

The Journal of British Military Thought



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BRITISH ARMY REVIEW

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Editorial

Welcome to British Army Review (BAR) 181 Autumn 2021. In this edition we are turning our attention to the issues surrounding race and diversity in the British Army, capturing the work initiated by the Army BAME network in 2020 in Project TULL and the subject of two subsequent conferences hosted by the CHACR.

These ground-breaking events were a response to the disproportionately severe impact of COVID-19 on some ethnic minorities and the shocking murder of George Floyd in Minneapolis in May 2020. Few of those who took the time to attend the CHACR conferences will forget the graphic accounts of the racist abuse suffered by minority ethnic Army personnel in the past, such as former Gunner

Michael Lawrence's horrific recollections from the 80s, which included being deliberately set alight with kerosene by other soldiers in his unit while on exercise in BAOR.

A similar issue was highlighted in July when the House of Commons Defence Committee published its report into the negative experiences of service-life for female soldiers; *Protecting those who protect us: Women in the Armed Forces from Recruitment to Civilian Life.* Just as those in ethnic minorities had struggled against the prevailing Army cultures, there is clear evidence that female soldiers continue to suffer unacceptable behaviours - such as bullying, harassment and discrimination, or sexualized behaviours – in the workplace. While better Diversity



Pictured is the British Army's Watchkeeper Unmanned Aerial System being prepared and launched from RAF Akrotiri. UAS vehicles were extensively used in the Nagorno-Karabakh War described elsewhere in this edition of BAR. Photo: Corporal 'Matty' Matthews, Crown Copyright

and Inclusion policies have been implemented over recent years, the incidence of such cases is still too high and does not reflect the Army in a creditable light as an effective 21st century institution.

In this respect, there are similarities between the BAME and female experience (noting that many soldiers are in both groups) of Army life. The HCDC report and Project TULL note that cultural change was neither sufficient nor being enacted at a fast-enough pace. Given that our D&I polices are now far better and support from Senior Command levels unequivocal, what is causing this 'drag factor'? Could it be that improved policy and more effective leadership are addressing symptoms rather than the causes of non-inclusive behaviour?

No-one in the Army is born a soldier. We all have individual worldviews shaped by our wider environment in the family, at school, at work and by society at large. While ARITC takes this raw human capital and tries to re-shape it to the Army's need, our personal biases and prejudices can have deep roots. Many aspects of everyday life have associated affiliations such as schools, universities and colleges, sporting teams, professions, where we call home, religion, language, dialect and musical taste, for example. Often these can provide a form of surrogate security against the challenges of life's 'unknowns' with the comfort derived from familiar and well-understood surroundings. It's a deep-seated aspect of human nature.

However, if these prejudices and biases are not properly recognised, acknowledged and controlled in everyday life including the Army - they are easily distorted to become a pernicious influence in a hierarchical institution. This can be external, as in 'you can't join us' or it can be internal as in, 'you can't join them'. For an example of this, look at the difficult experiences navigated by Leroy Logan both within the Metropolitan Police he joined and the London Caribbean community he never left. There will be many in the Army who can relate to the path he walked. In this context, it may be that prejudice and bias as normative behaviours in themselves, are much more pernicious causal problems than the racist or sexist symptoms that they subsequently present in the workplace. Aspects of race in the Army are explored in the articles by Colonel Karl Harris, Chair of the Army BAME Network, Captain Kidane Cousland and Corporal Priscilla Quansah. The Army's progress may have been too slow and insufficient in addressing these issues to date, but these views are opening the conversations that will help speed up the process. We know there will be more to come. Alongside them in this edition we have the usual mix of wide-ranging debates and book reviews for your consideration and response if necessary.

We hope you enjoy it.

Identities and Myths; Exploiting the UK's Heritage to see Beyond Racial Boundaries

Colonel Karl Harris, Royal College of Defence Studies, examines the ways in which the British Army can look beyond racial boundaries.



D Company 'The Delta Dogs', 5 Rifles conduct a live fire Company attack on the ranges at Castle Martin training area, as part of the 5 Rifles Battle Group preparation, ahead of their deployment on Op CABRIT. Photo: Corporal Rob Kane, Crown Copyright

THEME

E veryone has a different idea of what it actually means to be English. What pride means ... I understand ... we have a desire to protect our values and traditions - as we should - but that shouldn't come at the expense of introspection and progress.¹

As Euro 2020 neared, England Football Manager Gareth Southgate wrote an open letter responding to debates about his players 'taking a knee' in defiance of racism. He described the duty he and his players felt they had to 'interact with the public on matters such as equality, inclusivity and racial injustice.'² Substituting Southgate's 'English' for 'the British Army,' or 'a British Army soldier,' his letter touches many topics pertinent to the British Army's Diversity and Inclusion (D&I) initiatives, particularly those intended to improve the Army's racial and ethnic diversity.

