victory, raising the important question of the standards of victory and defeat (strategically), or success and failure (tactically), in the context of the Israeli-Palestinian military

³Hirsh Goodman, "How Strong Was the PLO?," *Jerusalem Post*, July 9, 1982, p.4.

⁴According to one source, Israel lost 983 killed out of 250,000 men participating in the 1967 war, and 189 killed out of 100,000 in the 1956 war. Col. T.N. Dupuy, *The Elusive Victory* (London: Macdonald and Jane's, 1978), pp. 212, 333 and 337.

confrontation. Results are often measured in terms of geographic areas occupied or retained, and the extent of human and material losses. How do such standards apply to the Palestinian case? First, such standards are useful in specific, narrow cases; for example, in minor clashes between an Israeli raiding party and a Palestinian base. If one or another unit suffers heavy losses, or the base is overrun, there is a specific instance of failure or success. If a particular strategy is based on continuous application of such tactics, then a string of tactical successes implies a strategic victory, as in Israel's ability to halt Palestinian cross-border action since 1969-70. If, for example, Israeli forces suffer unacceptably high losses (relative to Palestinian losses and Israeli domestic standards), as in the current Lebanese-Palestinian guerrilla campaign in South Lebanon, the balance shifts to the Palestinians, even if the overall balance of casualties or terrain remains in Israel's favor.⁵

Second, when an obviously superior force (in terms of numbers, armament, training, mobility, organization, logistics and technology), such as the Israel Defense Forces (IDF), confronts a Palestinian enemy of extremely limited means and capabilities, such as the PLO, there is little question as to who will gain the upper hand on the battlefield.⁶ However, the militarily superior force will have failed to achieve its goal if the militarily inferior force turns a battlefield defeat into a political victory (given the balance of forces, mere survival or regrowth is an achievement). An example is the Israeli invasion of South Lebanon in March 1978. Although the IDF was able to overrun PLO bases and occupy the area south of the Litani River and east of Tyre, the PLO forces put up a fierce resistance and slowed the Israeli advance, particularly at the defensive strongholds of Bint Jbeil, Taybeh and Khiyam. The PLO inflicted heavy Israeli casualties, preserved its combat units and withdrew in relative order, losing a minimal number of fighters. The primary Palestinian measure for success is the extent and intensity of combat with Israeli

⁵R.D.M. Furlong, "Israel Lashes Out," *International Defence Review*, Vol. 15, No. 8 (August 1982), p. 1001. According to Furlong, the main Palestinian guerrilla and troop concentrations, apart from those in Beirut and Damour, were located within 40km of the Israeli-Lebanese frontier.

⁶Such classic tenets of guerrilla or people's war are extensively discussed in such sources as Robert Asprey, *War in the Shadows* (London: Macdonald and Jane's, 1975); and Robert Taber, *The War of the Flea* (London: Paladin, 1974).

forces, followed by Palestinian combat skills and casualties.⁷ The Israeli measure is political; do the Palestinians admit defeat, is their political will broken? Israel's main failure in March 1978 and in the July 1981 artillery duels in the South and the bombing of Beirut was its inability to impose a unilateral Palestinian cease-fire and to alter the political position of the PLO.

Finally, one crucial aspect affecting an evaluation of the Palestinian military is to situate it technically. By June 1982, the Palestinian military had not evolved fully from guerrilla units into regular forces using classical modes of operation, despite the considerable development of its armament and structure in that direction. Israeli Chief of Staff Rafael Eitan expressed his satisfaction that the PLO was "going regular," since that gave Israel a better chance to isolate and destroy it.⁸ The Palestinian forces had lost the guerrilla's advantages of mobility, flexibility, and relative invisibility, without gaining the advantages of a regular army.⁹ The PLO found itself fighting with medium and heavy weapons, mounted on or towed by assorted vehicles, without the necessary levels of firepower, air defense, training, organization, and management required by regular units when fighting a technologically and numerically superior enemy.

Palestinian Military in Lebanon Before June 1982

Most developments in Palestinian armament, organization, and combat doctrine took place after Lebanon became the main PLO base, particularly since the 1975-76 civil war. In the early 1970s, the PLO absorbed large numbers of regulars from the Jordanian Army, and acquired a few light artillery pieces and rocket launchers, such as 76mm and 85mm anti-tank guns for shelling, and small jeep-mounted 107mm or 122mm multiple rocket launchers. The process of "regularization" proceeded slowly, with military ranks being introduced in mid-1971, and small independent artillery units being set up after 1973. The Lebanese

⁷Martin van Creveld comments on a decline in the performance of the Israel Defense Forces against the Arabs, tracing it to the tendency to concentrate on technological solutions at the expense of tactical originality. See his article, "The War: A Questioning Look," *Jerusalem Post*, December 12, 1982, p. 12.

⁸Van Creveld writes that the campaign "was no walkover," observing that the casualties roughly equalled those on the Egyptian front during the June 1967 war, *Ibid.*, p. 12.

