



The Strategic Implications of Effective Population Defense Against Ballistic Missiles

by Uzi Rubin

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EXECUTIVE SUMMARY: Israel was the clear victor in the 2014 Gaza War. That Israel's war aims were achieved by a defensive rather than offensive strategy does not diminish the magnitude of its success.

Before the 20th century, wars were often confined to distant battlefields. The advent of air power brought wars to home fronts. A new strategy for winning wars not by Clausewitzian decisive battles but by the use of airpower against home fronts was first offered by Giulio Douhet in 1921. His writing influenced military thinking between the two world wars and led to the establishment of strategic air forces in the UK and the US whose contribution to ending World War II is still controversial.

Missile power joined air power in terrorizing home fronts as soon as Nazi Germany perfected its V1 cruise missiles and V2 ballistic missiles in 1944, though the impact of those spectacular weapons on the course of WWII is judged today to have been insignificant.

Following the war, ballistic missiles graduated into nuclear ICBMs. Today ballistic missiles are perceived as adjuncts to the nuclear issue. Their non-nuclear capability to complement or replace conventional air power has been largely trivialized. The Iranian nuclear deal (the Joint Comprehensive Plan of Action, or the JCPOA), which excludes ballistic missiles, is a case in point.

Yet conventional ballistic missiles played a strategic role in the Middle East wars of the late 20th and early 21st centuries. The two most prominent examples were Saddam Hussein's use of extended-range, conventionally armed Scud missiles against Iran in 1988 and against Israel and Saudi Arabia in 1991. In the first instance, the end of the Iran-Iraq war was attributed by many observers to the

devastating effects of the Iraqi missiles on Iran's major cities. While the total number of casualties was miniscule in proportion to battlefield casualties, the costs in damages, dislocation, and trauma may have reached intolerable levels. In the second instance, Saddam Hussein's conventional missiles threatened to wreck the US-led coalition, which in turn might have stopped the war against him.

Rockets – in essence small, short-range, unguided ballistic missiles – have featured in Middle Eastern conflicts for almost half a century. Rockets have been extensively used against populations in the Syrian and Yemeni civil wars. Palestinian rockets fired from secure bases across international borders have been terrorizing Israeli population centers since late 1968 with significant destabilizing results.

With no effective defense save sheltering, Israeli responses were offensive, seeking to dissuade and deter. Thus, the 1982 Lebanon War came in response to incessant Palestine Liberation Organization rocket attacks on northern Israel. In the next decade, Hezbollah rocket attacks on the northern Israeli towns of Nahariya and Kiryat Shmoneh triggered massive Israeli retaliation on southern Lebanon in 1992 and again in 1996. Hezbollah rocket fire in July 2006 triggered a massive Israeli air offensive against Lebanon followed by a ground invasion. Similarly, escalating Palestinian rocket fire from Gaza on the Israeli southern and central districts brought Israeli air and ground retaliatory attacks, with real consequences to Palestinian civilians. With its population centers exposed to rocket attacks and with diplomacy achieving only shaky, short-lived cease fires, Israel had no other response option except escalation.

The need for an alternative, non-escalatory strategy became obvious to Israeli planners in the mid-1990s. Defense against rockets is a demanding technical challenge due to the short timelines involved. Hence the first attempt to devise active rocket defense revolved around speed-of-light directed energy weapons (i.e., high-powered lasers). The inherent limitations of this technology doomed the effort, and Israel reverted to more conventional interceptor missile technology. The result was the "Iron Dome" short-range missile defense system, which has been deployed since mid-2011.

The Middle East is a cockpit of wars, making it a veritable proving ground for weapons, tactics, and strategies. The introduction of Iron Dome to the battlefield provided an opportunity to evaluate the strategic implications of population defense against rocket fire in limited wars. From Israel's perspective, population defense exceeded expectations. If the purpose of the Palestinian rockets was to wage an attritional war against Israel's population in order to gain political concessions, the successful defense of that population inverted the attritional equation and forced the aggressors, rather than the defenders, to seek a ceasefire with no tangible political gains.

