

## Article

# Airminded Insurgents: Innovations to Undermine Airpower in the Gaza Strip

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**Biography:** Flight Lieutenant Jacob Davies joined the RAF as a pilot in 2016. This article is the product of a five-month, full-time research fellowship at the Institute for Middle Eastern and Islamic Studies. It is an adapted excerpt of a paper published in full as a Durham Middle East Paper. Details of that article can be found below. Flight Lieutenant Jacob Davies, 'How the Weak Deter the Strong: Airpower, Technological Regression and the Coercion Balance in the Gaza Strip', Durham Middle East Paper No. 101, *IMEIS*, 2020.

<https://www.dur.ac.uk/resources/imeis/DMEP101-HowtheWeakDetertheStrong.pdf>

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**Abstract:** Like many Western nations, Israeli security relies heavily upon airpower. Hamas recognises reliance as an exploitable weakness, and has tailored its strategy around the limitations of airpower in asymmetric settings. It acts to accentuate the difficulties of delivering discriminate and proportionate force from the air through typical insurgent tactics, embedding military assets within protected sites and moving its operations underground. Most recently, Hamas has incorporated moves into the 'grey zone' within an existing mantra of violent resistance. Border marches and incendiary terror allow Hamas to extract a cost from Israel from a less overtly aggressive starting position, permitting deniability whilst retaining a capacity to escalate. They fall outside the remit of conventional airpower, rendering the Israeli Air Force's (IAF) considerable capabilities obsolete. Significant tactical advances from the IAF have been unable to fill the vacuum left by deficient strategy. Hamas' innovation provides an example of how sub-state groups can reach strategic parity with their superiors by countering complexity with simplicity.

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**Disclaimer:** The views expressed are those of the authors concerned, not necessarily the MOD.

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## Introduction

When trouble breaks out in a settled country, such as Palestine ... the guilty and innocent parts of the population are living close together... the whole thing is on too small a scale to give scope for the characteristics of the aeroplane – its speed, hitting power and independence of communications, and it is therefore upon the Army that the main burden of this kind of police work must fall.<sup>1</sup>

Air Cdre C. F. A. Portal, DSO, MC, speaking at a lecture in 1937.

**T**he short history of the Israeli state has been characterised by conflict. A small democratic nation nestled between hostile neighbours, Israel's survival, and its growth in the face of adversity, has depended on the excellence of the Israeli Defence Force (IDF), and of the Israeli Air Force (IAF) in particular. However, like many Western militaries, the IDF has struggled to replicate its conventional successes in an asymmetric setting. A deterrence policy that relies upon the delivery of force from the air has stuttered in the Gaza Strip, where insurgents have identified Israel's reliance on airpower as an exploitable weakness. Adept at recognising the limitations of an air-led strategy, Hamas has adapted its operations to bypass the IAF's considerable strengths. Through 'airminded' strategies, Hamas has produced a deterrent power to match that of its military and economic superior.

Since Hamas took control of the Gaza Strip in 2007, virtually continuous IDF activity in the region has been punctuated by three intense operations in 2008-09, 2012 and 2014. Technical adaptation on the part of the IAF has produced an impressive tactical record over these campaigns, but strategic success remains elusive. The IAF's innovations are well documented, and will not be the focus of this excerpt.<sup>2</sup> This article will attempt to drag models of airpower away from the state, focusing instead on the insurgent's interactions with air-led strategies. The resources required to construct an air force of the top order are out of reach for most nations, but even if insurgents cannot normally field air forces, they are best placed to recognise the strengths and weaknesses of airpower. This is the view from the ground looking up, or 'airmindedness from below'.<sup>3</sup>

This article will examine airpower from the perspective of the insurgent, and how Hamas has exploited the limitations of an air control strategy in an urban environment. Through comprehensive adaptation, Hamas has undermined the IAF's considerable capabilities. For instance, the ability to strike objectives with staggering accuracy is of little use if the target does not present itself, or if a military objective is embedded within protected, civilian sites. Moreover, overwhelming firepower, indispensable in an inter-state conflict, can serve as a weakness in one of the most densely populated regions in the world. These are the murky paradoxes of asymmetric warfare, where the state's adherence to moral and legal norms becomes an exploitable weakness.

This excerpt will begin with a brief summary of Hamas' development, before moving on to discuss the group's defensive measures. In particular it will examine how Hamas embeds

military objectives in protected sites, and also how it has developed a comprehensive tunnel network to move its assets away from the reach of airstrikes. Next, the offensive methods Hamas employs will be assessed, all of which are designed to fall outside the realm of traditional military force.

It will conclude with Hamas' most recent movements into the realm between war and peace, and how it has constructed methods of resistance that render the considerable capabilities of the IAF obsolete. The development of sub-lethal tactics has posed an acute dilemma for a nation that relies on its air force as its primary force component. Border marches and incendiary terror fall outside of the remit of conventional airpower, and the IDF has struggled to find a response that both addresses their security concerns and adheres to international norms. As with all of Hamas' 'grey zone' tactics, these innovations complement rather than replace traditional methods of aggression. The capacity to escalate this harassment, to easily transition from protest to violence, ensures that these methods are powerful coercive tools.

The RAF is not the IAF, and lessons learnt in Gaza cannot be adopted wholesale by the UK's military. Israel routinely operates alone and from within its own borders, in contrast to the expeditionary, coalition warfare that has characterised recent British history. However, the same factors that push Israeli planners towards airpower pervade all Western democracies, and the UK is no exception. Unfortunately for the state, drastic technological advancements have been unable to overcome the fundamental problems Portal identified in the RAF's interwar air control strategies. Delivering discriminate and proportionate force to insurgents in densely populated, cluttered environments remains a challenge.

Despite considerable disadvantages, Hamas endures, and continues to exact a cost from Israel for its policy towards the Gaza Strip. On one side of the fence is an insurgent group, firing rockets composed of old pipes, and tying burning cloth to bundles of balloons; on the other is an operator of the F35I, one of the most sophisticated militaries in the world. Yet through a mishmash of improvised methods of attack, and adaptation in defence, Hamas has produced a deterrent power to match that of the IDF's. This paper will explore the on-going learning process between the two parties, and how the weak have adapted to deter the strong.