⁹One Israeli opinion along these lines is that of Hirsh Goodman, *op.cit.*, p. 4.

civil war prompted much more rapid and radical transformations: heavy artillery and some armored fighting vehicles were acquired and Palestinian forces began fighting in large units stretched out along fixed frontlines, often against regular forces of superior size and armament. By 1982, the PLO had acquired large numbers of heavy weapons, including obsolete T-34 tanks, 122mm, 130mm, and 155mm howitzers, BM-21 mobile 30- or 40-tube multiple rocket launchers, BRDM-2 scout cars, BTR-152 personnel carriers, SA-7 and SA-9 missile launchers, and ZSU-23-4 mobile radar-guided anti-aircraft guns. Most of these developments in armament and organization were a response to internal Lebanese developments, although Palestinian arms procurement policy was also reactive in confronting Israel. That is, a specific weapon was sought because the enemy had come to use it, and not because it was seen to be otherwise particularly suitable to Palestinian requirements.

An essential feature of Palestinian military development since 1975 is a strong functional dualism. Palestinian forces had to fight on two fronts: external, against Israel, and internal, against enemies in Lebanon. They worked simultaneously within two military balances, each with distinct priorities and considerations. PLO forces enjoyed effective parity in the internal balance, a fact which was partly due to, and partly encouraged, the tendency towards larger formations and heavier weapons. The aging T-34 tanks, for example, had an impact on internal enemies they could never enjoy against Israeli forces. The practical implications of this dualism were that the Palestinian forces in Lebanon had to arm, train, organize, plan, and deploy in two distinct, often contradictory, ways in order to confront two separate enemies. Palestinian forces needed high flexibility when facing Israeli forces—fighting in small, lightly-armed bands according to guerrilla tactics—and high concentration in men and equipment when confronting internal enemies. In addition, the Palestinian forces had to take over security tasks in large areas of Lebanon, especially after the Syrian Arab Deterrent Force withdrew from the entire coastal strip south of Beirut. In June 1982, a large part of available Palestinian fighters in the countryside were tied down and scattered in villages to prevent internal Lebanese clashes, not due to conscious planning for the Israeli invasion.

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Evaluation of Palestinian military performance at the operational level means examining the following areas: planning and prediction; armament,

training, organization, and deployment of forces; and management of forces during combat. Related areas are: the role and performance of specific weapon categories; the effectiveness of response to specific threats; levels of administrative, logistic, engineering, and medical services; and the degree of flexibility, mobility, and initiative. The analysis is directly relevant to the command structure at its higher levels (battalion and up), although it has a bearing on the lower levels of military formations (companies and platoons).

Planning and Prediction

In early 1982, the Palestinian leadership spoke constantly of the imminence of large-scale Israeli military attack, possibly reaching Beirut to link up with the right-wing Lebanese Forces in an "accordion" movement. The leadership was apparently quite sincere in its warnings, but did the general expectation result in any specific, practical predictions or planning?

The answer appears to be both yes and no. The deployment of Palestinian forces was not changed, and no studied contingency plans were made by the combat forces or their sectoral commands. This suggests a continuation of the reactive character of Palestinian military action since the early 1970s. What was required, and was still lacking when the war broke out, was a careful examination of possible Israeli tactical and strategic military objectives, of probable Israeli methods for achieving these objectives, of axes of advance or landing zones, and consequently of the available human and material means for defense according to a definition of Palestinian political, geographic, and military priorities.

There was some prediction and planning, inasmuch as Palestinian forces were already deployed in many sectors to confront Israeli attacks. The bulk of available manpower was in and around the refugee camps, cities, and other densely populated areas, mainly in response to perceived internal threats. Since total Palestinian fighting power was insufficient to make a stand against Israeli main units in open countryside, and since Palestinian forces were already overstretched and unable to cover all possible axes of advance, PLO deployment in the more urban, defensible areas made military sense.¹⁰ When the IDF actually invaded, however, the

¹⁰Both Palestinian and Israeli sources present this assessment, but van Creveld advances the most balanced evaluation: "The PLO (despite official Israeli attempts to prove the contrary) possessed very few of the heavy weapons crucial to the conduct of modern war and hardly any of the logistic and technical infrastructure required to maintain and deploy them," *op.cit.*, p. 12.

effect of inadequate prediction and planning became all too clear. PLO forces were scattered and surrounded, their communication routes cut, and their command structures non-existent. This meant less effective resistance to the first blow, and a subsequent inability to regroup and mount any widespread military attacks behind Israeli lines. Those Palestinian units that had made some individual planning effort made a better showing, whereas those that were taken completely by surprise lost all cohesion.¹¹

The PLO should also have devised contingency plans to facilitate the movement and regrouping of friendly forces should the IDF attain its immediate objectives in the South. The scattered Palestinian units would not have been neutralized so effectively had they immediately resorted to predetermined alternative battle plans. Instead, most units or individual fighters made their way to the nearest city or zone of friendly control where they were either surrounded by or isolated from the IDF.