However, overseas critics challenged this conclusion on two counts: first, that Iron Dome was less successful than claimed; and second, that the success was qualified and temporary. The first claim was made by scientists Dr. Ted Postol, a nuclear scientist from MIT, and Mr. Richard Lloyd, a missile warhead expert. Based on open-source, two-dimensional images, the two concluded that Iron Dome's score was poorer than claimed, although their estimates diverged considerably between 5% (Postol's) and 40% (Lloyd's).

In contrast, Israelis were unanimous in their confidence that [Iron Dome worked](#) as advertised. This was supported by Israel's Treasury information on damage claims and payments, which showed a steep decline compared to previous rocket attacks in 2006 and 2012. On a more personal note, the author, who, during the 2014 war, commuted every weekday to his Tel Aviv office, never saw any rocket hit the city or its suburbs, though more than 130 rockets targeted it. Similar testimonies abounded in Israel's media. The critics' claim of marginal success fails to explain this reported tranquility.

Other critics accept the success of Israel's population defense but argue that it was both strategically qualified and volatile. Such arguments were made mainly, but not exclusively, by Elizabeth M. Bartels in her recent [article](#) in *The Strategy Bridge*. Bartels make three arguments in support of her claim: first, that the casualty imbalance brought about by Iron Dome's successful defense of Israel's population came at a strategic cost; second, that the success is destined to be short-lived; and third, that it denied Israel a decisive military victory. These arguments will be addressed sequentially.

The Iron Dome reduced Israeli civilian deaths and enhanced the effectiveness of Israel's population defense during the 2014 Gaza War. Of the five Israeli civilians killed by Palestinian fire, only two deaths were caused by rockets. The toll among Palestinian civilians is in dispute but in any case, it constituted a sizable proportion of the total death toll of more than 2,000 persons. Bartels argues that this disparity in the death toll between Gaza and Israel, accentuated by the success of Iron Dome, carried a strategic cost to Israel. In her words, "Palestinians suffered while Israelis remained relatively safe."

While this argument does not offer specific suggestions on how this cost might have been mitigated, some options can be envisaged. Other than giving in to Hamas demands, two possibilities come to mind: either allow an increase in the Israeli death toll by foregoing defense, or decrease the Palestinian death toll by foregoing offense. The first option is a non-starter: no democratic government would intentionally expose its citizens to the risk of death if defense is feasible. The second option may sound tempting to uninvolved observers: after all, since its citizens were relatively safe, Israel could

theoretically afford to passively absorb Palestinian rocket fire without retaliating. Similar suggestions have been made by other observers.

In real life, this too is non-starter. The economic, political, and social impact of high-intensity rocket fire on population centers is not limited to the number of civilian deaths; it has wider implications. The reduction in the number of fatalities does not reduce the terror itself. Life stops whenever an alarm is sounded, and the constant threat disrupts the economy and traumatizes the population. Fortunately for Israel (and the Palestinians), the 2014 Gaza War happened during the annual school recess. Had it taken place during the school year, the rocket threat would have closed all schools and other educational institutions, compelled the labor force to stay at home, and essentially shut down the economy.

A prolonged passivity would sway public opinion towards a more aggressive policy and precipitate a political crisis. Neither Israel nor any other country can sustain rocket attacks against its citizens indefinitely, even when casualties are relatively light. Prolonged passive sustainment might have mitigated the strategic cost of casualty imbalance but at a higher overall strategic cost.

In more general terms, the "casualty imbalance" argument misses the wider strategic implications of successful population defense. The clash of arms between Israel and the Palestinians in the summer of 2014 had some attributes of a full-scale war in which both sides had explicit political goals. Israel's declared objective was a return to the previous ceasefire situation and the cessation of rocket attacks from Gaza. The declared war aims of Hamas, as elucidated at the time by then-Hamas leader Ismail Haniya, were the unconditional lifting of the "siege" on Gaza including open borders and the construction of a Hamas-controlled international airport and seaport – in short, the unconditional recognition of Hamas sovereignty in Gaza without any obligation to make peace with Israel.