### **Hamas: Resistance and Rockets**

Before examining Hamas' innovations to undermine Israeli airpower, it is first necessary to briefly explore how the group became one of Israel's most significant security threats. Following Israel's withdrawal from Gaza in 2005, few predicted Hamas' dramatic ascendancy, yet in the elections of January 2006, among the freest elections ever held in the Middle East, Hamas took 74 of the 132 seats on offer.<sup>4</sup> By July 2007, following a week of violence which left over 100 dead, Hamas had taken full control of Gaza and split the Palestinian Authority in two.<sup>5</sup> Condemnation of the group, already designated a terrorist organisation by much of the international community, intensified, with fresh sanctions and isolation that has continued virtually unabated to the present day.<sup>6</sup>

One of the many Islamist groups in Gaza, Hamas maintains control over the instruments of power with repressive policies, but also by maintaining a degree of grassroots support. Its legitimacy rests on its image as the most effective form of resistance against the Zionist 'invaders', and its fundamental aims, enunciated in its Charter of 1988, remain unchanged. It will not recognise the validity of the state of Israel, and seeks 'the full and complete liberation of Palestine, from the river to the sea.'<sup>7</sup>

The strength of the State of Israel, and its clear resilience and growth in the face of adversity, ensures that 'resistance' remains the most important element of Hamas' strategy. As Kirchofer highlights, like many terrorist groups with ambitious strategic aims, Hamas has more immediate 'process' goals which allow it to redefine success and claim victory without tangible progress towards its ultimate objectives.<sup>8</sup> Prior to 2006 Hamas' shorter-term goal was to attain power in Gaza, and following its ascent to government its aim has been to consolidate and maintain it.<sup>9</sup> In the absence of progress in its lofty strategic ambitions, Hamas relies on the 'process', or method, of resistance. In their own words:

Hamas is a comprehensive institutional movement taking resistance against the Israeli occupation as its main goal and strategic project.<sup>10</sup>

In constructing its methods of resistance, Hamas has drawn from the 'rocket doctrines' of other Palestinian sub-state actors, most notably Hezbollah, and turned them to the context of the Gaza Strip. Similarly to their regional counterparts, it has adopted projectiles due to their low cost and the minimal expertise required to operate. Just as Israel seeks to establish that rockets will be met with airstrikes, Hamas has ensured that the reverse is true. In the words of spokesman Sami Abu Zuhri, Hamas is seeking to impose 'the equation of blood for blood and buildings for buildings.'<sup>11</sup>

This reciprocal strike relationship has been unable to prevent the extensive use of missiles by both parties. From 2000-2014, 16,500 rockets were fired at Israel from Gaza, and the IDF has waged three protracted and costly campaigns against Hamas.<sup>12</sup> The stated aims of each of these campaigns, and indeed the 'Campaign between Wars', were to reduce Hamas' ability to harm Israeli citizens, and to re-establish deterrence. Air campaigns were integral to Op Cast Lead (2008-09) and Op Protective Edge (2014), and during Op Pillar of Defense (2012) the IDF relied on airpower in isolation. The rocket fire from Gaza was highest during these campaigns: 3,852 rockets were fired during Op Protective Edge alone.<sup>13</sup>

Hamas' 'rocket doctrine' is well documented, and explored in detail elsewhere.<sup>14</sup> It will only be referenced here in relation to Hamas' other tactical and strategic innovations. The focus of this excerpt will be on how Hamas has adapted to undermine Israeli airpower, first defensively and then in its offensive methods of resistance. By continuing to exploit Israel's vulnerabilities, Hamas has produced a coercive power that matches that of its enemy. It has been able to reach parity with its far superior rival by implementing a strategy based on 'airmindedness from below.'<sup>15</sup>

## Defensive Adaptations

Hamas' defensive adaptations in the face of Israeli airpower are many and varied. The following two will be discussed here: its use of civilians to shield military objectives, and its extensive network of tunnels.

### Civilians as Missile Defence

The manner in which Hamas has embedded military structures within the civilian population, and among sites protected under international law, is well documented. Hamas' practices have extensive precedent in other asymmetric conflicts and comprise what Dunlap termed as 'lawfare', that is, 'the use of law as a weapon of war'.<sup>16</sup>

Hamas and Hezbollah routinely operate on or near protected sites, such as schools, mosques, medical facilities or UN facilities, using them to cache or launch weapons from. Such action exploits ambiguity in international law and presents IDF decision makers with intractable problems that need to be addressed in short time frames. Should the IDF refrain from an attack, the target remains unimpeded, but should they strike they could cause significant civilian casualties and international censure. For the insurgent, it is a zero sum game. Prominent liberal Zionist, the late Amos Oz, summarises the situation from an Israeli perspective:

I am afraid that there can be no way in the world to avoid civilian casualties among the Palestinians as long as the neighbor puts his child on the lap while shooting into your nursery. This is why for Israel it is a lose-lose situation. The more Israeli casualties, the better it is for Hamas. The more Palestinian civilian casualties, the better it is for Hamas.<sup>17</sup>

The scale of this practice is contested, but sufficient evidence exists to rebuke Hamas' claims that allegations are 'utter lies'.<sup>18</sup> The IDF allege that 550 of the 4,500 rockets and mortars fired during Op Protective Edge were launched from or near 'sensitive sites', including schools, UN facilities, hospitals and places of worship.<sup>19</sup> Although the UN (and the United Nations Relief and Works Agency (UNRWA) in particular) had made it absolutely clear that the neutrality of their sites must not be compromised, during the same operation there were instances of weaponry being discovered in UN sites, as reported by Mike Cole, head of UNRWA's legal field office in Gaza from 2012-2015.