Armament, Training, Organization, and Deployment of Forces

Armament

A. Light Arms. The light arms used by the Palestinian forces were generally effective and suitable, consisting mainly of AK-47 assault rifles, Belgian FN and West German G-3 assault rifles of 7.62mm caliber, squad and platoon machine guns of 7.62mm and 12.7mm caliber, 82mm mortars, and RPG-7 anti-tank rocket launchers. These weapons and their ammunition were available in large quantities, and individual proficiency in their use was acceptable. The use of heavier crew-served weapons requires more detailed examination.

B. Anti-tank weapons. The individually-fired RPG-7 anti-tank rocket has been mentioned frequently in Israeli accounts of the fighting.¹² Despite basic improvements in the armor of Israeli tanks, this weapon probably

¹¹This is also the assessment of American military writer Anthony Cordesman, "The Sixth Arab-Israeli Conflict," *Armed Forces Journal* (August 1982), p. 32.

¹²There were several positive Israeli assessments of Palestinian use of the RPG-7 anti-tank rocket launchers and of anti-tank tactics quoted in "Israeli Evaluations of Arab Combat Capabilities in the Lebanon War," *Strategic Review*, Vol. 3, No. 16 (September 9, 1982), p. 12 (in Arabic).

caused the most Israeli losses. Indeed, the RPG-7 is widely issued to Israeli infantry as well. Anti-tank mines were of some effectiveness against Israeli armor, but only where they had been prepositioned in the South before the war or later around Beirut. Mines were not used extensively in the South to block routes of advance not covered by PLO units, mainly due to civilian use of the road network. Foresight would have enabled greater use of reserve stocks of mines to hinder the IDF's movements once it was in Lebanon. The other anti-tank weapons available were recoilless rifles, anti-tank guns, guided missiles, and T-34 tanks. Of these, only recoilless rifles were used to any significant degree. Palestinian forces had Western-designed 75mm and 106mm and Soviet-made B-10 (82mm), B-11 (107mm), and SPG-9 (73mm) recoilless rifles in considerable numbers. These weapons were not used efficiently, however, due to inadequate training, poor positioning, easy detection and destruction by enemy fire, and immobility, as even vehicle-mounted guns were immobilized when the vehicles ran out of fuel or the roads were cut. The 76mm, 85mm, and 100mm anti-tank guns were not used in their anti-tank role, but as light artillery, which was probably effective in view of their weight and size. The PLO did not use effectively the Sagger anti-tank and guided missiles (although several were fired in the Khaldeh battle by Syrian soldiers) due both to poor technical and tactical training, and to the absence of specialized anti-tank guided missile squads or platoons. Finally, the T-34 tanks, which could have been used as mobile anti-tank guns, were unable to fulfill that role in the open countryside because of the limited range of their 85mm guns and their extreme exposure to Israeli aircraft. A few T-34s managed to fight and survive in Beirut, though they had no anti-tank role even then.

C. Anti-aircraft weapons. Palestinian forces possessed a wide range of anti-aircraft guns, as well as numbers of individually-launched SA-7 anti-aircraft missiles and several vehicle-mounted SA-9 systems. The guns ranged in caliber from 12.7mm, through 14.5mm, 20mm, 23mm, 37mm, 57mm, 85mm, and 100mm. In addition, the PLO had recently received several self-propelled, radar-guided quadruple-barrelled 23mm "Shilka" guns (ZSU-23-4). These weapons were moderately effective, despite the major flaws of their non-integration into air defense systems, and poor technical and tactical training. Anti-aircraft guns, especially those of 14.5mm to 23mm caliber, bore the brunt of air defense tasks in all sectors. In fact, these guns were probably responsible for shooting down the two

helicopters Israel admitted losing,¹³ and for “crippling” several other aircraft.¹⁴ The A-4 Skyhawk plane which Israel admits was lost to Palestinian fire, was probably shot down by a SA-7 missile.¹⁵ Palestinian forces achieved appreciable results firing their anti-aircraft guns against Israeli armor, particularly APCs.

Palestinian use of anti-aircraft weapons exposed two major shortcomings. One was tactical: most of these weapons were mounted on jeeps or trucks which soon ran out of fuel and usable roads, were constantly exposed to aerial observation and vulnerable to anti-personnel munitions, and posed a considerable logistic and administrative strain on already stretched company or battalion commands. Some PLO units, with tremendous efforts, extricated their vehicles and sent them to “safe” areas, only to lose them when whole zones were cut off by Israeli landings. The second shortcoming was more fundamental: the hundreds of anti-aircraft weapons employed by the PLO were totally uncoordinated, even at a local level. Thus combat units diverted men to act as gun crews that had no hope of putting up effective anti-aircraft resistance because there were too few guns per unit to be effective. On the other hand, cities and camps that needed a heavy concentration of such weapons were dotted with gun emplacements that worked individually and separately, without any fire plan or control. Consequently, the second aim (or first in some opinions) of anti-aircraft defense was lost, namely forcing enemy aircraft to take evasive action at high altitudes and thus lose effectiveness in attacking ground targets. This was compounded by the loss of hundreds of able-bodied fighters to ineffectual roles. The presence of guided weapons did not change the overall picture, partly because the Israeli Air Force had long effected counter measures, and partly because too few of these weapons were available even if the requisite comprehensive system of deployment and fire control had been in force.

