Back to Ground Rules:
Some Limitations of Airpower in the Lebanon War

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On June 3, 1999, following seventy-eight days of intensive aerial operations in Balkan skies, the NATO military campaign in Yugoslavia came to an end. A famous British historian was quick to observe that June 3 marked the first time a war was decided by airpower alone, and will forever be remembered as one of the most significant turning points in military history.[1] Many concurred, and Operation Allied Force, as the NATO operation was known, has since become the yardstick by which any large scale aerial activity is measured.

In Israel many were eager to compare Israel's Operation Change of Direction in Lebanon[2] with Operation Allied Force, notwithstanding the fundamental differences between the two operations, which are outside the scope of this article. Yet in the days following the start of the Lebanon operation, especially with the incessant launching of rockets at northern cities and towns, including Haifa, opinions were soon voiced regarding the so-called failure of the air force to achieve the operation's objectives. Despite hundreds of sorties flown by the air force twenty-fours hours a day every day, it seemed that airpower had disappointed by failing to meet the expectations held by many: a decisive aerial victory in Lebanon.

A full assessment of the actual situation shows that aerial power did not fail in Lebanon, just like it would be wrong to say that it single-handedly won the war in Yugoslavia. The fact is that airpower is no magic solution. Though it has many capabilities, and more now than ever, there are ends it cannot satisfactorily meet.

The Challenge of Mobile Targets

What can a modern air force do? As the recent wars of the United States in the Persian Gulf and the Balkans have proven, and as in the early days of operation Change of Direction, the smart use of fighter planes and attack helicopters carrying precision guided munitions, along with supporting C^{3}I systems, affords considerable achievements in hitting strategic targets such as command centers, army bases, and infrastructure targets. The capability of a small number of aircraft to carry large amounts of precision guided munitions and to hit the target's critical spot, day and night in almost any weather, is remarkable. If the mission planner and the air crew know where the target should be struck, primarily thanks to accurate intelligence, it will most likely be struck. The attack can be carried out from very short range, but if the aerial force is under threat, it can be carried out, with no less accuracy, from a range of dozens or even hundreds of kilometers by using standoff munitions. In this respect the Israeli air force is second only to the US air force, and in some respects might even surpass it. In fact, it is doubtful that any other air force in the world other than the two mentioned, including West European air forces, is capable of executing a prolonged aerial campaign of this sort.

Nevertheless, and as was true for previous aerial campaigns as well, the air force has a hard time successfully engaging targets labeled as low-signature and time-sensitive. This means mobile targets that are not prominent on the ground and can carry out their tasks while keeping a relatively low profile and quickly escaping the area. Examples include mobile surface-to-air missile (SAM) systems as well as launchers for surface-to-surface rockets (SSR) and for surface-to-surface missiles (SSM).

With SSM launchers and even

1 John Keegan, "Please, Mr Blair, Never Take Such a Risk Again, "*Daily Telegraph*, June 6, 1999.

2 The initial name of the operation was "Just Reward."

more so SSR launchers, the task is especially complicated. Often an SSR launcher is no more than a few barrels joined together and hidden well in the bushes. The launcher does not require a large support system, and a small team is sufficient for operating it. In addition, contrary to many SAM systems, operation of the launcher does not require transmission or other activities that may be picked up in advance by electronic sensors. Thus nearly the only way to identify the launcher is visually, and since the target is an easy one to camouflage and is difficult to distinguish from civilian targets, e.g. a truck, typically the launcher will only be spotted as a result of identifying the launch itself. This has two implications: first, the launch must be identified early and the information relayed quickly to the attacking equipment. The entire process, referred to as "closing the loop," must be completed in a very short time period, only a few minutes, since soon after the launcher will be moved from its location. Second, the identification can only take place after the launcher has launched its payload, i.e., after the potential damage is already underway.

The process of "closing the loop" – locating the launcher, identifying it, directing the attack aircraft, and the attack itself – requires a combination of continuous, real time intelligence and an ongoing presence of precision means of attack in the area, be they aerial (as in fighter planes, attack helicopters, or other platforms), ground-based, or naval (as in long-range artillery). The greater challenge is the intelligence requirement. The main tool used for this task is the UAV (Unmanned Aerial Vehicle), but a large number of UAVs are needed to cover an area the size of the potential launch sites in Lebanon, and even then absolute accurate reports cannot be guaranteed.

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The successes of the air force in "hunting down" SSR launchers in Lebanon, as reported by the IDF, are not insignificant. The capabilities and achievements of the Israeli air force in engaging low-signature, time-sensitive targets are probably better than those of any other air force, but they are not the entire story. Even if the air force destroys several launchers every day, the rate is not sufficient and Hizbollah's stockpile of weapons remains impressive, as evidenced by the ongoing onslaught of Katyushas.

No Airpower Decision, Yet Once More

What then can one expect from the air force? The experience gained by the Americans in their efforts to stop Iraqi SSM fire during the 1991 Gulf War shows that you can impair the efficiency and functioning of SSM / SSR even without scoring accurate hits on the launchers themselves. During the entire war, the Americans did not succeed in hitting a single SSM launcher, despite assigning considerable forces to this task. However, the intensive air operations, alongside the use of special operations forces on the ground, affected the accuracy rate of Iraqi SSM fire as the fighting went on. This achievement was the result of continuous air operations over the launch areas and attacks on SSM support sites. In the case of SSR there are fewer such sites, and it is better to attempt to destroy rockets that are stored at one location, rather than when they are dispersed all over. This requires accurate intelligence, which is often unavailable.

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Even if the air force should improve its SSR launcher destruction rates, it will not be able to completely remove the threat. Working in parallel to limited deployment of ground forces, the air force will be able to disrupt the rockets' accuracy and pos-

sibly reduce the quantities launched and the launch rates. To this end two vital resources are required: intelligence and time. It is uncertain that in Operation Change of Direction those two resources are available to the air force to the extent required in order to show significant results any time soon.

In the case of Yugoslavia, the image there too is in fact far less clear-cut. The war did not end after the destruction of the Serbian army's capacity to fight, nor because of decisive hits to strategic targets in Yugoslavia. Its end came about primarily after Serbia had lost the support of its main ally, Russia, and as a result of a threatened ground invasion by NATO. A closer examination of the air operations against Serbian forces shows that in thousands of sorties, in which hundreds of targets were reportedly hit, air strikes only managed to destroy about fifty armored forces and artillery targets. This is an extremely low success rate, especially in view of the many resources allocated to this task over an extensive period of time. And, we might add, this low success rate came with no strikes on the attacking force's home front, in complete contrast to the challenge facing the Israeli air force in fighting in Lebanon.

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Although the Israeli air force, despite its impressive capabilities, cannot achieve the stated operation objectives on its own, its activity in Operation Change of Direction cannot be construed as a failure. Moreover, it may yet contribute to creating the conditions that will aid the political moves, as was the case, for example, in Yugoslavia. The air force did not disappoint in the current war in Lebanon. Rather, it did what it can do, but in contrast to the writings of the British historian, apparently airpower alone cannot determine the outcome of a war, at least not at this stage. This was true in Yugoslavia, and it is true in Lebanon. This is neither a failure nor a disappointment – this is reality.