Topics in Southgate's letter include notions of culture wars, values, example, identity, history and heritage. These have been debated at fever pitch during 2020 and continue to be debated as 2021 matures. Racist abuse targeting England players after the Euro 2020 final met defiant public support of the players in reply, and the discourse added another chapter to the annals of socio-political debates in the UK. Similar debates will continue for the foreseeable future, until a large enough consensus agrees that sufficient improvement has been made. These deliberations matter to the British Army because it reflects wider society and, as an institution, it sets a national example through its conduct; the debates are not a sectional interest of a football team, or corners of UK society. This is recognised within Defence, and public commitments to tackle racism have been made. In 2020, for example, Secretary of State Ben Wallace opined that Defence 'has simply not done well enough on two areas, predominantly on BAME issues: we have not recruited enough people, and we have not made this a welcoming place for enough people ... it's really, really important that this is stopped, crushed, got rid of, and we have to double our efforts.'³ And in 2021, the Chief of the General Staff described 'aspects of [the British Army's] leadership and culture that, put frankly, we're much less proud of. We need to place a greater emphasis on our moral leadership.'⁴

As a values-based armed force needing to recruit, progress and retain the best possible talent from a diverse population in a competitive environment, it is right for the British Army to be self-critical and determined to improve. It is also important to place the current situation in context so that progress is recognised, because it has been made. Nevertheless, as the CGS described, the Army's reputation is 'defined' by how it treats its people, and on its D&I it is 'not yet moving fast enough.'⁵

A November 2020 conference indicated that enhanced understanding of British imperial and Commonwealth heritage could enhance the Army's race - and ethnicity - related D&I efforts.⁶ Based on that premise, this article aims to illustrate how understanding British imperial and Commonwealth histories might enhance trust, respect and belonging within the Army, whilst challenging and mitigating narratives that, if misunderstood, ignored or

¹ Southgate, Gareth, 'Dear England,' The Players' Tribune. https://www.theplayerstribune.com/posts/dear-england-gareth-southgate-eurossoccer (accessed 11 June 2021).

² ibid.

³ Bailey, Georgina, 'Ben Wallace interview: UK defence isn't fit for purpose – our Armed Forces must adapt to 21st Century threats,' The House, 19 June 2020. https://www.politicshome.com/thehouse// article/ben-wallace-interview (accessed 2 May 2021).

⁴ Carleton-Smith, General Sir Mark, Chief of the General Staff, opening address to the British Army's Black Asian and Minority Ethnic Network Conference, 11 May 2021: https://jive.defencegateway.mod.uk/videos/32971.

⁵ ibid.

⁶ The British Army's Black, Asian and Minority Ethnic Network and Centre for Historical and Conflict Research co-hosted a day-long seminar, entitled 'Our Common Bonds: Examining the multicultural heritage of today's British Army.' The seminar aimed to raise awareness, stimulate interest and improve understanding of the shared heritage of the British Army, British Empire and Commonwealth. The online event explored perspectives on race and ethnicity in the contemporary British Army and the role heritage plays in shaping them. The 513 attendees were located in 14 countries across four continents, with ranks ranging from OR2 to OF8. Attendance exceeded many of the platform provider's preceding records. Further information is on Defence Connect: https://jive.defencegateway.mod.uk/groups/army-bame-network/ blog/2020/11/21/our-common-bonds-examining-the-multicultural-heritage-of-today-s-british-army

abused, could hinder the Army's D&I. To do so, it first describes contemporary 'culture wars' surrounding race, illustrating their enduring pertinence. Short case studies exploring the British Empire's decolonisation and migration flows, and combined operations during the World Wars will then situate concepts of race, ethnicity and nationality today. The article concludes, proposing that British imperial and Commonwealth history could be employed strategically to enhance the British Army's D&I path to progress.

Culture is much like the air people breathe: it is taken for granted until there is an external stimulation that forces people to think about it.⁷

Footballers taking a knee remains a prominent gesture associated with global anti-racism protests following the murder of George Floyd on 25 May 2020. These protests included 'the largest civil rights movement' in British history.⁸ After the protests, Prime Minister Boris Johnson announced a Commission for Racial and Ethnic Disparities (CRED) would 'look at all aspects of inequality,'⁹ and expressed his desire to 'change the narrative.'¹⁰ The CRED evoked vociferous debate. On one hand its report was described as 'historically illiterate'¹¹ and a 'masterclass in gaslighting.'¹² On the other, it was seen as a 'brave first step in confronting the neo-Marxist ideology that has poisoned conversations about race,'¹³ and 'the rest of Europe could learn a lot from post-Brexit Britain.'¹⁴ Tanya Gold observed that notions of 'culture wars' might be exaggerated; 'conflict sells', a staple of social media and tool for those that like their 'politics bloody, unserious and superficial,' but British people are 'moderators' looking for 'common ground.'¹⁵ The politics and media commentary of the so-called 'culture wars' have proven to be noisy, even if the general population might be considered moderators.