¹³ A senior Israeli Air Force officer (probably the then Air Force Commander David Ivri) mentioned the vulnerability of helicopters during the 1982 war to small arms fire. “Bekaa Valley Combat,” *Flight International*, October 16, 1982, p. 1111.

¹⁴ Cordesman suggests that the Israeli Air Force lost one or two aircraft during the 1982 war due to poor maintenance, pilot error, or poor support. If that is the case, then total Israeli aircraft losses during the war are five, not three, aircraft and two helicopters, *op.cit.*, p. 29. Pentagon sources are convinced that Israel lost 11 or 12 aircraft shot down or crippled, including one F-16, the rest being Kfir, A-4 Skyhawk, and F-4 Phantom aircraft. See Clarence Robinson, “Surveillance Integration Pivotal in Israel’s Success,” *Aviation Week*, July 5, 1982, p. 17.

¹⁵ According to Clifford Wright, “The Israeli War Machine in Lebanon,” *Journal of Palestine Studies*, Vol. 12, No. 2 (Spring 1983), p. 48.

D. Armored vehicles. The PLO's armored vehicles included 60 T-34 tanks, a few dozen light-skinned BRDM-2 and BTR-152 carriers, and some home-made armored cars with machine guns. The precise number of T-34 tanks is not known: Israeli figures range from 50 to 500, but Israeli military correspondent Ze'ev Schiff confirmed that 38 T-34s were captured, as well as 46 T-55s (all or most of which belonged to the Syrian forces)¹⁶ The PLO's purpose in acquiring armored vehicles is particularly unclear, as they could not be assigned a direct role in tank warfare, and their presence in the South did not add defensive weight against constant Israeli commando raids. They could neither concentrate to face a threat, nor influence the battle when dispersed. These vehicles suffered from poor maintenance, primitive wireless communications, and lack of air cover. The war found a large number of tanks, APCs, jeeps and trucks immobilized by breakdowns: some were in garages, others were left as static gun emplacements.

E. Artillery. The PLO began to develop artillery with the influx of regular army gunners and artillery officers in the early 1970s. The first significant action of light artillery came during the October 1973 war, across the Lebanese border, although artillery rockets were used in far greater numbers. By 1976, with the acquisition of heavier calibers, Palestinian artillery became more important and effective, as evidenced by the curtain of fire defending Tel al-Zaatar camp when it was besieged by the Lebanese Forces. Artillery also held its own during the March 1978 fighting and in the cross-border duels of July 1981.¹⁷ In those encounters, Palestinian guns sustained a high rate of fire and minimal losses, despite enemy air activity.

In the 1982 war, however, Palestinian artillery lost a major advantage: previously it had not come face-to-face with Israeli ground units, as the slow Israeli advance in March 1978 allowed the guns to be withdrawn, and in July 1981 there was no ground movement. In Summer 1982, Palestinian artillery units were isolated, blocked, and suffered direct assaults which obliged the gunners to take to their personal side arms in self-defense. The central commands and field artillery observers or combat units also lost contact and cohesion, effectively paralyzing the

¹⁶On these and other PLO material losses, see Zeev Schiff, quoted in Michael Jansen, *Battle of Beirut* (London: Zed Press, 1982), pp. 5-6.

¹⁷Artillery was the main effective weapon used by the PLO during the July 1982 fighting. See "Aspects of the Palestinian-Israeli Conflict in the Coming Phase," *Strategic Review*, Vol. 3, No. 19 (October 21, 1982) p. 2, Appendix.

artillery. Palestinian rocket artillery was more flexible in this situation, due to its mobility in contrast to the towed artillery. The light artillery (76mm, 85mm, and 100mm), and heavy artillery (122mm, 130mm, and 155mm) were the most vulnerable and expensive to use because of their size and weight, and their dependence on tow vehicles, ammunition supply trucks, and large crews. Mortars of 82mm, 120mm, and 160mm caliber were rarely used, although they were in fact better suited to the battle conditions.¹⁸ Rocket artillery, mainly 107mm and 122mm mounted on jeeps, trucks, or special mobile platforms (such as the BM-21), provided heavy concentration of fire which was particularly effective due to the rapidity of fire (which allowed quick movement back into hiding), and to its "carpet" effect, which partially made up for the lack of sighting and observation. Palestinian artillery was at its most effective during the siege of Beirut where it benefitted from both the relative protection and a measure of central command.