Without a shadow of a doubt, protected places like UN sites were being used to store or fire weapons from, and when we found it we shut it down immediately. There was no connivance.<sup>20</sup>

The IDF has attempted various methods to minimise casualties and fulfil their commitments to international law. Byford traces the significant tactical adaptation the IDF has undergone to shorten its sensor to shooter cycles and enable it to prosecute targets of opportunity.<sup>21</sup> In Lebanon in 2006 the IDF's warning system was limited, but by Op Cast Lead a sophisticated network of phone calls, written notices, leaflet drops and radio communications was in place

to try and disperse civilians prior to a strike.<sup>22</sup> Providing warning is particularly important for Kasher and Yadlin, and international law, due to the way that it transforms unwitting civilian shields into voluntary defenders, thus reducing the IDF's obligations to minimise casualties. IAF warnings have experienced some success. A Situation Report, issued by the UN Office for the Coordination of Humanitarian Affairs on 9 July 2014, reported that prior to airstrikes residents had been warned 'in most cases'.<sup>23</sup>

Such are Israel's efforts to minimise casualties and the skewed censure of the international community that it has led some to argue of double standards, in both action and the degree of truth required for legitimacy.<sup>24</sup> Unfortunately, this is an unavoidable feature of asymmetric warfare. As Galula recognised, in such situations the state is 'tied to his responsibilities and to his past, and for him, actions speak louder than words. He is judged on what he does, not on what he says'.<sup>25</sup> The legality of an action does not matter as much as whether such an action is perceived as legitimate and proportionate. Discussions on who bears blame for civilian casualties do not prevent the loss of life, nor do they avert the damage of the action to the reputation of those that caused such deaths.<sup>26</sup>

Regardless of any level of precaution, the use of airstrikes to counter insurgents in an area as congested as Gaza will inevitably cause casualties and damage. An airstrike, almost by definition, is designed to cause some degree of destruction. Despite the mitigation procedures outlined above, in the first two weeks of Op Protective Edge the IDF destroyed 3,000 homes, 46 schools and 54 mosques, with a reported 16 hospitals and clinics coming under fire.<sup>27</sup> Although in many cases, including those of the Al-Aqsa and al-Wafa hospitals, the IDF published evidence of the very close proximity of rockets to hospitals and detailed the ways they tried to avoid unnecessary damage, this was still insufficient to avoid international condemnation.<sup>28</sup> This criticism can have an immediate strategic effect, as was the case following the Qana airstrike of 30 July 2006. After two bombs killed 28 civilians, Israel suspended airstrikes on Lebanon for 48 hours at a particularly sensitive point in the operation.<sup>29</sup> For Israel the challenge remains how to combat insurgents intentionally endangering civilian populations, whilst maintaining deterrence through a doctrine based on excessive force.

The debate surrounding Israel's 'knock on the roof' procedure reflects the severity of the challenge. Developed in 2009, a smaller, typically 25lb hellfire, missile precedes a main strike, in an effort to provide warning and encourage civilians to evacuate. Like much of the IAF's air control efforts, this practice has precedent in interwar air policing. During the Mohmand Campaign of 1935 the RAF dropped 'harmless 11-lb stannic-chloride practice bombs as "frighteners"' for the first time, to try and force the eviction of villagers prior to a strike.<sup>30</sup> The criticism associated with this technique is indicative of the difficulties of using air strikes to deter in urban areas. The Goldstone Report claimed that it was 'not effective as a warning and constitutes a form of attack against the civilians inhabiting the building'.<sup>31</sup> Human rights group *B'Tselem* is strong in its criticism of the practice, alleging that on 14 July 2018 a warning strike killed two Palestinian teenagers.<sup>32</sup> There is no standard time gap between the initial and the

main strike, and the IDF has faced accusations that the window is sometimes too small to allow civilians to evacuate.<sup>33</sup>

Moreover, whilst such strikes may warn civilians of an impending attack, they also alert insurgents. It follows that if they do reduce the danger to civilians then they will also reduce the danger to Hamas' operatives. Pre-warned airstrikes will only be useful for destroying physical infrastructure and equipment, and will not be an effective way to kill the enemy. Such compromises are inevitable when airstrikes are used to coerce an enemy embedded in a civilian population. Again, for Hamas it constitutes a zero sum game.

## Tunnels

Alongside the use of civilians and protected sites as shields, Hamas has also undermined Israel's ability to affect their operations from the air by moving assets outside their reach. The enduring aerial presence over Gaza, and the risk of observation, and therefore strike, from above, has pushed Hamas underground.<sup>34</sup> The comments of a Hamas commander following Op Cast Lead demonstrate this logic.

It was a completely different conflict to the ones in the past. In 2008, the airstrike and air surveillance took us by surprise. That war cost us a lot, so we made strategic plans to move the battle from the surface to underground.<sup>35</sup>

This move expanded an already extensive network of tunnels for smuggling, C2 and attack purposes. The sprawling network of tunnels within Gaza is a defensive asset, designed to deter Israel from using ground forces in the region. They also act to blunt the effectiveness of airstrikes by protecting operatives and materiel from their destructive effects. Offensive, cross-border tunnels fulfil Hamas' objectives of harassing the Israeli population to make the government pay a cost for its policy towards Gaza. Generally speaking, Hamas has employed defensive tunnels to deter, with offensive tunnels to compel.

## Defensive Tunnelling and Deterrence

The size of Hamas' C2 tunnel network within Gaza remains unknown, but there is some truth behind Hamas' bluster that it is twice as large as the Viet Cong's was at the height of Vietnam War.<sup>36</sup> The extent and utility of the network was demonstrated by the maintenance of functional command over the 50 days of fighting during Op Protective Edge. In this conflict tunnels were used extensively to aid rocket launches and to conceal operatives and equipment following a strike.<sup>37</sup> Internal networks also act as a significant deterrent to Israeli decision makers by increasing the potential casualties of any comprehensive ground offensive. Even during the limited push into Gaza during Op Protective Edge, Israeli soldiers encountered extensive booby traps, with cases of fighters emerging from tunnels following house searches to open fire.<sup>38</sup>

The enabling effect of Gaza's internal tunnel network for Hamas is akin to that of the Iron Dome for Israel. The network extends Hamas' staying power during a campaign by reducing

the effectiveness of IDF airstrikes and provides a capacity to 'outwait' their opponents. UNRWA's Mike Cole made the following comments on Hamas' pattern of operations during Op Protective Edge:

They went underground immediately. You didn't see anybody. Politicians and military forces appeared to go underground, and for obvious reasons. Their use of tunnels is very well documented and probably quite effective. The use of tunnels is absolutely widespread.<sup>39</sup>

The relative predictability of the IDF pattern of operations modelled around retaliatory airstrikes ensures this capacity to 'outwait' Israel is crucial, and the minimal casualties Hamas suffered during the exchanges of fire in March 2019 is a reflection of how these tactical assets have strategic effect.<sup>40</sup>

Defensive tunnels simultaneously increase the cost of an Israeli ground offensive and reduce the effectiveness of airstrikes. In doing so they provide the deterrence that is the basis for Hamas' airminded coercive strategy.