After 53 days of fighting, albeit with some temporary lulls, Hamas opted instead for what turned out to be an unconditional ceasefire without gaining anything substantial in return. Thus, and without escalating the fighting beyond what was strictly necessary to block the Palestinian tunnel threat, Israel achieved both its immediate war objective and a significant long-term strategic gain: blunting Palestinian rocket terror, thereby broadcasting a strong deterrent message to Israel's foes in the region.

This result was the product of a successful population defense. With the rocket fire largely neutralized by Iron Dome, the attritional equation was overturned and it was Hamas who could not sustain Israel's counter actions any longer.

Bartels argues that this achievement is destined to be temporary, because "adversaries will adapt and learn how to circumvent the system." This is a generic argument that is hardly specific to Iron Dome but applicable to any innovative weapon system or, in fact, any new commercial venture. The competition will always strive to adapt and circumvent anything that threatens its own weapons or commercial gains. The argument of advantage volatility is often cited by opponents of missile defense, who believe missile defense is particularly prone to countermeasures – in fact, there is a rich literature on how aggressors can deploy so-called "cheap and simple" countermeasures that are likely to circumvent the most sophisticated missile defense system.

This is a fallacy. Nothing in the art of countermeasures is simple or cheap. Moreover, the defenders are at least as adaptive as the aggressors, and often even more so. In the case of Iron Dome, the Palestinians have been trying to circumvent it ever since its first operational debut in April 2011, with no discernable success to date. Doubtless they will continue to try, and Israel's defenders will continue to improve their defenses. This is another manifestation of the eternal race between offense and defense, where the advantage lies with the side that holds the technological high ground.

Lastly, the question of whether or not Iron Dome denied Israel a decisive military victory needs to be addressed. Such opinions were indeed aired by retired Israeli officers, probably echoing the disappointment of some serving IDF officers at their government's refusal to endorse a full-scale assault into, and reoccupation of, the Gaza Strip with the aim of crushing the Palestinian armed forces. Similar opinions were voiced by numerous Israeli analysts and lawmakers. Most critics attributed the reluctance of the Israeli government to hesitant leadership. Some ascribed it to the lulling effects of effective population defense, which gave the government the leeway to avoid a counterproductive policy.

In fact, the architects of Israel's missile defense aimed to achieve exactly such leeway, providing the political leadership with a non-escalatory option. In the 2014 Gaza War, it was Israeli government policy neither to seek a final showdown with Hamas nor to reoccupy the Gaza Strip. The former might have brought to power an even more radical, ISIS-like Palestinian faction; the latter would have embroiled Israel in years of protracted urban guerilla war in the dense population centers of Gaza. A high number of casualties from Palestinian rockets would have forced the government to revert to an escalatory option, with its inevitable human toll for both Israelis and Palestinians. Effective population defense allowed Israel to practice restraint and see the fighting to a successful end.

Combatants at war have mutually exclusive objectives, and the winner is the side that gains its objectives or prevents the other side from gaining theirs.

From this perspective, Israel clearly won the 2014 Gaza War. The key factor was successful population defense. That Israel's war aims were achieved by a defensive rather than offensive strategy does not diminish its success.

In the history of warfare, defensive victories such as Gettysburg or the Battle of Britain have had major strategic implications no less than offensive victories. Limited wars between asymmetric opponents tend to target the resilience of populations rather than the capabilities of armed forces. One of the most important lessons from the 2014 Gaza War is that effective population defense can level the playing field and bring back a degree of symmetry to the balance of power between the contenders.

This is an edited version of an [article](#) that appeared in The Strategy Bridge on February 21, 2018.

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