Training

Among Palestinian forces there was a wide discrepancy in the levels of technical training related to specific weapons, and combat training related to methods and doctrines of fighting. Technical training was glaringly deficient with regard to guided anti-tank or anti-aircraft missiles, tanks, and certain anti-aircraft guns. While some fighters were very proficient, there was no systematic attempt to standardize and generalize such abilities. Training on such weapons entails much more than combat use; both combat units and support services should acquire care and maintenance skills. Poor maintenance and ignorance of various technical limitations meant, for example, that many guided missiles failed to fire. Routine checks and better storage would have avoided such situations.

Training in artillery and rocket artillery weapons was generally better. The proportion of weapons in actual service was higher, and combat training allowed gun crews to unlimber guns, fire several shells, limber up, and move away within five minutes (i.e., before the enemy could respond with air raids or counter battery fire). Training on individual weapons such as RPG-7 anti-tank rocket launchers was also generally good, especially as both launchers and rockets were in large supply which allowed lavish consumption in training.

¹⁸Both Schiff and Furlong estimate that the PLO had just over 300 various artillery pieces (including rocket artillery). See Schiff *op. cit.*, p. 6; and Furlong, *op. cit.*, p. 1003.

Possibly of greater importance in combat than individual skill in weapon-handling, is tactical training. Training, both at individual and at squad or platoon level, was carried out by Palestinian instructors, often within combat units, and was generally good. Such training concentrated on small unit tactics which allowed greater mobility, flexibility, and effectiveness once the larger units had broken up. Training at battalion level, or in combined operations (of infantry, anti-tank weapons, heavy machine guns, armored vehicles, and artillery), was instituted in the late 1970s. It proved effective against Major Saad Haddad's forces, or against company- or battalion-sized Israeli raids, but totally unsuitable against a major Israeli attack.¹⁹

Tactical training was deficient in two other respects: on specific weapons (such as the tanks), it was often unsuited to Palestinian battlefield conditions; and training on a particular weapon was not complemented by tactical training on its use within a military unit, against a specific threat, according to physical conditions. Thus, much effort was wasted on learning inapplicable skills, and much individual skill was wasted because the handler did not know how to put his training and weapon to their best use. Training provided in Palestinian camps was more relevant than training in friendly countries, due partly to the Palestinian command's lack of clarity in what it required of external training, and partly to its added failure to evaluate, standardize, and generalize the lessons of such training.

Organization

Normally, the size and form of military units are determined by the number of fighters, type of weapons, nature of combat, and enemy qualitative and quantitative strength. In the Palestinian case, there was an added element of facing two distinct enemies simultaneously. It was important, for political, psychological and security reasons, to maintain a front in South Lebanon against the Haddad forces and minor Israeli attacks. In contrast to classic guerrilla theory, it was also important not to melt away immediately whenever Israeli forces advanced in strength. Much of the Arab and international recognition accorded the PLO was bought by staying to fight and paying a high price in human losses.

¹⁹This contrasts with the Israeli emphasis on training, doctrine, and original military thought, including surprise and deception, to use van Creveld's expressions. See van Creveld, *op.cit.*, p. 12. On Israeli training generally, see Edgar O'Ballance, "Training of Israeli Officer," *Arab Strategic Thought*, No. 6/7 (January/May 1983), pp. 107-120.

Palestinian forces in Lebanon were divided into fixed formations theoretically ranging from platoon level, through companies and battalions, to regiments, but most units were far below strength. Thus, they became accustomed to thinking in terms of large formations, although their units did not have the numbers and punch to undertake large-formation tasks. This was especially true of infantry units, while artillery units generally fielded only as many guns as they could man.

Possibly the only advantage of this anomalous situation was that breaking up into small bands was made easier. The disadvantages were more significant: such quick and easy change in unit size was an instinctive reaction, not one envisaged in planning or training; different unit strengths meant discrepancies in fighting capabilities of theoretically equivalent units; and some units were more dependent on formal command hierarchies, which hastened unit paralysis when command structure broke down. An added disadvantage, in the event, was the loss of fighters to various independent armor, artillery, rocket, and anti-aircraft units with separate organizational status. Once Israeli forces were in control of the countryside and in position around the coastal cities, Palestinian forces ceased to exist or operate as large formations, even when present in large numbers. In Sidon, for example, many small groups fought within unconnected sectors under virtually no localized central command.