Whether one sits on either side of the debates or oscillates, George Floyd's murder, the ensuing protests, the CRED report, and the introspection evoked, all raised a mirror inviting critical analysis of the UK's national identity. There is a spectrum of opinion about the reflections that stare back. If not responsibly marshalled, some vocal opinions could create rifts and exacerbate existing divisions, eroding trust and cohesion. As Tim Marshall cautions, 'physical divisions,' such as those associated with national identity, 'are mirrored by those in the mind,'16 with - as Edward Said wrote - 'the Other' beyond those divisions problematised; 'stamped with an otherness - as all that is different.'17 The British Army is not immune to problematised divisions of the mind, nor is the Army immune to potential movements and people that seek to sow division on the basis of race and ethnicity, or might undermine the Army's hard-earned reputation.¹⁸

For illustration, a narrative shorthand implying divisions that could unwittingly undermine the Army's D&I potential is of, as Anthony King has described, a British

⁷ Bislin, R.W. and Cushner, K., et al., Intercultural Interactions: A Practical Guide (Beverly Hills, CA: Sage Publications, 1986) p22 quoted in Stocker, A. Major British Army. 'Cultural values at work on the advanced command and staff course (ACSC).' Defence Studies, 2:1, 140, DOI: 10.1080/14702430208405015 (accessed 7 April 2021).

⁸ White, Nadine, 'Exclusive: Black Lives Matter Sparks 'Largest Racial Justice Movement in UK History,' Huffpost, 13 November 2020. https:// www.huffingtonpost.co.uk/entry/black-lives-matter-petitions-protests-racial-justice_uk_5fa12dc2c5b6c588dc9561f2 (accessed 4 May 2021).

⁹ Johnson, Boris, 'Rather than tear some people down we should build others up,' The Telegraph, 14 June 2020. https://www.telegraph.co.uk/ politics/2020/06/14/rather-tear-people-should-build-others/ (accessed 14 January 2021).

¹⁰ Sandle, Paul & Smout, Alistair, 'Calls for action, not words, as Johnson launches UK racism commission,' Reuters, 14 June 2020. https:// www.reuters.com/article/uk-minneapolis-police-protests-britain-j-idUKKBN23L0T4 (accessed 1 May 2021).

¹¹ Olusoga, David, 'The poisonously patronising Sewell report is historically illiterate,' The Guardian, 2 April 2021. https://www.theguardian. com/commentisfree/2021/apr/02/sewell-race-report-historical-young-people-britain (accessed 2 April 2021).

¹² Parker, Amanda, 'UK report on race is a masterclass in gaslighting,' Financial Times, 1 April 2021. https://www.ft.com/content/feca1eb5a50d-4698-8f43-c4d7c3d207b3 (accessed 2 April 2021).

¹³ Jacobs, Sherelle, 'The battle against the Left's ideology of racial victimhood has only just begun,' The Telegraph, 31 March 2021. https:// www.telegraph.co.uk/politics/2021/03/31/battle-against-lefts-ideology-racial-victimhood-has-just-begun/ (accessed 1 April 2021).

¹⁴ Goodhart, David, 'Any BLM activists reading this race report will find their beliefs shredded,' The Telegraph, 1 April 2021. https://www. telegraph.co.uk/opinion/2021/04/01/blm-activists-reading-race-report-will-find-beliefs-shredded/ (accessed 1 April 2021).

¹⁵ The Sunday Times, 'Culture wars: how divided is Britain really?' 27 March 2021. https://www.thetimes.co.uk/article/culture-wars-howdivided-is-britain-black-lives-matter-brexit-megxit-q8h5660ks (accessed 15 April 2021).

¹⁶ Marshall, Tim, Divided: Why We're Living In An Age of Walls (London: Elliott and Thompson Ltd, 2018), 4.

¹⁷ Said, Edward W., Orientalism (London, England: Penguin Classics, 2003), 97.

¹⁸ For examples of public statements by retired generals dissociating the Armed Forces with far-right organisations see Vron Ware, Military Migrants: Fighting for Your Country. (London: Palgrave Macmillan, 2012), 275-276. Recent examples include soldiers posing with former EDL leader Tommy Robinson (BBC News. Army investigates Tommy Robinson photo with soldiers. 9 October 2018 (https://www.bbc.co.uk/ news/uk-45805285)) and racist graffiti on the car of a soldier parked within a military barracks (BBC News. