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## Lessons from the Air Campaigns over Libya, Syria, and Yemen

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Ben Nimmo

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**ABSTRACT:** The international air campaigns over Libya, Syria, and Yemen offer lessons for the planning of future interventions. Planners and politicians must acknowledge hostile targets will evolve over time, and it is impossible to prevent civilian casualties entirely. They should accept the likelihood every action will be filmed and posted online, and they should plan for post-conflict reconstruction as rigorously as they plan for conflict.

The past five years have seen four major air campaigns conducted by foreign powers in the Middle East: The NATO-led mission over Libya, the US-led mission against ISIL over Iraq and Syria, the Russian mission to support President Assad in Syria, and the Saudi-led campaign over Yemen.

While these interventions differ significantly in their focus, conduct, and participation, they offer a number of lessons for the political and military leadership of the United States and other Western nations. These lessons are particularly important to the political preparation of military operations and to the sustainment of political support over the long term. As such, it is vital for the military to factor them into planning and to communicate them to political leaders. The five key lessons are:

1. The likelihood of “target creep,” in which air strikes expand to an ever-growing list of target types;
2. The likelihood of “force evolution,” in which new types of assets are brought into theater to accelerate an apparently slow-moving campaign;
3. The inevitability of civilian casualties;
4. The new information environment created by observers on the ground equipped with smartphones, cameras and satellite imagery; and
5. The need for a coherent post-conflict reconstruction plan focused on providing immediate civilian services—“shoes on the ground” to accompany “boots on the ground.”

### Target Creep

The international campaign over Libya began on March 19, 2011. Its authority was United Nations Security Council Resolution 1973, which authorized UN members “to take all necessary measures...to protect

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civilians and civilian populated areas under threat of attack.”<sup>1</sup> For the first 12 days, the operation, dubbed “Odyssey Dawn” (OOD), was conducted by a coalition of the willing, led and enabled by the United States, together with Britain and France; from March 31 onwards, NATO took over the command of the operation, renamed “Unified Protector” (OUP). The operation formally concluded on October 31, 2011. The author of this article was a NATO press officer throughout the operation.

Militarily, the conflict can be divided into four phases. The first week of Operation Odyssey Dawn was marked by the rapid destruction of Gaddafi regime armored columns by high-tempo air and cruise-missile strikes, lifting the immediate threat to the key rebel stronghold of Benghazi.<sup>2</sup> The assumption of command by NATO and the launch of OUP coincided with a prolonged period of predominantly urban fighting along relatively static front lines; during this period, NATO was accused of having fallen into a stalemate.<sup>3</sup> This second phase endured until late July when the forces opposed to Gaddafi broke out of their strongholds and advanced on the capital, Tripoli, with a speed that surprised OUP’s commander.<sup>4</sup> Following the fall of Tripoli, the final phase was marked by a gradual reduction in the tempo of combat, until by October, OUP was conducting only half as many sorties per day as it had in April—approximately 80 per day, against a peak of almost 150.

OUP units clearly possessed overwhelming technological superiority over Gaddafi forces: in seven months of operations, not one Operation Unified Protector casualty was caused by enemy action. It was, moreover, unprecedentedly precise: Out of more than 6,000 air-strikes, five were confirmed as having resulted in civilian casualties (a subject to which we shall return). It is, therefore, worth asking how Gaddafi’s forces managed to keep their own campaign going so long.

They did so by adapting their tactics, improvising weapons systems and supply points, and hiding among the civilians whom OUP was intended to protect. One very early adaptation was the decision to disperse tank formations and instead mount heavy weapons on pick-up trucks—known as “technicals”—which were largely indistinguishable from civilian and rebel vehicles, which were easier to conceal in urban areas. According to NATO Chief of Allied Operations Brigadier General Mark Van Uhm at a press conference on April 5, 2011:

They more and more are using trucks, light vehicles, to move the operational to the front line and (...) they are keeping, as we military call it, their

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1 For full text of resolution, see “Security Council Approves ‘No-Fly Zone’ over Libya, Authorizing ‘All Necessary Measures’ to Protect Civilians, by Vote of 10 in Favour with 5 Abstentions,” UN Press Release, March 17, 2011, <http://www.un.org/press/en/2011/sc10200.doc.htm>.

2 For a more detailed overview, see Christopher S. Chivvis, “Strategic and Political Overview of the Intervention,” *Precision and Purpose: Airpower in the Libyan Civil War* (Santa Monica, CA: RAND Corporation, 2015), 23.

3 See Shashank Joshi, “Stalemate in Libya: Will Advisers and Drones Tip the Balance?” April 23, 2011, *RUSI Commentary*, <https://rusi.org/commentary/stalemate-libya-will-advisers-and-drones-tip-balance>.

4 See comments made by COM OUP Lieutenant-General Charles Bouchard to the Atlantic Council of the United States, February 14, 2012, <http://www.atlanticcouncil.org/news/transcripts/coalition-building-and-the-future-of-nato-operations-2-14-2012-transcript>.

more heavy equipment, like tanks and other stuff, armored vehicles, in their second echelon.<sup>5</sup>

The effect of this adaptation was exacerbated by NATO's own capability limitations. In the early days of OUP, intelligence, surveillance, targeting acquisition, and reconnaissance (ISTAR) assets were limited both in number and in the amount of time they could spend over Libya, rendering an already complex problem even more challenging:

Target development was difficult. Previous analysis on the country was out of date (some targets were ten years old or more) and there were few dedicated ISTAR assets in the air over the country, which meant that there was little to develop target packages from. (...) This lack of intelligence and real-time dedicated ISTAR feeds, more than the lack of combat or tanking assets, was a limiting factor for NATO forces wishing to attack targets, owing to difficulties in distinguishing between loyalist and rebel forces on the front line.<sup>6</sup>

Simultaneously, Gaddafi's forces dispersed their supply lines. At the start of the conflict, their logistics had been based on hardened bunkers; these were readily identified by aerial reconnaissance. In reaction to this, Gaddafi's forces increasingly moved their supplies to civilian buildings, making them harder to locate and to strike, and increasing the danger to civilians.