Deployment

Palestinian deployment was concentrated around the coastal camps and cities from Rashidiyeh south of Tyre, to Damour-Naameh and Beirut. One difficulty in estimating actual strength is that many fighters were not "regulars," but part of local militias. Israeli estimates vary greatly: 6-14,000 PLO fighters in the South, and 12-18,000 in the whole of Lebanon.²⁰ The PLO probably had no more than 2,000 full-time fighters in the South, including the Sidon region, and another 2,000, including allied organizations, for local support. These numbers were concentrated in the Tyre region, Nabatiyeh-Rihan, the lower end of the Bekaa Valley-Arqoub, along the coast south and north of Sidon (noticeably at Zahrani, Awwali, and Damour-Saadiyat), and in Sidon itself. The actual numbers deployed in the countryside were minimal: Israeli sources claimed initially

²⁰Figures varied from 6,000 PLO fighters in Lebanon (*Jerusalem Post*, June 7, 1982), to 8,000 (according to Cordesman, *op. cit.*, p. 29), or 30,000 (according to van Creveld, *op. cit.*, p. 12). Furlong estimates that there were 10,000 PLO fighters in the South alone (*op. cit.*, p. 1002).

that there were 1,000 PLO men in the Nabatiyeh command,²¹ roughly eight to ten times the actual number.

There were probably no more than 2,000 PLO regulars in the Beirut area, including some who had withdrawn ahead of the Israeli forces in the South.²² Larger population figures and the presence of PLO offices and leaders in Beirut meant, however, that the number of part-time fighters was quite large, reaching around 4-5,000. Just before the war, they were deployed within Beirut, or just south of it; during the war they defended Khalde and the Aley mountain before withdrawing into the Beirut perimeter. Finally, other PLO forces in the country (Bekaa and Tripoli) probably did not exceed 1,000 regulars and 2,000 militia (including affiliated local organizations). These forces were concentrated mainly in the central Bekaa area (including Baalbeck), and in the northern city of Tripoli or in the Beddawi and Nahr el-Bared camps nearby, where they remained during the war.

Concentration in the urban areas gave the Palestinian forces added defensive strength, a primitive form of "force multiplication." In the countryside, and along rural axes of advance, the Israeli forces enjoyed relatively uninhibited freedom of movement, partly because there were no local PLO reserves and once the war had started there was no possibility of moving central reserves. More PLO fighters in the countryside would not have changed the overall picture to any significant degree, but better planning and preparation would have resulted in greater Israeli casualties and higher Palestinian survival rates.

Management of Forces

The Palestinian military leadership was not able to reappraise its deployments and plans before the Israeli forces effectively cut it off from its fighters and encircled Beirut. From the outset, therefore, the central command lost its centrality and became a local battlefield command for the Beirut zone. In evaluating the performance of battlefield commands at all levels, the most prominent feature is the rapid disintegration of effective command in all but the Beirut theaters of operation. PLO forces based in the countryside may have been forced to discard command structures from company level upwards once the Israeli forces had broken

²¹The *Jerusalem Post* of June 7, 1982 also estimated that there were 1,000 PLO fighters in the Nabatiyeh area.

²²These figures exclude around 1,000 Syrian soldiers and 3,000 PLA men under Syrian control.

through, but the loss of such cohesion among units defending the cities led to a marked decrease in combat effectiveness. Thus, Israeli forces were allowed to land at the Awwali river north of Sidon despite the presence of PLO forces still capable of fighting in company strength. Later, the IDF was able to carve up Sidon as it had done in the Tyre area into convenient, isolated sub-sectors to be subdued at relative ease, mainly because there was no PLO central command in Sidon, and the defending units dissolved into a disordered mass of small groups. In such situations a battalion command should have taken over the role of central command, and company commands could have provided leadership for local sector defense.

In the defense of Beirut, the PLO displayed better use of its available forces and command structures, partly because of the presence of the PLO's main leadership and headquarters. The delay of the Israeli forces south of Beirut was also crucial for by the time the city was encircled, the defense perimeter had been established and the PLO forces had been assigned sectors and responsibilities according to their organizational establishment. The result was significantly increased combat effectiveness, as evidenced in the IDF's failure to capture Beirut Airport, despite repeated attempts, until August 1. The two cases of Sidon and Beirut demonstrate how influential the presence or absence of effective command can be, although combat in the countryside also showed how important it is that such command be flexible or even dispensable.

Other Areas of Operational Performance

Support Services

These include administrative, logistic, engineering, and medical services. Before the war, administrative services were provided at battalion or regimental level and covered matters of pay, leave, rank, and posting. Much of this information was stored by the central military administrations of the separate organizations within the PLO, in the absence of a unified military structure.

The functioning of the other services is more crucial to combat performance. Logistic supply of ammunition, food and fuel broke down almost instantly in the South because of near-total interdiction by Israeli aircraft of the roads and direct attacks on the supply and administrative centers. The defending forces had to rely on local stocks, though the loss of heavy weapons and vehicles and the dissolution into smaller units

generally reduced logistic requirements. In the eastern sector of the Bekaa-Arqoub, communication routes led back to Syrian-held territory and PLO forces withdrew before being encircled or destroyed. In Beirut, a stable defense perimeter and huge stockpiles of food, weapons and ammunition allowed the supply services to operate regularly. The continued existence of recognizable military formations also greatly facilitated the determination of needs and distribution.