### **Offensive Tunnelling and Coercion**

Hamas has incorporated offensive tunnelling within its model of method-based harassment. Similarly to its rocket doctrine these tunnels have a strategic impact that is not dependent on the success of individual raids. That the IDF has to expend effort to counter this threat represents a success in itself. As with Hamas' other harassment strategies, these tunnels have a coercive purpose, but the capacity to escalate through such assets produces a secondary deterrent effect.

The first known tunnel attack from Gaza was in 1989, but industrial tunnelling operations originated in the smuggling corridors that emerged with sanctions in 2007.<sup>41</sup> Offensive tunnelling is well integrated into Hamas' attack doctrine, and what began as explosive attacks under IDF positions has developed into cross-border raids to kill or abduct Israelis. The long dispute following the kidnap of IDF soldier Gilad Shalit, and his ultimate return in 2011 in exchange for over 1,027 Palestinian prisoners, demonstrates the effectiveness of these attacks.<sup>42</sup> Moreover, the asymmetry of the exchange indicates the value Israel places on Israeli life and the heavy price it will to pay to preserve it.

The length and scale of offensive tunnelling has steadily increased over time. Its industrial nature is reflected by the 1,800m long tunnel discovered in October 2013 and the 30m deep, one mile long tunnel discovered in 2016.<sup>43</sup> A typical offensive tunnel reportedly takes 10 months to complete, but some can take more than two years.<sup>44</sup> Hamas' force structure reflects their focus on such tunnels as a strategic weapon, with a specialised 'Nukhba' unit ('The Chosen Ones') 5,000 strong and trained to operate in the subterranean environment.<sup>45</sup> These offensive tunnels clearly represent a substantial strategic threat in their potential to



enable terrorist attacks on a large scale, and Hamas has used the possibility of escalation to shift the deterrence balance in their favour.

Tactical innovation on part of the IDF has managed to reduce the severity of the offensive threat, but has proven unable to remove it. A stated objective of Op Protective Edge was to nullify the hazard posed by such tunnels. Defense Minister Moshe Ya'alon predicted that the task would take 2-3 days, but in reality it took weeks to discover and destroy 32 tunnels.<sup>46</sup> Innovative measures included the use of disappearances of phone signals to pinpoint the tunnel entrances, although in practice the IDF found that destroying the entrances made identifying the remainder of the tunnel more difficult.<sup>47</sup>

From the air, thermal imagery feeds from UAVs were used to identify insurgents exiting tunnels on the Israeli side of the border, whilst the 'kinetic drilling' of dozens of Joint Direct Attack Munitions was used to destroy pre-identified tunnel lines.<sup>48</sup> After Op Protective Edge the IDF has continued to improve, with some analysts questioning whether it was accountable for a spate of tunnel collapses in 2016.<sup>49</sup> More recently, in January 2018 the IDF credited the destruction of four tunnels in three months to the 'Steel Dome.' This multi-layered system of technologies and tactics will be complemented by an \$800 million sensor-fused, underground barrier that is near completion.<sup>50</sup> The IDF's defensive improvement has been on such a scale that it has led some to claim it was behind the rise in off-the-shelf drone attacks in the summer of 2019. Hamas' change in tack can be interpreted as tacit recognition that successful underground terror attacks are becoming increasingly more difficult.<sup>51</sup>

Despite the significant progress made by the IDF, the border attack of 21 August 2019, when 10 Palestinian gunmen and 4 IDF soldiers died in the ensuing gunfight, served as a grim reminder that the threat is not entirely removed.<sup>52</sup> This does not nullify successful Israeli attempts to reduce the danger, as it is clearly preferable to diminish it even if it cannot be known to be eliminated. What it does signal, however, is how tactical adaptation to bypass airpower allows insurgents to redefine victory and claim triumph, even with limited tactical success.

### **Tunnels, Lethality and Legitimacy**

Both the use of offensive tunnels and the integration of military infrastructure into the civilian population have allowed Hamas to significantly weaken the strength offered to the IDF by its aerial assets. However in the battle for internal and external support for the IDF's operations, the clear severity of the threats they face acts in Israel's favour.

The transition from wars of survival to wars of choice has forced Israeli policy makers to be more attuned to the potential to lose public opinion during a conflict. Diminishing support for Israel's occupation of southern Lebanon contributed to the decision to withdraw in 2000. Towards the end of the occupation, public protest groups, such as the Four Mothers, undermined the legitimacy of the campaign. In 2003, in opposition to Israel's policy in Gaza and the West Bank, 27 IAF pilots signed a petition against 'carrying out illegal and immoral

orders to attack.<sup>53</sup> The impact waning support had on Israel's occupation of Lebanon shows the importance of public support for military campaigns. In this respect, the severity of lethal force emanating from Gaza increases the public's appetite for military action.

In Israel, the clear lethality of tunnels and rockets has galvanised support for operations in the Gaza Strip. Record's view that Western democracies have what amounts to a 'casualty phobia' is unjustified in the Israeli case.<sup>54</sup> Nincic's challenge stands: democratic populations will tolerate casualties if they are perceived as justified by the threat and the chances of success.<sup>55</sup> Such is the 'fog of war' in counterinsurgent operations that Hamas can deny using human shields even in the face of significant evidence, but well documented proof of tunnel attacks is undeniable.

Unsurprisingly, regular attacks from lethal weaponry and armed insurgents in tunnels galvanises public opinion in Israel.<sup>56</sup> For example, during Op Protective Edge the IDF released aerial footage of missiles repelling insurgents as they emerged from an attack tunnel in Israel. These images were widely shared in the Israeli and international media.<sup>57</sup> The location of the tunnel entrance was already known to the IDF and under surveillance, but rather than attack the tunnel when it was discovered they elected to wait until Hamas attempted to use it. The IDF has not commented on whether this was for military purposes, but the images certainly provided compelling evidence of Hamas' lethal intent to the media.

Both the use of offensive tunnels and the integration of military infrastructure into the civilian population has significantly weakened the strengths of IDF aerial assets. However, as lethal threats they can be incorporated within existing IDF doctrine, based on the use of airstrikes and excessive force to deter. A further challenge for the IDF are the tactics Hamas has developed in the 'grey zone', below the lethal threshold of violence, but still causing the same intolerable harassment to Israeli civilians. How the IDF can marry incendiary devices and border marches with a doctrine based on excessive force from the air remains a challenge as yet unsolved.

### **Bypassing Deterrence in the 'Grey Zone'**

The instigation of border marches and arson terrorism in March 2018 has circumvented Israel's policy of airstrike-facilitated deterrence. Such innovation, though less overtly lethal than Hamas' extant methods of harassment, represents an improvement in strategy. These coercive strategies fulfil the objectives of Hamas' method-based resistance by exacting a cost from Israel for their policy towards Gaza. However, the ostensibly peaceful nature of these marches renders the sophisticated capabilities of the IDF irrelevant. Alongside their coercive purposes, by retaining the capacity to escalate Hamas has been able to weaponise these marches into a tool of deterrence.

Although Hamas may not have been the initiators of these tactics, they have incorporated them within their strategy of resistance and control the tempo and intensity of these activities.

By falling below the threshold of acts of war, these methods permit deniability and accusations of disproportion whatever the IDF response.

Hamas has also used such demonstrations as a 'pressure valve', directing protest towards external outlets and away from opposition to their rule in Gaza. The distractive element of such protests serve to undermine the logic of using airstrikes to exert pressure on the population, which will in turn press the government.

Moreover, these newer methods of harassment in the 'grey zone' complement rather than replace Hamas' more traditional methods of resistance, affording Hamas the capacity to escalate from actions that are less overtly aggressive to the international community. It is this capacity to escalate, both at the marches themselves and by accompanying them with other methods, that make these sub-lethal tactics a strategic improvement that has proven so difficult to counter.

### **The 'Great March of Return'**

Incendiary terrorism and border marches emerged in tandem in the spring of 2018 following four years of relative quiet after Op Protective Edge. The Great Marches of Return began through grassroots online activism. On Friday 30 March 2018, 40,000-50,000 Palestinians attended the first border protest on the anniversary of 'Land Day', a protest against Israeli land appropriation in 1976 where 6 Israeli Arabs were killed.<sup>58</sup> The movement began in opposition to what Palestinians perceived as Israel's illegal occupation and 'siege' of Gaza, the relocation of the US embassy to Jerusalem, and to reaffirm the 'right to return' of refugees to their ancestral lands in historic Palestine. The protests were scheduled for six weeks, but continued for almost 18 months until December 2019. Even now, they remain 'postponed' rather than cancelled.

The attendance and intensity of the marches varies, and the motivation and the actions of both protesters and the Israeli Security Forces (ISF) have come under severe criticism. Israel has reported significant violence at the border, including stone throwing, Molotov cocktails, hand grenades, IEDs, shootings and attempts to infiltrate Israel. In response to marches the ISF have used tear gas, rubber coated bullets and live rounds to disperse demonstrators, killing 195 Palestinians and injuring nearly 29,000 in the first year of the marches.<sup>59</sup> Although there are antecedents, these marches comprise a qualitative step change in Palestinian protest and the security threat to Israel.

From 13 April 2018 onwards, organisations in Gaza were reportedly releasing airborne incendiary devices. These typically consist of burning pieces of fabric, soaked in fuel and attached to balloons or kites, released with the intention of starting fires in Israel.<sup>60</sup> As of 2 July 2019, the Israeli government reported 2,155 fires had been started by such devices, burning 8,747 acres of land.<sup>61</sup> Airborne arson attempts are only effective in the summer, and although balloon incursions were reported over the rainier winter of 2018/2019, they bore IEDs rather than incendiary materials.<sup>62</sup>

## Deniability

For Hamas, a crucial strength of these methods is that their organisational footprint is sufficiently light that it leaves space for deniability. As such they fulfil Hamas' aim of creating a security situation that is intolerable for Israel, but not attributable to Hamas. The marches were born through the organisation of social activists, stating in the 'General Principles' on the organisation's Facebook page that 'It is a peaceful march that will not resort to any other form of struggle. It aims at [calling for the right of] return in a completely peaceful manner.'<sup>63</sup> Yet even before even the first march took place on 30 March 2018, Hamas was already established as the enablers and leaders of the protests.<sup>64</sup>

To this end Hamas has encouraged the appearance of civilian control in the organising committee of the Supreme National Authority of the Return Marches and Lifting the Siege. Although the organisation is nominally non-partisan, the 14 Hamas representatives on the committee make up the largest contingent, with the next largest the 13 Palestinian Islamic Jihad representatives, followed by 4 Fatah operatives and a variety of personnel from a combination of other organisations.<sup>65</sup> Hamas has been content to either permit or assist harassment at the fence or through incendiary devices. By relying on self-declared 'units' without formal ties to armed groups, they retain a degree of separation from the more hostile elements of the marches.<sup>66</sup> That Hamas controls their tempo is demonstrated by the high numbers of its members that can be found closest to the border fence engaging with the IDF, and consequently the large percentage of the total casualties that the group incurs.<sup>67</sup>

Similarly, the type of the damage caused by incendiary devices permits Hamas to deny that it is responsible, or even that incendiary devices caused the fires in the first place. The importance Hamas places on deniability in efforts to manipulate the narrative is reflected in publications on Hamas' website. The following words from Dr Basem Naim, head of the Council of International Relations in Gaza and former Palestinian minister of health, is characteristic of their propaganda:

According to our observation, the fires are caused by hot weather or burning crops by Israeli farmers for financial reasons. The Israeli occupation, however, claimed that such fires were caused by arson balloons.

We do think that this behaviour is a desperate attempt by Israeli leaders to find a way out of the internal crises in the Israeli occupation, especially the upcoming elections and the formation of a new government. Indeed, the Israeli leaders want to export such crises to Gaza at the expense of our people and their freedom and life.<sup>68</sup>

The deniability of the terror intent of these sub-lethal methods allows Hamas to fulfil its mantra of resistance at a lower risk of an escalation to full-scale conflict, such as Op Protective Edge, which is against its stated interests. This is particularly important regarding its internal audience

in the Gaza Strip, both as a pressure valve for public anger and for maintaining its position of leadership in the struggle against Israel. The overt opposition to Israel provides an external outlet for public anger and discontent, thus shifting the focus from Hamas' rule to Israel's sanctions. The addition of 'Breaking the Siege' to the title of the organising committee was against the wishes of the original organisers, and provides an example of how Hamas shifted the focus of peaceful protests to fit such tactics within their narrative of violent resistance and struggle.<sup>69</sup>

Opposition to Hamas' rule, such as the 'we want to live' protests on 14 March 2019, can be deflected onto Israel, and the IDF's response to border threats has assisted this distraction tactic. These protests against Hamas' rule were not isolated incidents: over a 10 month period in 2018 the Independent Commission for Human Rights in Palestine recorded 81 complaints of arbitrary arrest and 146 complaints of torture against Hamas security forces.<sup>70</sup> The function of the marches as a pressure release valve for Palestinian discontent undermines Israel's efforts to apply what former Prime Minister Yitzhak Rabin termed 'circular pressure', using airstrikes and other methods to induce the population of Gaza to apply pressure on Hamas as the ruling party.<sup>71</sup>

### **Proportionality**

Moreover, the sub-lethal nature of these tactics means that even if Hamas' culpability is undeniable, a disproportionate response is unavoidable. Whether the ISF has been proportionate is hotly contested, and will not be examined in this paper. The focus here will be the way Hamas exploits a sub-lethal perception to label Israel as disproportionate regardless of its actions.

The simplicity of these methods fit Hamas' self-projections to the international community. It permits Hamas to portray themselves as a resistance movement taking on a 'nuclear superpower with four slingshots', contributing to its redefinition of victory as endurance.<sup>72</sup> The civilian nature of the marches means that there is no use of armed force that will not attract censure. For instance, during the demonstration of 12 October 2018, 20 demonstrators cut the separation fence with machetes, axes and wire cutters and penetrated Israeli territory. They retreated after Israeli forces shot at them with live ammunition, killing between one and three demonstrators.<sup>73</sup> The IDF claimed that during this incident three Palestinians attempted to storm a sniper post, whilst another approached an IDF soldier with a knife in an attempt to steal his weapon.<sup>74</sup> Such incidents occupy the grey zone between conflict and protest, challenging Israel to respond to threats to its territory without the use of armed force. Censure from organisations such as Human Rights Watch (HRW) stems from an interpretation of the Israeli role as policing rather than defence, prohibiting the use of lethal force except as a last resort to prevent an imminent threat to life.<sup>75</sup> Yet in the context of previous infiltrations and terror attacks, border defence is a highly charged issue with the potential for a significant loss of Israeli civilian life. The stated unarmed and peaceful intention of these demonstrations leave Israeli forces with virtually no armed response that will not attract international condemnation.

### **The Limitations of Targeting as Strategy**

Even with considerations of proportionality aside, such tactics are, by design, almost impossible to target using conventional armed force. At the Marches of Return the lack of central leadership and an 'enemy' that is made up, in part, of women and children, render the IAF's considerable capabilities obsolete. These methods have bypassed a mode of operations based on excessive force to re-establish deterrence, and Israel has been pushed to adopt passive defensive measures in the absence of an alternative.

Warnings to Gaza residents of Israel's willingness to use armed force to defend its border, both from leaflets dropped by the IAF and in public statements by Chief of Staff (COS) Lt Gen Eizenkot, have not deterred demonstrators.<sup>76</sup> Defensive measures include reinforcing positions with strengthened and additional fences, trenches, underground barriers and berms, accompanied by an additional 100 sharpshooters at the first demonstration.<sup>77</sup> Further restrictions on Gaza, including halting the flow of fuel and gas, withholding funds to the PA and restricting Gaza's maritime area, have been unable to prevent continued friction at the border or incendiary terror. Moreover, they have attracted criticism as 'measures that amount to collective punishment'.<sup>78</sup> Israel has been forced to move to structural changes in its land use to reduce the damage in 2019, including firebreaks and the introduction of intensive grazing, alongside two on call fire alert teams.<sup>79</sup> These defensive measures, combined with the adaptation of UAV tracking systems such as the Skyspotter, have reduced the damage to more tolerable levels, but have been unable to remove the threat entirely.<sup>80</sup>

Together with these defensive measures, by early 2019 the IDF's responses to incendiary terror had become consistent with that of its responses to Gaza originated terror in general. Similarly to rockets, the IDF relies on retaliatory airstrikes on Hamas military positions to reduce dissidents' capabilities and re-establish deterrence.

These tactics are inseparable from Hamas' overarching strategy of method-based harassment. As with rockets and tunnels, by forcing Israel to take preventative measures these methods have enjoyed some degree of success. What these sub-lethal tactics demonstrate is the limitations of relying on technical competence to fill a void left vacant by a lack of strategy. A focus on targeting and efficiency has proven ineffective at nullifying Hamas' asymmetric tools of compellence, such as rocket launches or tunnel attacks. Against Hamas' methods of sub-lethal harassment, an aerial coercion strategy based on targeting has proven largely useless.

### **Sub Lethal Tactics and Escalation Dominance**

The capacity to escalate is the most important strength of sub-lethal tactics, and ensures that these innovations must be considered a strategic improvement and not a reduction in violence. Hamas has developed their capacity to escalate both at the marches themselves and more broadly through its more typically military capabilities; it is this potential for escalation that is affecting the deterrence balance between the two warring parties.

Even if the marches are peaceful in their current form, the weekly presence of tens of thousands of discontented residents of the Gaza Strip at the security fence could be rapidly weaponised to present a severe problem. Throughout the marches' history, Hamas has maintained control of their tempo. According to *Israel Hayom*, information obtained by Shin Bet from interrogations of protesters revealed that Hamas pays activists to charge the fence, whilst forbidding its own personnel from approaching the border until it is breached. If it is broken, operatives are instructed to infiltrate Israel and carry out armed attacks.<sup>81</sup> A designated Night Disturbance Unit has been formed to harass Israeli civilians. During the marches themselves there has been the reported use of off the shelf quadcopters to direct protestors, including military personnel, towards pre-identified vulnerable spots in the barrier.<sup>82</sup> This escalatory power cannot be impeded by offensive action from the air; in effect, sub-lethal innovations have rendered one of the four roles of airpower, attack, irrelevant.