The result of these tactical shifts was to force what could be called "target creep" on OUP's targeteers: As the supply of first-choice targets dwindled, either because they had been destroyed or because they had been relocated to areas where it would be risky to strike them, the OUP commander was forced to shift the air strikes to other target types in order to generate a continued effect. For example, in April OUP destroyed more than twice as many tanks as technicals: 62 tanks, 24 technicals. By June, the Gaddafi forces' tactical shift meant this ratio was reversed: Technicals accounted for 115 hits over the course of the month, more than double the 53 tanks struck.<sup>7</sup>

Other targeting figures tell a similar story. In April, the brunt of OUP's firepower was directed at the Gaddafi forces' ammunition dumps: 351 were hit that month. But the regime forces' rapid adaptation, together with OUP's own initial success, meant the ensuing months saw drastic drops in the number of ammunition stores struck—just 44 hits in June. To maintain the pressure, OUP's targeting switched to vehicle storage facilities: having struck just five in April, air strikes hit 75 in May, severely degrading the Gaddafi forces' ability to operate their vehicle fleet. Soon, however, vehicle storage facilities, too, grew harder to find: In June, only 20 were struck. Instead, the focus turned to command and control. Command and control facilities accounted for just 11 strikes in April, 56 in May, and 57 in June. Throughout the campaign, indeed, OUP shifted the focus of its targeting repeatedly—partly because of

5 For the full transcript, see "Press Briefing on Libya," NATO Press Office, April 6, 2011, [http://www.nato.int/cps/en/natohq/opinions\\_72027.htm?selectedLocale=en](http://www.nato.int/cps/en/natohq/opinions_72027.htm?selectedLocale=en).

6 Elizabeth Quintana, "The War from the Air," in *Short War, Long Shadow: The Political and Military Legacies of the 2011 Libyan Campaign* (London: RUSI Whitehall Report, 2012), 36, [https://rusi.org/sites/default/files/201203\\_whr\\_short\\_war\\_long\\_shadow\\_0.pdf](https://rusi.org/sites/default/files/201203_whr_short_war_long_shadow_0.pdf).

7 All figures for NATO operations are based on NATO's operational media updates, archived at [http://www.nato.int/cps/en/natohq/news\\_71994.htm](http://www.nato.int/cps/en/natohq/news_71994.htm).

its own early success, but partly because of the Gaddafi forces' tactical changes.

Political demands also played a role. The apparent lack of progress in the campaign created both tension and frustration in NATO capitals, with the UK government being "particularly open in pushing for an expansion of the target list to include more of Gaddafi's military and civilian infrastructure."<sup>8</sup> OUP's targeting creep was, thus, the outcome of tensions between the political imperative to protect civilians, and the political imperative to show quick results.

The same is true of the US-led Operation Inherent Resolve (OIR) in Iraq and Syria, though it is a conflict of a different nature. OUP was pitted against a national army, with all the logistical and command and control structures that implies: OIR is pitted against the terrorist group ISIL, which is much more fluid and fast-moving, and holds less in the way of heavy armor and artillery. However, the campaign has seen a comparable target creep. As in Libya, the initial early successes proved difficult to sustain: Two months after fighting began, the Department of Defense issued a statement explaining why its momentum had slowed. Entitled "Airstrikes Causing ISIL to Change Tactics," and quoting then-Pentagon spokesman Rear Admiral John Kirby, it described a situation familiar to all those who had followed the Libyan campaign:

Not surprisingly, they have gotten better at concealment. Before the air-strikes...they pretty much had free rein. They don't have that free rein anymore, because they know we're watching from the air.<sup>9</sup>

The United States struck; ISIL adapted; the United States adapted too. Throughout 2015, OIR showed a pattern of target creep, shifting the focus of its strikes to compensate for ISIL tactical changes. By December 2015, Kirby, now a State Department spokesman, was able to characterize the progress:

When we first started flying airstrikes, what were we hitting? Convoys—right—vehicles, artillery positions, defensive positions, then they changed the way they operated. They're more in the cities, they're not out there as much, and so we changed and started hitting more urban targets that we could—that we knew we could be precise at, and now there's a focus on this oil smuggling. But they have adapted the way they operate, the way they finance themselves; we have to keep adapting as well.<sup>10</sup>

The targeting creep continued into 2016 as the United States stepped up the pressure, especially after the ISIL terrorist attacks in Paris and Brussels. By February 2016, the United States had "slowly built up its airpower to the point where it can play a role in attacking (ISIL) at every level from its top leadership to its forces in the field and fundraising activities in the rear."<sup>11</sup> As we shall see, this progressive build-up of air power is itself an important lesson of the campaigns over Libya and

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8 See Chivvis, p. 33.

9 "Airstrikes Causing ISIL to Change Tactics," DOD Press Release, October 3, 2014, <http://archive.defense.gov/news/newsarticle.aspx?id=123337>.

10 State Department Daily Press Briefing, December 7, 2015.

11 Anthony H. Cordesman, "Creeping Incrementalism: US Forces and Strategy in Iraq and Syria from 2011 to 2016: An Update," CSIS, February 1, 2016, <https://www.csis.org/analysis/creeping-incrementalism-us-forces-and-strategy-iraq-and-syria-2011-2016-update>.

Syria. However, it also demonstrates the extent to which the target list progressively crept outwards to take in a wider range of ISIL targets.

Thus, both the Libyan and Syrian experiences show target creep is an integral part of air campaigning. It can be driven by the opponent's adaptation and domestic political considerations; it can be the result of initial successes in depleting a given target category. It is not, of itself, a negative phenomenon. It can prove so if it exposes friendly forces or civilians to greater risk; but it is an inherent component of air-to-ground warfare. Political and military planners who envisage any future air interventions would do well to bear that in mind as they plan, and communicate, their campaigns.