Before the war, the engineering services concentrated on fortifying military positions and building shelters in civilian areas. In Nabatiyeh and Rihan, the Israeli forces found extensive trenches, tunnels, and shelters. In other sectors there was very little engineering work. Although there was a large number of civilian shelters, many were either unusable or inadequate due to poor design and construction. In the South, there had been no organized mine-laying work, but this shortcoming was rectified in Beirut, where extensive minefields were laid, tunnels and trenches dug, and earth barriers thrown up within four or five days as the Israeli invasion force fought for the southern and eastern approaches to the city.

Throughout the war, Palestinian medical services were the most active in all sectors. PLO casualties were still being evacuated from the battlefield as Israeli advance units closed in around Tyre, Nabatiyeh, and Sidon. The Palestine Red Crescent Society and the medical units attached to the military forces functioned even after the IDF was in physical control of these areas, and suffered a disproportionately high number of casualties or prisoners. In Beirut, Palestinian medical services managed to function long after those in the South had been eliminated, due to the stability of the frontline and the existence of appreciable stocks of medical supplies and equipment. Many new forward casualty evacuation centers and rear hospitals were set up, which treated over 12,000 wounded.

Mobility, Flexibility, and Initiative

In these aspects of performance, there was a wide discrepancy from unit to unit. In the South, road mobility was lost in stages between the first and third day of the land invasion, while the movement of fighters in the countryside allowed large numbers of them to filter north and east to safe areas. In Beirut, the protection afforded by buildings allowed continued use of the roads despite intensive shelling and bombing. In the strictest sense, however, mobility was non-existent due to constant Israeli control by land or from the air of all roads in the general theater of operations. Mobility on foot became a basic survival tactic, but was not a planned

asset, so not enough use was made of small, mobile units.

The flexibility to change into small groups did not develop according to a plan but was reactive. In Sidon, for example, many small groups ended up defending the same sector, but did not coalesce smoothly into larger, better-adapted formations. The lack of flexibility was evident in planning and improvisation to face new conditions, as reflected in the general unadaptability of combat units to new tasks required by the radically changing situation.

Initiative was low, as evidenced by the lack of aggressive military action behind Israeli lines and by the absence of junior officers stepping into the command vacuum to reorganize the defense. Battalion and company commanders did adapt themselves personally to lead whatever forces they had left, even if they could not bring under their control other forces occupying the same sector. This failure was due to the fragmented nature of the various PLO organizations and their military wings, the absence of real coordination between organizations and combat units before the war, and the lack of standardization in training and military skills. Many Palestinian units displayed great tenacity during the fighting, but not initiative. In some cases holding a defensive line against huge Israeli forces precluded offensive action, in others military training did not promote immediate offensive instincts.

The War of Attrition

Since the PLO's evacuation from Beirut, there have been daily Palestinian—Lebanese guerrilla attacks against Israeli military targets inside Lebanon.²³ Israeli troops are now concentrated in major encampments and bivouacs, with extensive fortifications, and support facilities, such as airstrips in Damour, near Aley, Ansar, and Metulla, and helicopter pads.

There are several striking features in the current Lebanese-Palestinian campaign.²⁴ Operations range widely over occupied areas with attacks on Israeli convoys on the coastal road, others in the Tyre, Nabatiyeh, and

²³The reputable Lebanese daily, *Al-Nahar*, mentioned on May 27, 1983, for example, that while the Israeli military spokesman had announced that an explosive charge had killed one Israeli soldier and wounded 14 in eastern Lebanon the day before, another unannounced explosion had wounded 15 others in Sidon that same day, and a third charge was dismantled before detonating.

²⁴For interesting comments on the current situation, see: "Concerning the Resistance to Israeli Occupation of Lebanon," *Strategic Review*, Vol. 4, No. 7 (May 5, 1982), p. 2.

Zahrani districts, and in central and eastern Lebanon. The methods of attack vary greatly, from remote-controlled car bombs to grenade attacks and direct automatic arms ambushes. These operations indicate better training, planning, execution, and greater confidence, such as in the effective use of wireless controlled bombs, and ambushes against sizeable Israeli units in broad daylight. Israeli military spokesmen have admitted to nearly one operation a day since September 1982—and to over 150 Israeli deaths, while resistance sources consistently report other operations at about double Israeli admissions. Palestinian and Lebanese casualties have been minimal, not exceeding 15 killed or captured. For the first time in the history of the Arab-Israeli conflict, Israeli forces are suffering worse than one-to-one casualties.

That the Lebanese and Palestinians have been able to sustain such a high level of resistance since September 1982 indicates a total change in their approach to military action. Patrols into Israeli-occupied territory are small, lightly-equipped, and mobile. This implies good reconnaissance and knowledge of terrain, local support, and improved planning and management. Israeli and Western assessments that many different political groups are undertaking the attacks with little or no coordination have two positive implications: first, that it is more difficult to uncover resistance networks, and second, that local commands (whether inside Israeli-occupied areas or outside them) can take the initiative within a general strategy. Whether such advantages, and the success they bring, will promote a fundamental reevaluation of past strategy remains to be seen.