Such activities represent a substantial threat to Israel, but Hamas' deliberate disconnect from the marches permits a separation between peaceful protest and violent resistance which is artificial in reality. This is evident in the Office of the United Nations High Commissioner for Human Rights (OHCHR) Report of 2019 that criticises Israel's responses to the demonstrations in the strongest possible terms. Although it mentions the shooting of an IDF soldier by a sniper at a demonstration of 20 July 2018, and Israeli citizens' fears of fires and border raids, as 'these events occurred outside the time and place of the demonstration, the commission did not investigate them'.<sup>83</sup> The arms-length control Hamas maintains over the marches ensures that they must be treated as civilian demonstrations, and the capacity to weaponise such events is approached as a different issue rather than an integral part of the same problem.

Hamas' attitude concerning the marches is demonstrated by the way it accompanies the demonstrations with traditional methods of violence. For Hamas, civilian demonstrations do not represent a distinct struggle, but are incorporated as one of their many tools within a doctrine of violent resistance. The expediency with which Hamas has utilised peaceful protest is evident in Yahya Sinwar's statement of 16 May 2018, when he commented that, 'This method of struggle is appropriate for this stage, but circumstances may change, and we may have to return to the armed struggle'.<sup>84</sup>

These remarks are particularly telling as they seek to assert that Hamas has chosen non-lethal protest over violence, whereas in reality these tactics complement violent resistance. In the first year of the marches there were seven rounds of fighting, during which 1,100 rockets and mortar shells were fired into Israel.<sup>85</sup> During the exchanges of fire in March 2019 outlined earlier, the threat of Hamas chief Ismail Haniya on 27 March 2019 that Gazans could 'march in their millions' on 30 March demonstrates the effective amalgamation of peaceful and violent resistance.<sup>86</sup> In this instance, the threat of escalation was followed by concessions in an Egyptian brokered ceasefire.

In a framework of indirect deterrence, the price of Hamas' restraint is dependent on the potential for violence, with the capacity to escalate increasing the value of this restraint. Hamas exercises its ability to restrain violence at protests in return for Israeli concessions. This is evident from the quieter atmosphere of protests of 2 and 5 November 2018. Hamas reduced the numbers of protestors congregating, enforced a 500m separation zone from the fence and prevented its own operatives and those of other groups from firing rockets, missiles and incendiary kites.<sup>87</sup> In the previous week Israel permitted a Qatari fuel shipment worth \$60 million, and following Hamas' restraint Israel authorised further relief, although ceasefire negotiations quickly deteriorated after IDF agents were discovered in Gaza.

Moreover, the capacity to cause more harm injects a level of urgency into Egyptian brokered negotiations. These talks necessarily involve Hamas as the ruling party and undermine the PA's claims to be the legitimate governors of Palestine. The PA's easing of sanctions at Egypt's insistence in November 2018 indicates the way negotiations unavoidably undermine the PLO's stance that reconciliation must precede a ceasefire, and improve Hamas' legitimacy as rulers of Gaza.<sup>88</sup> Importantly, the easing of restrictions was achieved by restraining marches, not ceasing them entirely, allowing Hamas to retain the escalatory potential of the demonstrations in reserve.

Patterns of near automatic escalation favour the party that has the greatest capacity to increase their opponents' costs whilst minimising the damage they receive in return. By incorporating sub-lethal methods into their broader framework of violence Hamas has improved its capacity to escalate and simultaneously undermined the ability of the IDF to respond with its conventional strength. The following response of Dr Amira Abo el-Fetouh to criticism after exchanges of fire in November 2018, although clearly propagandist in nature, contain an echo of truth:

This is short-sighted and those of this opinion have not yet understood the strategy of deterrence and what it actually means.

We are not in a decisive war that will resolve the conflict. Rather, we are in one of its rounds. Whether we like it or not the conflict will be ended by a truce – or, let us say, a stabilisation of the truce – between the belligerent parties. Each party wants to improve its conditions and even impose its conditions on the other. This is what has happened with Hamas. Zionists were quick to ask for a truce.

The only reason behind this request was that the Zionist foe realised the balance of power was not in its favour and that the Palestinian resistance now has the same deterrent power the Zionists used to consider a source of pride.<sup>89</sup>

## **Conclusions**

The Gaza Strip is a unique environment, and many of the lessons learnt by Hamas and the



IDF are not easily transferable to other settings. However, some observations on their mutual relationship are relatable to theories of deterrence and airpower in general.

In some respects, the strengths of airpower can also act to undermine its coercive potential. The lower risks of airstrikes compared to ground offensives do increase the credibility of threatened force, as strategists can employ them with limited risks to humans or equipment. Yet this invariably means that airstrikes are used in situations where the state's commitment is lower, and perhaps in settings where they are less likely to succeed. In instances where the state's resolve is limited, insurgents adapt their pattern of operations to 'outwait' airstrikes. Through its use of tunnels and civilian shields, Hamas has mitigated the damage of airstrikes on its equipment and operatives. Simultaneously, it has constructed methods of harassment, such as rockets, offensive tunnels and incendiary kites, which have proven difficult to target from the air.

The IDF's difficulties deterring Hamas reveal the problems associated with transposing conventional models of force into the 'grey zone.' A strategy based on efficient targeting is of little use against an enemy with few tangible manifestations of its power. Doctrines of excessive, pre-emptive, aerial force face difficulties in urban areas, against tactics designed to increase the civilian death toll of airstrikes. In this respect, Hamas provides a classic example of how insurgents exploit ambiguities in international law and manipulate public opinion to further their aims. The IDF's difficulties in Gaza highlight how it is necessary to reassess the value of conventional strength in an asymmetric setting, and recalibrate public expectations of what can and cannot be achieved from the air.

The success of Hamas' deterrence does not invalidate the efforts of the IDF to counter it. Significant tactical adaptation by the IDF, and the IAF in particular, has resulted in impressive technological achievements that have saved many Israeli lives. Nor should the success of Hamas' coercive strategy be overstated: it remains a pariah in the international community, under sanctions and in the midst a steadily deteriorating humanitarian crisis. Yet still it exists, and, despite the best efforts of a nuclear power for over a decade, it continues to exact a cost from Israel for its policy towards Gaza. By redefining victory as endurance, for Hamas this can be considered a success.

## Notes

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<sup>2</sup> For an overview of the IDF's campaigns in Gaza, see Raphael S. Cohen, et al, *From Cast Lead to Protective Edge: Lessons from Israel's Wars in Gaza* (Santa Monica: RAND Corporation, 2017).

<sup>3</sup> For a discussion on how 'airmindedness' is a frame of mind which begins on the ground, see James Robinson, 'Concealing the Crude: Airmindedness and the Camouflaging of Britain's Oil Installations, 1936-9', in *From Above: War, Violence and Verticality* ed. by Peter Adey, Mark Whitehead and Alison Williams, (London: C. Hurst & Co., 2013), 145-162.

<sup>4</sup> Simon Jeffrey, 'Hamas celebrates election victory', *Guardian*, 26 January 2006.

<sup>5</sup> ' Hamas takes full control of Gaza', *BBC*, 15 June 2007.

<sup>6</sup> United Nations, General Assembly, *Human rights situation in the Occupied Palestinian Territory, including East Jerusalem: Report by the Secretary General*, United Nations, A/HRC/24/30 (22 August 2013), 5-8.

<sup>7</sup> 'A Document of General Principles and Policies', 1 May 2017. <http://www.palwatch.org/STORAGE/Documents/Hamas%20new%20policy%20document%20010517.pdf> [accessed 13 November 2019].

<sup>8</sup> Charles P. Kirchofer, 'Managing Non-State Threats with Cumulative Deterrence-by-Denial', *Perspectives on Terrorism* 11(2) (2017), 21-23.

<sup>9</sup> Cohen provides a summary of the short term aims of Hamas and the priority of endurance over comprehensive military victory. Samy Cohen, *Israel's Asymmetric Wars* (New York: Palgrave Macmillan, 2010). 140.

<sup>10</sup> 'About Hamas – Hamas Islamic Resistance', *Hamas Website*, 1 July 2019. <https://hamas.ps/en/page/2/> [accessed 1 August 2019].

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<sup>12</sup> Michael J. Armstrong, 'The Effectiveness of Rocket Attacks and Defenses in Israel' *Journal of Global Security Studies* 3(2), 113.

<sup>13</sup> 'Palestinian Violence and Terrorism Against Israel, 2018: Data, Nature and Trends', *Meir Amit Intelligence and Terrorism Information Center*, 18 February 2019. <https://www.terrorism-info.org.il/en/palestinian-violence-terrorism-israel-2018-data-nature-trends-2/> [accessed 3 July 2019].

<sup>14</sup> For an overview see the full article by the author: Jacob Davies, 'How the Weak Deter the Strong: Airpower, Technological Regression and the Coercion Balance in the Gaza Strip', *Durham Middle East Paper* No. 101, *IMEIS*, 2020, 55-66.

<sup>15</sup> For a theoretical discussion on how actions from above influence conceptions of those on the ground, see Peter Adey, Mark Whitehead and Alison Williams, ed., *From Above: War, Violence and Verticality* (London: C. Hurst & Co., 2013), 1-18.

<sup>16</sup> Charles J. Dunlap, 'Law and Military Interventions: Preserving Humanitarian Values in 21st Conflicts', Paper presentation for the Humanitarian Challenges in Military Intervention Conference, Washington, 29 November 2001, 2.

<sup>17</sup> Amos Oz, 'Interview on the Gaza Assault', 30 July 2014. <https://www.palestine-studies.org/en/node/186693> [accessed 10 January 2021].

<sup>18</sup> 'Press Statement on the Israeli Report Regarding the 2014 Aggression on Gaza', *Hamas Website*, 15 June 2015. <https://hamas.ps/en/post/63/a-press-statement-on-the-israeli-report-regarding-the-2014-aggression-on-gaza> [accessed 1 August 2019].

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<sup>21</sup> Alistair Byford, 'Network Enabled Capability, Air Power and Irregular Warfare: The Israeli Air Force Experience in Lebanon and Gaza, 2006-2009', *Air Power Review* Vol 13 No 1 (2010), 1-12.

<sup>22</sup> Alan Craig, *International Legitimacy and the Politics of Security: The Strategic Deployment of Lawyers in the Israeli Military* (Plymouth: Lexington Books, 2013), 197.

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<sup>24</sup> James Corum and Wray Johnson, *Airpower in Small Wars: Fighting Insurgents and Terrorists* (Kansas: University Press of Kansas, 2003), 406.

<sup>25</sup> David Galula, *Counterinsurgency Warfare: Theory and Practice* (Westport: Praeger Security International, 1964, 2006), 9.

<sup>26</sup> Craig's work on the difference between legality and legitimacy, and the conflicting legitimacies behind Israel's operations is extensive. See Craig, *International Legitimacy*.

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<sup>28</sup> *Ibid.*

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<sup>30</sup> A J Young, 'Royal Air Force North-West Frontier, India, 1915-39', *RUSI Journal* 127(1) (1982), 62.

<sup>31</sup> United Nations General Assembly, *Report of the United Nations Fact-Finding Mission on the Gaza Conflict*, United Nations, A/HRC/12/48 (25 September 2009), 13.

<sup>32</sup> B'Tselem, 'Israeli "warning strike" killed two Palestinian teenagers; video released by military edited out footage of fatal strike', 19 December 2018. [https://www.btselem.org/press\\_releases/20181219\\_lethal\\_warning](https://www.btselem.org/press_releases/20181219_lethal_warning) [accessed 3 October 2019].

<sup>33</sup> Tim Lister and Salma Abdelaziz, 'Israeli military's "knock on roof" warnings criticized by rights groups', *CNN*, 15 July 2014. <https://edition.cnn.com/2014/07/15/world/meast/mideast-israel-strike-warnings/index.html?no-st=9999999999> [accessed 14 October 2019].

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<sup>38</sup> Amos Harel, 'Analysis: As Bulldozers Destroy Hamas' Underground Network, IDF Sees Light at

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<sup>40</sup> For a case study of Hamas and the IDF's reciprocal strike relationship in March 2019, see author, 'How the Weak Deter the Strong', 44-48.

<sup>41</sup> In 1989 Mahmoud al-Mabhouh escaped to Gaza via tunnel after abducting and murdering 2 IDF soldiers. See Aid Kuntsman & Rebecca L. Stein, *Digital Militarism: Israel's Occupation in the Social Media Age* (Stanford: Stanford University Press, 2017), 248.

<sup>42</sup> Kevin Connoly, 'Gilad Shalit: A 1,000-to-one asymmetry', *BBC*, 18 October 2011.

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