### Force Evolution

A related phenomenon in these campaigns has been that of "force evolution," in which new weapon platforms and forces are brought into action to accelerate apparently slow-moving campaigns.

Both the Libyan and Syrian campaigns bear witness to this tendency. In Libya, for example, the bulk of the initial air strikes were carried out by cruise missiles and high-flying, fixed-wing aircraft deploying explosive precision munitions. However, even before Operation Odyssey Dawn handed on the command to Operation Unified Protector, the United States added A-10 Thunderbolts and AC-130 Spectre gunships "to further enhance coalition capabilities against regime forces on the ground."<sup>12</sup>

Additional shifts followed the handover to Operation Unified Protector. First, in late April, NATO aircraft began dropping non-explosive concrete bombs—allowing aircraft to strike armored vehicles in densely built-up areas while minimizing the risk to civilians.<sup>13</sup> Simultaneously, the United States agreed to provide two Predator drones for strike missions (they had conducted strikes during Operation Odyssey Dawn, but returned to a surveillance role under Operation Unified Protector.)<sup>14</sup> A month later, Britain and France deployed attack helicopters, with Bouchard explaining they could "pinpoint exactly these vehicles that are much more difficult to see from high altitude."<sup>15</sup> The deployment was "perceived by some to be a 'game changing' development, not only because of the precision it could deliver ashore, but also because of the way in which its operation appeared to have a coercive effect on Libyan forces disproportionate to its actual capability."<sup>16</sup> In August, meanwhile, Operation Unified Protector's warships—primarily deployed to conduct the UN-mandated arms embargo—moved inshore to deliver naval gunfire against regime positions.<sup>17</sup> In each case, adding a

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<sup>12</sup> See Chivvis, p. 23.

<sup>13</sup> See, for example, "France Dropping Concrete Bombs in Libya," Defense Tech, April 29, 2011, <http://www.defensetech.org/2011/04/29/france-using-concrete-bombs-in-libya/>.

<sup>14</sup> See Chivvis, p. 31.

<sup>15</sup> From "Press Briefing on Libya," NATO Press Office, May 27, 2011, [http://www.nato.int/cps/en/natohq/opinions\\_74826.htm?selectedLocale=en](http://www.nato.int/cps/en/natohq/opinions_74826.htm?selectedLocale=en).

<sup>16</sup> See Lee Willett, "Don't Forget About the Ships," in *Short War, Long Shadow: The Political and Military Legacies of the 2011 Libyan Campaign*, 45.

<sup>17</sup> See "Press Briefing on Libya," NATO Press Office, August 9, 2011, [http://www.nato.int/cps/en/natohq/opinions\\_77137.htm?selectedLocale=en](http://www.nato.int/cps/en/natohq/opinions_77137.htm?selectedLocale=en).

new capability was intended to break a perceived deadlock, and accelerate the progress of the campaign.

Operation Inherent Resolve has seen a similar pattern. The operation opened fire on August 8, 2014 when US F/A-18s dropped 500-pound laser-guided bombs near Erbil in Iraq.<sup>18</sup> Initial strikes, again, were largely from fixed-wing aircraft and drones. Once ISIL adapted and became better at concealment, the decision was taken to adapt the US force posture in reply; as Kirby put it, “Everybody paints them as this great adaptive, capable, agile enemy. We’re pretty adaptive, capable and agile ourselves.” Sure enough, two days later the mission saw its first combat deployment of attack helicopters.<sup>19</sup>

Since then, OIR’s forces have steadily evolved. In mid-November 2014, A-10 Thunderbolts joined the operation; in August 2015, Marine Corps Harriers joined; in the fall of 2015, A-10s and F-15s were deployed to Turkey to support Kurdish and Arab fighters; in April 2016, B-52 Stratofortresses were deployed to the region, with US Central Command saying the deployment “demonstrates our continued resolve to apply persistent pressure on (ISIL) and defend the region in any future contingency.”<sup>20</sup>

At the same time, OIR had seen a steady increase in the number of US personnel on the ground. Initially billed as a “no boots on the ground” operation, it grew steadily from the original estimated 450 troops, with 130 “assessors” ordered to Iraq in mid-August 2014, 475 troops added on September 10, 2014, an authorization to deploy up to 1,500 more troops on November 7, 2014, an authorization to deploy a “modest” 450 in June 2015, and a warning from General Joseph Dunford, chairman of the Joint Chiefs of Staff, in March 2016 that he and Carter “both believe that there will be an increase to the US forces in Iraq in the coming weeks.”<sup>21</sup> As the troop numbers grew, so their role expanded, from “assessors” at the beginning of operations, to the revelation in March 2016 that US Marines had established a fire base near Makhmour in Iraq—a deployment that was only revealed when

18 See “US Aircraft Conduct Targeted Airstrike in Northern Iraq,” DOD Press Release, August 8, 2014, <http://archive.defense.gov/news/newsarticle.aspx?id=122879>.

19 See “Isis Air Strikes: US Brings in Apache Helicopters as British Jets Target Militants in Iraq,” *The Independent*, October 8, 2014, <http://www.independent.co.uk/news/world/middle-east/isis-air-strikes-british-jets-carry-out-latest-attack-on-militants-in-iraq-9777284.html>.

20 See “A-10 Performing 11 Percent of Anti-ISIS Sorties,” *Defense News*, January 19, 2015, <http://www.defensenews.com/story/defense/2015/01/19/a10-strikes-isis-11-percent/21875911/>; “Essex Amphibious Ready Group and 15th MEU Support Operation Inherent Resolve with Harrier Strikes,” US Navy Press Release, August 18, 2015, [http://www.navy.mil/submit/display.asp?story\\_id=90661](http://www.navy.mil/submit/display.asp?story_id=90661); Anthony H. Cordesman, “Creeping Incrementalism: US Strategy in Iraq and Syria from 2011 to 2015,” CSIS, November 9, 2015, [http://csis.org/files/publication/151109\\_Cordesman\\_Incrementalism\\_iraq\\_syria.pdf](http://csis.org/files/publication/151109_Cordesman_Incrementalism_iraq_syria.pdf); and “B-52 Stratofortress Joins Coalition Team,” US Central Command Public Affairs Office, <http://www.af.mil/News/ArticleDisplay/tabid/223/Article/717091/b-52-stratofortress-joins-coalition-team.aspx>.