Conclusion

The shortcomings in Palestinian military performance can be traced to three inter-related phenomena that have distinguished Palestinian armed action, at both conceptual and technical levels, since the early 1970s.

1. The lack of a military theory. There has been virtually no reappraisal of Palestinian military action since the late 1960s, when there were a few individual efforts to evaluate and criticize theory and practice.²⁵ As a result, the PLO went through the upheavals of the 1970-71 Jordanian civil war, and the politico-military vicissitudes of Lebanon during the 1970s

²⁵See footnote 2; there is a brief critique of a general nature by Gerard Chaliand and Abu Iyad in Gerard Chaliand (ed.), *Guerrilla Strategies* (Berkeley, CA: University of California Press, 1982).

and early 1980s without any form of military theory. This in turn meant that strategy and tactics received no concentrated attention.

Fateh abandoned its short-lived flirtation with the attempt to draw the Arab armies into a final, cataclysmic showdown with Israel after the June 1967 war dispelled all its illusions. Then, the various armed Palestinian organizations espoused guerrilla war, developing into a full-fledged people's war. Up to 1970, the people's war theory meant wide-scale recruitment of guerrilla volunteers and intense action against Israeli targets on or behind the (mainly) Jordanian-Israeli cease-fire lines. With the rise in numbers, Palestinian operations became more numerous and adventurous, often involving strikes against several targets along an extended front. The withdrawal from Jordan to Lebanon ended such freedom of action.

In the early 1970s, the PLO reached a historical low in its political fortunes and near-paralysis in its military activity. It did not study the military lessons of the past, or formulate a political or military strategy that could translate the theory of people's war into the Palestinians' particular situation.

2. Regularization. In the context of this vacuum, certain events came to determine subsequent Palestinian military development: the influx of ex-Jordanian army regulars, the October 1973 war, and the 1975-76 Lebanese civil war. The net result of these events was to accelerate the introduction of heavy weapons and large formations into PLO forces. The process of "regularization" (*tajyeesh*) and the static nature of both frontlines and combat in South Lebanon led to a divorce between the official ideology of people's war and the form and role of Palestinian military structures.

Ranks were instituted in PLO forces in mid-1971, and have remained ever since. The "regularization" of PLO forces meant the adoption of traditional army forms, structures, armaments and combat doctrine. Guerrilla "sectors" (*qita'*) were redesignated as battalions, light artillery and 6-wheel trucks were introduced, and the ranking system became more complex and widespread which affected pay-scales. During the Lebanese civil war, this trend accelerated in terms of armament, structure and operation (fighting in large units or along static frontlines) greatly assisted by the influx of Palestine Liberation Army (PLA) units previously outside PLO politico-military and geographic control.

Since 1976, "regularization" had become an accepted fact: PLO forces were already "regular" but needed more heavy weapons and trappings to

be accepted as such. Officers were sent abroad for training as battalion and brigade commanders, and as staff, naval, air and armor officers. Every battalion or "brigade" (*qiyadat quwwat*) had a staff of administrative and operations officers. Combat units were issued with helmets, anti-aircraft weapons, vehicles, and 120mm mortars. By Summer 1982, the PLO was fielding tanks, APCs, heavy artillery, and hundreds of crew-served weapons. It had reportedly requested SA-6 anti-aircraft missile systems and Frog surface-to-surface heavy bombardment rockets.

3. Arms procurement policy. The rationale for acquisition of particular weapons was reactive and had little to do with real needs or capabilities. Developing armament seemed desirable, given the absence of a clear military strategy derived from a particular military theory, the false security of the UN buffer zone in the South, and the search for increased international legitimacy by portraying the image of a state-in-formation. Thus, heavy artillery was introduced during the Lebanese civil war in response to the shelling of West Beirut; heavy multiple rocket launchers and guided anti-aircraft weapon systems were acquired to provide better defense and a more intense artillery response to Israeli artillery firepower following the post-Camp David shellings and the July 1981 aerial bombing of Beirut. In all these cases, development in weaponry did not follow on effective absorption and use of existing weapon systems, nor did it take into account actual Palestinian technical and human capabilities.

The PLOs "regularization" and arms procurement policies grew out of an initial vacuum, then became an alternative military practice that still claimed people's war as its inspiration. "Regularization" and the acquisition of heavy weaponry are not, by definition, inimical to the concept of people's war—the Vietnamese National Liberation Front certainly used large formations and heavy weapons—but the aims of achieving concentration of men and firepower did not require, indeed were harmed by, the PLO's methods. The PLO's political and diplomatic objectives were more influential in this matter than purely military considerations. Otherwise, the Palestinian version of marrying regular forms with revolutionary aims can only be the result of bad judgment of needs, circumstances and capabilities. The use of large formations and heavy weapons requires a much broader human base; in the absence of this, elite units built through better planning and training would be more appropriate. The present successful Palestinian-Lebanese guerrilla campaign against Israeli forces in Lebanon holds positive lessons for the future.