21 “President Sends More Assessors to Iraq,” DOD Press Release, August 13, 2014, <http://archive.defense.gov/news/newsarticle.aspx?id=122911>; “US Sending 475 More Service Members to Iraq,” DOD Press Release, September 10, 2014, <http://archive.defense.gov/news/newsarticle.aspx?id=123127>; “President Authorizes Additional Troops for Counter-ISIL Effort,” DOD Press Release, November 7, 2014, <http://archive.defense.gov/news/newsarticle.aspx?id=123595>; “US to Deploy Modest Increase in US Troops to Iraq,” DOD Press Release, June 10, 2015, <http://archive.defense.gov/news/newsarticle.aspx?id=129019>; and “Dunford: More US Troops May Be Needed in Iraq to Support Counter-ISIL Forces,” DOD Press Release, March 25, 2016, <http://www.defense.gov/News-Article-View/Article/705517/dunford-more-us-troops-may-be-needed-in-iraq-to-support-counter-isis-forces>.



they suffered their first casualties.<sup>22</sup> This pattern of force evolution and extension is expected to continue.<sup>23</sup>

Throughout this process, the question has been raised whether such incremental deployments constitute “mission creep” (a term the Pentagon has taken pains to rebut); however, it is rather a form of evolution.<sup>24</sup> Conflict is not a static process, but a dynamic one: offensive measures inspire defensive countermeasures, which trigger offensive counters in their turn. The decision to introduce new weapon systems or new forces into the theater of operations is a militarily rational one designed to break an apparent deadlock; it can be politically necessary to generate more rapid progress and to sustain democratic support. However, it is a phenomenon that is seldom accorded the attention it deserves in the political build-up to the launch of operations. Politicians who call for future military interventions need to accept that force evolution will be an integral part of any campaign; it falls to the military to communicate this to them.

### The Certainty of Civilian Casualties

Planners must also consider the issue of civilian casualties ahead of time. The lesson of the air campaigns in Libya, Syria, and Yemen is that claims of such casualties are not only likely, but *inevitable*—especially when the campaign is against an enemy who makes a policy of hiding forces in civilian areas.

OUP faced such claims from the outset. As soon as the campaign began, the Gaddafi regime started accusing NATO of causing massive civilian deaths. The great majority of these claims were disproven after the conflict was over, and NATO was credited with a “demonstrable determination” to protect civilians:

The target engagement approval process was constructed so as to minimize civilian risk. This required that the target be positively identified, that it met the rules of engagement and legal criteria, and that the envisaged collateral damage was acceptable. This last factor tended toward the use of smaller weapons with a smaller blast effect. More than 80 percent of the air-launched weapons used by the coalition were in the 500-pound class or less. The lethal radius of a 500-pound weapon is less than half that of a 1,000-pound class bomb.<sup>25</sup>

Despite all this care, however, the UN-mandated inquiry identified five OUP strikes that caused civilian deaths while hitting targets that appeared to have been mis-identified as command and control and staging areas.<sup>26</sup> This outcome is especially significant, because the mis-

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22 For a discussion of the military imperative behind the deployment, see Mark F. Cancian, “Helping the Kurds in the Recapture of Mosul,” CSIS, April 5, 2016, <http://csis.org/publication/helping-kurds-recapture-mosul>.

23 Kenneth M. Pollack, “Iraq Situation Report, Part I: The Military Campaign Against ISIS,” Brookings Institution, March 28, 2016, <http://www.brookings.edu/blogs/markaz/posts/2016/03/28-military-campaign-against-isis-pollack>.

24 See “Kirby: Mosul Dam Operation Not ‘Mission Creep,’” DOD Press Release, August 19, 2014, <http://archive.defense.gov/news/newsarticle.aspx?id=122963>.

25 See report of the International Commission of Inquiry on Libya, March 2, 2012, para. 85, [https://archive.org/stream/324151-bengali-un-libya/324151-bengali-un-libya\\_djvu.txt](https://archive.org/stream/324151-bengali-un-libya/324151-bengali-un-libya_djvu.txt); ICIL Report, Executive Summary; and Douglas Barrie, “Libya’s Lessons: The Air Campaign,” *Survival: Global Politics and Strategy* December 2012–January 2013 54, no. 6 (December 1, 2012), 63.

26 ICIL Report, paras. 86 and 88.



identification appears to have been, in itself, a result of the Gaddafi forces' tactical decision to relocate to civilian areas: Thus, the same tactical changes which forced target creep on OUP also forced it into targeting choices that placed civilians at greater risk. Meanwhile, on June 19, 2011, a precision-guided weapon appeared to malfunction and killed a number of civilians.<sup>27</sup> These incidents mean that roughly one strike for every 1,000 resulted in civilian deaths; a better record than any campaign in recent history achieved, but still not enough to prevent civilian deaths altogether.

In Syria and Iraq, too, the coalition's actions have caused a number of civilian deaths. For example, in November 2014, an air strike killed two children near Harim city in Syria; another in mid-2015 killed four civilians at an ISIL checkpoint.<sup>28</sup> Other sources have put the death rate far higher. In late November 2015, the UK-based Syrian Observatory for Human Rights reported that the coalition campaign had killed 250 civilians.<sup>29</sup> As with OUP, these cases concern a tiny proportion of the total number of strikes conducted; but just as in OUP, all the coalition's care has been insufficient to prevent them completely.

This is especially important, because Western tolerance of civilian casualties is lower than it ever has been: During the Libyan operation, for example, it was observed that "Nothing could have derailed the operation so quickly in the minds of a non-committal public at home, and of Libyans themselves, than civilian casualties among those the operation was explicitly mandated to help."<sup>30</sup>

The implications of this refusal to accept civilian deaths become clear from the Saudi-led campaign in Yemen. The campaign, which began in March 2015, has come at a high diplomatic cost for the Saudi government, largely due to the toll it has taken on civilian lives. The campaign has been punctuated by credible and well-researched reports of civilian deaths: Amnesty International enumerating 110 deaths in October 2015; the United Nations reporting another 62 in December 2015; a single strike in March 2016 killing over 100 civilians at a market.<sup>31</sup> The profligacy has led to a chorus of condemnation in the West, with the Saudi-led campaign being described by mainstream media as "savage," and "a

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27 See "Press Briefing on Libya," NATO Press Office, June 21, 2011, [http://www.nato.int/cps/en/natohq/opinions\\_75652.htm?selectedLocale=en](http://www.nato.int/cps/en/natohq/opinions_75652.htm?selectedLocale=en).

28 "Syria Crisis: 'Children Died' in US Air Strike," *BBC News*, May 22, 2015, <http://www.bbc.co.uk/news/world-middle-east-32840132>; and "Centcom Investigation: 4 Civilians Killed at ISIL Checkpoint," DOD Press Release, November 20, 2015, <http://www.defense.gov/News-Article-View/Article/630801/centcom-investigation-4-civilians-killed-at-isil-checkpoint>.

29 "US Coalition Strikes in Syria 'Killed 250 Civilians,'" *Al Jazeera*, November 25, 2015, <http://www.aljazeera.com/news/2015/11/coalition-strikes-syria-killed-250-civilians-151124075241069.html>.

30 Michael Clarke, "The Making of Britain's Libya Strategy," in *Short War, Long Shadow: The Political and Military Legacies of the 2011 Libyan Campaign*, 10.

31 "Yemen: 'Bombs Fall From the Sky Day and Night:' Civilians Under Fire in Northern Yemen," Amnesty International, October 7, 2015, <https://www.amnesty.org/en/documents/mde31/2548/2015/en/>; "Yemen: Civilian Casualties Top 8,100 as Airstrikes and Shelling Continues, UN Reports," UN News Center, January 5, 2016, <http://www.un.org/apps/news/story.asp?NewsID=52938#.VxAD4Mdll8c>; and "Saudi-Led Coalition to Investigate Yemen Air Strikes," *Al Jazeera*, March 16, 2016, <http://www.aljazeera.com/news/2016/03/saudi-led-coalition-investigate-yemen-air-strikes-160316071229274.html>.

fundamentalist dictatorship that's bombing and killing civilians."<sup>32</sup> As early as April 2015, a senior Obama administration official described the diplomatic fallout as Saudi Arabia "getting a black eye internationally;" a year on, the campaign has come to be seen as "a humanitarian catastrophe and a boon to al-Qaeda in the Arabian Peninsula."<sup>33</sup> The UK government has come under pressure to justify its arms sales to Saudi Arabia, amidst accusations that it is abetting war crimes, and to review its entire relationship with the kingdom.<sup>34</sup>

Amidst this welter of criticism, it is instructive to note, according to a statement made by UN High Commissioner for Human Rights Zeid Ra'ad Al Hussein on March 18, 2016, the Saudi-led coalition is responsible for two-thirds of the roughly 3,200 civilian deaths since the Yemeni war began.<sup>35</sup> This equates to roughly 2,000 civilian casualties over the course of a year. This means the rate of civilian casualties caused by the Saudi-led campaign over Yemen is, in fact, on par with, or slightly below, that of the NATO operation over Kosovo in 1999 (an estimated 500 civilian deaths over two and a half months of bombing).<sup>36</sup> This is not to trivialize the extent of the suffering; any civilian death in combat is a tragedy. It does, however, indicate the extent to which Western tolerance for civilian casualties has receded over the past two decades.

In terms of the lessons to be applied from these campaigns, the first, and most important, is clearly all possible steps must be taken to prevent civilian casualties, even when the legal mandate is not specifically couched in terms of protecting civilians. The laws of war dictate it, humanitarian principles demand it, and public opinion expects it. However, the harsh reality of these campaigns is no countermeasures have ever been enough to prevent civilian deaths completely. As such, other responses are also necessary.

First, the military must make clear to its political leaders and to the public from the outset that civilian casualties cannot be avoided, despite all efforts to prevent them. Second, the military should enumerate the principles it will follow to limit the danger to civilians. Here, operational security will have to be taken into account, but this should not be exaggerated. A statement, for example, that all targeting is to be based on the principle of "zero expectation of civilian casualties" and all munitions will be selected based on the principle of "lowest yield needed to achieve the effect" will not give the opponent an insuperable advantage, or endanger the lives of friendly personnel. Third, procedures should be

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32 "Yemen War: Saudi Arabia's Savage Air Strikes End, But the Crisis Remains," *The Independent*, March 17, 2016, <http://www.independent.co.uk/news/world/middle-east/yemen-war-saudi-arabias-savage-air-strikes-end-but-the-crisis-remains-a6937466.html>; and "Britain is at War with Yemen. So Why Does Nobody Know About It?" *The Guardian*, January 28, 2016, <http://www.theguardian.com/commentisfree/2016/jan/28/britain-war-yemen-saudi-arabia-military-advisers>.

33 Quoted in the *Wall Street Journal*, "US Pressed Saudis to End Yemen Airstrikes," April 22, 2015, <http://www.wsj.com/articles/houthi-advance-in-yemen-as-saudis-turn-to-negotiations-1429708217>; and Bruce Riedel, "What the Yemen ceasefire means for the Gulf, the anti-ISIS campaign, and U.S. security," Brookings Institution, 12 April 2016, <http://www.brookings.edu/blogs/markaz/posts/2016/04/12-yemen-ceasefire-us-security-riedel>.

34 "Britain is at War with Yemen. So Why Does Nobody Know About It?" *The Guardian*, January 28, 2016.

35 "Zeid Condemns Repeated Killing of Civilians in Yemen Air Strikes," UNOHCHR Press Release, March 18, 2016, <http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=17251&LangID=E>.

36 See Human Rights Watch, "Civilian Deaths in the NATO Air Campaign," February 2000, [https://www.hrw.org/reports/2000/nato/Natbm200.htm#P39\\_994](https://www.hrw.org/reports/2000/nato/Natbm200.htm#P39_994).

put in place in advance to verify claims of civilian casualties, and to draw the lessons from any incidents in which they are caused. And fourth, compensation mechanisms for the victims and their families should be established in advance.

In short, no efforts, and no technology, are sufficient to prevent civilian deaths completely. The military should acknowledge that, and plan and communicate accordingly.

### **From Smart Bombs to Smartphones**

Target creep and force evolution are not, of themselves, new phenomena. By contrast, the fourth lesson of the air campaigns in the Middle East—the presence of civilian observers with smartphones, laptops, and access to satellite imagery—is revolutionary.

The importance of this factor cannot be overstated. Whereas in the past, detailed information from the combat area generally only emerged slowly, the communications revolution means it can surface within minutes of a strike.

The presence of camera-enabled smartphones means any action—from an air strike to a simple equipment move—not only *can*, but almost certainly *will*, be filmed and posted online in near real time, probably with its exact GPS coordinates.

The implications for military planning and communication are enormous. At the basic level, soldiers who have their own smartphones can compromise operational security and become a potential diplomatic liability by posting indiscreet pictures of themselves online. Indeed, one of the first indications Russia was planning action in Syria was a set of social-media posts from members of the 810th Marine Division showing them traveling to and posing in Syria in early September 2015.<sup>37</sup> The risk to security becomes particularly acute when the telephone camera in question is GPS-enabled. The coordinates are then embedded in the photo file, allowing viewers to identify where the picture was taken almost to the square yard.<sup>38</sup>

Even if the troops on the ground can be persuaded not to post selfies—in itself a challenge—anyone else with a camera and internet access can quickly betray their presence. For example, as part of the campaign against ISIL, the arrival in Libya of a team of 20 US commandos was revealed as soon as it reached the country when the Libyan Air Force posted pictures of them on its Facebook page.<sup>39</sup> Video footage taken by civilians, meanwhile, has emerged as one of the main sources of

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37 Ruslan Leviev, “Are There Russian Troops in Syria?” September 5, 2015, <http://ruslanleviev.livejournal.com/38649.html>.

38 The seminal example of this technology in action remains the case of Bato Dambayev, a Russian soldier deployed to Ukraine in February 2014. His selfie odyssey was chronicled by Atlantic Council analysts in the report “Hiding in Plain Sight: Putin’s War in Ukraine,” May 2015, <http://www.atlanticcouncil.org/publications/reports/hiding-in-plain-sight-putin-s-war-in-ukraine-and-boris-nemtsov-s-putin-war/>; the locations of his selfies were given so accurately journalist Simon Ostrovsky was able to follow Dambayev’s traces and photo himself in exactly the same locations. See Simon Ostrovsky, “Russia Denies That Its Soldiers Are in Ukraine, but We Tracked One There Using His Selfies,” Vice News, June 16, 2015, <https://news.vice.com/article/russia-denies-that-its-soldiers-are-in-ukraine-but-we-tracked-one-there-using-his-selfies>.

39 “Secret US Mission in Libya Revealed After Air Force Posted Pictures,” *The Guardian*, December 17, 2015, <http://www.theguardian.com/us-news/2015/dec/17/secret-us-mission-in-libya-revealed-after-air-force-posted-pictures>.

evidence for claims the Russian air force used banned cluster munitions in Syria—leading to accusations of war crimes.<sup>40</sup>

Social-media posts have also become a key source of information on events in Yemen. On January 6, 2016, for example, residents of the al-Thiaba district in the capital Sana'a posted on Facebook a number of images purporting to show cluster munitions which had been dropped on the district; Human Rights Watch included it in a report on the use of cluster munitions in the conflict.<sup>41</sup> Western journalists have also turned to social-media posts, with photographs and videos attributed to social-media users being used as evidence in reports.<sup>42</sup>

Even officially produced video imagery can have serious consequences for the conduct of the military campaign, and the political process above it. The classic example of this is the series of cockpit camera videos released by the Russian Defense Ministry between September 30 and October 12, 2015, at the very beginning of the Russian air campaign in Syria. In all, 43 videos were released over this period, detailing what the Ministry claimed was a series of precision strikes on ISIL forces. However, a team of investigative journalists compared the Ministry's footage with freely-available satellite images of the terrain in Syria, and pinpointed the genuine locations of the strikes. They concluded that the Ministry's claims betrayed "inaccuracy on a grand scale: Russian officials described thirty of these videos as air strikes on (ISIL) positions, but in only one example was the area struck, in fact under the control of (ISIL)."<sup>43</sup> Open-source evidence, thus, rapidly disproved the Russian claim it was focusing its strikes on ISIL, and was at least a contributing factor in the failure of Russia's diplomatic push to be recognized as a partner in the fight against ISIL.

The implications for military planning are complex, because such social-media posts are very much a double-edged sword. They can reveal priceless information about an opponent's location, readiness and assets; they can betray information about one's own forces to the opponent. The security implications can only realistically be mitigated by a long-term campaign of awareness raising, aimed at creating a culture in which soldiers on active duty view their phones (if they carry them at all) as a liability to be managed. Similarly, the information-gathering potential of social media will require large-scale investment into monitoring and analysis if it is to be realized.

However, one factor can, and should, immediately be brought into the military planning process, and that is the question of how, and to what extent, combat camera footage should be made public. So much

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40 See "Russia/Syria: Extensive Recent Use of Cluster Munitions," Human Rights Watch, December 20, 2015, <https://www.hrw.org/news/2015/12/20/russia/syria-extensive-recent-use-cluster-munitions>.

41 The original post is online at [https://www.facebook.com/permalink.php?story\\_fbid=867989619986503&id=100003264197140](https://www.facebook.com/permalink.php?story_fbid=867989619986503&id=100003264197140); and "Yemen: Coalition Drops Cluster Bombs in Capital," Human Rights Watch Press Release, January 7, 2016, <https://www.hrw.org/news/2016/01/07/yemen-coalition-drops-cluster-bombs-capital-0>.

42 See, for example, "Intense Clashes in Yemen Endanger Prospects of Humanitarian Cease-fire," *Washington Post*, May 11, 2015, [https://www.washingtonpost.com/world/middle\\_east/yemen-rebels-claim-tribal-allies-downed-moroccan-warplane/2015/05/11/27e895c4-f7df-11e4-a13c-193b1241d51a\\_story.html](https://www.washingtonpost.com/world/middle_east/yemen-rebels-claim-tribal-allies-downed-moroccan-warplane/2015/05/11/27e895c4-f7df-11e4-a13c-193b1241d51a_story.html).

43 See Maks Czuperski, Eliot Higgins, et. al., "Distract, Deceive, Destroy: Putin at War in Syria," Atlantic Council of the United States, April 5, 2016, <http://publications.atlanticcouncil.org/distract-deceive-destroy/>. The author of this article contributed to the report.

information can now be gleaned from imagery that future operations will have no option but to frame an overall policy on its release. Such a policy should answer three questions: 1) Should cockpit camera footage be released at all? 2) If so, how will it be vetted before release, so it does not inadvertently breach operational security requirements? 3) If not, how will the inevitable public and media criticism be mitigated?

This is such a new field, and the technology itself is evolving so fast, there are no easy answers. However, the experience of the Syrian campaign in particular shows the problems are only going to become more complex, not less. As such, the smartphone problem must be included in future planning—at the very least, to raise awareness that such a problem exists at all.

### **Shoes (and Boots) on the Ground**

The final lesson, and in many ways the most important, concerns the period immediately after the end of hostilities—what could be termed the “outbreak of peace.” This somewhat overly dramatic term is used deliberately, because the lesson of the Libyan campaign is the initial days after an air campaign are as crucial to long-term success as are the initial days of the campaign itself. Western practice over the past two decades has been to go into conflict with a massive weight of firepower designed to overwhelm an opponent’s defenses and to destroy his ability to conduct set-piece battles; the West needs to understand post-conflict situations require a similarly massive effort—not just of boots on the ground, but of shoes on the ground.

Libya is, in fact, a template of how not to conclude an intervention. In purely military terms, the air campaign was a success: it delivered effects on the ground with a very low rate of civilian casualties and almost no casualties among its own personnel. The follow-up to the campaign, however, was catastrophic—indeed, President Obama subsequently said “failing to plan for the day after” was probably the worst mistake of his eight years in office.<sup>44</sup> In a dizzying span of four and a half years, Libya saw “a burst of political activity with the discovery of newfound freedoms; a growing period of divisiveness over the pursuit of political power and the spoils of war; an inability to form a cohesive government to establish basic security and provide economic well-being for a resource-rich country; the outbreak of civil war; and the ensuing political chaos that gave space for Salafi jihadists and ultimately the Islamic State of Iraq and al-Sham (ISIS) to gain influence across the country’s vast territory.”<sup>45</sup>

The experiences of Libya, Afghanistan, and Iraq show there is a very narrow window of opportunity between the end of a campaign and the beginning of a descent into chaos, a window that can be measured in months, if not weeks. Initially, the end of large-scale combat leads to euphoria and optimism; but that quickly crumbles under more basic questions of governance, service and security—especially if the end of

44 “President Obama: Libya Aftermath ‘Worst Mistake’ of Presidency”, *BBC News*, April 11, 2016, <http://www.bbc.co.uk/news/world-us-canada-36013703>.

45 Ben Fishman, “Could Libya’s Decline Have Been Predicted?” *Survival: Global Politics and Strategy* 57, no. 5, (September 22, 2015): 199-208, <http://www.iiss.org/en/publications/survival/sections/2015-1e95/survival--global-politics-and-strategy-october-november-2015-3ec2/57-5-14-fishman-re-9997>.

large-scale combat is followed by smaller skirmishes between armed groups who have, perhaps, an interest in preventing the outbreak of peace. In the words of Libya historian Dirk Vandewalle, “In Libya, the ability to shape the political landscape and fill (the power) vacuum was a race against time: a window of opportunity to restructure and refashion political and social institutions before the disintegrative, centrifugal forces of subnational or supra-national loyalties—whether tribal or geographical, linked to circles of patronage to Islamic movements—could assert and consolidate themselves.”<sup>46</sup>

The practical challenges of rebuilding a functioning state, and building from scratch a more or less representative form of government, after a conflict are enormous and immediate: They require everything from the development of a constitution to the delivery of basic services such as water supplies, sanitation, law enforcement, justice, and security. It is no coincidence that ISIL’s propaganda has made much of its supposed ability to provide services in the cities it has taken:

When ISIL takes over new territory, its first priority is restoring security and basic services (primarily water and electricity) as quickly as possible. In some areas, ISIL has even taken over bread factories to provide free or subsidized food. Syrians I have interviewed in Turkey say that ISIL police and courts initially try to build goodwill with the population by cracking down on ordinary crime—thieves, murderers, drug dealers, and rapists are the primary targets.<sup>47</sup>

The West has been lamentably slow in appreciating this fact; indeed, in this area, the extremists appear to have learned faster. In Afghanistan, for example, the Taliban profited significantly from the perception that they were more capable of providing basic local services than was the remote and apparently disengaged (not to say corrupt and ineffective) central government in Kabul.<sup>48</sup> It took almost a decade for the West to acknowledge the need for improved local governance, and to introduce its own strategy of “government in a box.”<sup>49</sup> There are already warnings that the errors of the past look likely to be repeated in present-day Syria and Iraq:

Defeating ISIS will do little to bring regional security and stability if it is not tied to efforts to deal with the broader sectarian and ethnic tensions in Iraq and Syria, and to efforts to help the leaders in both states make reforms in politics, governance, and economics that can bring recovery and broader development (...). So far, however, the Obama administration has not even articulated a clear set of options for helping Iraq and Syria deal with their broader problems.<sup>50</sup>

The lesson must be applied. As repeated conflicts have shown, the effort devoted to military campaigns needs to be matched in scale

46 Quoted in Fishman, pp. 203–204.

47 Mara Revkin, in “Experts Weigh In: Is ISIS Good at Governing?” Markaz Blog on Middle East Politics and Policy, Brookings Institution, November 20, 2015. <http://www.brookings.edu/blogs/markaz/posts/2015/11/20-experts-weigh-in-isis-governance-revkin-mccants>.

48 Thomas Barfield and Neamatollah Najumi, “Bringing More Effective Governance to Afghanistan: 10 Pathways to Stability,” *Middle East Policy* 18, no. 4 (Winter 2010), <http://www.mepc.org/journal/middle-east-policy-archives/bringing-more-effective-governance-afghanistan-10-pathways-stability>.

49 Dexter Filkins, “Afghan Offensive is New War Model,” *New York Times*, February 12, 2010, [http://www.nytimes.com/2010/02/13/world/asia/13kabul.html?\\_r=0](http://www.nytimes.com/2010/02/13/world/asia/13kabul.html?_r=0).

50 Cordesman, November 2015, pp. 27–28.



and sustainment by the effort to rebuild the provision of basic services afterwards. Any future conflict intervention should include, from the beginning, a plan for a post-conflict intervention aimed at providing and sustaining basic services in the immediate aftermath of the conflict, while a new national administration can be stood up. In most cases, it is likely at least part of this post-conflict intervention will have to be carried out by the military through a policy of “boots on the ground;” security is the necessary foundation for reconstruction, and there are many circumstances under which only the military can realistically provide it. But this should not be construed as meaning the job can or should be left to the soldiers alone. The post-conflict intervention will most probably need boots on the ground; but it will definitely also need shoes on the ground. To be given the greatest chance of success, a post-conflict intervention will need to plan for *both*—and how they will interact.

An integral part of any plan which includes an element of “shoes on the ground” must also be an attempt to answer the question of who will fill those shoes. Which local institutions, officials or groups will be able to take on the burden of restoring governance to ungoverned spaces, and how will civil peace be maintained in a post-civil-war situation? For all the West’s failings in Libya, the country’s descent into civil war was primarily driven by domestic factors: “The specific traits of the Libyan people; their collective history under an impulsive and brutal 42-year regime; and the scrum for power that Gaddafi’s demise unleashed in a society that suppressed freedoms, ambitions, and even tribal and religious identities for decades.”<sup>51</sup> Similarly, the Syrian and Iraqi conflicts are deeply rooted in local antipathies which will have to be managed if a further round of bloodshed is to be rendered less likely: “Even decisive military success against (ISIL) is likely to prove ephemeral if there is no plan (nor any effort to implement such a plan) to create a political context where tactical military victories can be translated into enduring, political achievements.”<sup>52</sup>

On a rhetorical level, at least, that message has begun to penetrate. Speaking at the Manama Dialogue on security in October 2015, US Deputy National Security Advisor Anthony Blinken underlined the need for shoes on the ground, and for agreement on who should fill them:

Ultimately, however, lasting peace and stability for the region cannot be imposed from above, from the outside, or by force. They need to be built from within by governments that are inclusive, accountable to their citizens, and interconnected with the world. Security assistance alone cannot get governments there. It requires political accommodation to ensure the freedom, dignity, and security for all citizens.<sup>53</sup>

Implementing the rhetoric, however, will require overcoming formidable obstacles; indeed, the “government in a box” strategy itself met with, at best, mixed success in Afghanistan.<sup>54</sup> An international post-conflict intervention would be costly and lengthy; it would be dependent

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<sup>51</sup> Fishman, p. 200.

<sup>52</sup> See Pollack, n. 32 above.

<sup>53</sup> See the transcript of his remarks provided by the State Department at <http://www.state.gov/s/d/2015/249031.htm>.

<sup>54</sup> See, for example, Shashank Joshi, “The Afghan Endgame: Retrospect and Prospect,” RUSI Commentary, July 2, 2010, <https://rusi.org/commentary/afghan-endgame-retrospect-and-prospect>.

on local support and political goodwill, and upon the ability of local actors to accept a power-sharing arrangement; it would depend for its success on close cooperation between the military and a wide variety of civilian actors, both local and international. It would have to rely very largely on local bureaucracies and service provision, which would in all probability demand a significant and sustained training effort; it would have to reflect and respect local cultural norms, even when they differ from Western ones; it would have to aim, as its ultimate goal, at the creation of a cadre of local leaders and administrators capable of providing basic services. These are immense challenges, and the West's record of success in this area is low.

However, the first step towards addressing such challenges is to acknowledge they exist, and must be planned for at an early stage—ideally, at the same time as military intervention is being considered. This is a task in which the civilian and military leadership will have to work together. They should consider, as early as possible, how basic law enforcement, security and governance could be provided from the day peace breaks out; they should consider what funding and assets may be needed to ensure the delivery of basic humanitarian services such as water, sanitation, food and healthcare; they should begin discussing, and working towards, the legal framework for a post-conflict reconstruction project; they should begin analyzing the regional pattern of relationships, in order to work towards regional support for the stricken country; they should discuss how to train, recruit and retain local service providers, so that any international reconstruction project can hand over to local services. In brief, the civilian and military leadership should work together on both the conflict and the post-conflict plans.

None of this will be easy, cheap, or quick; but the lesson of recent interventions is it is necessary. Libya, in particular, is an object lesson in how easy it is to win the war and then lose the peace. The ultimate goal of the next intervention should be to win the peace as well.

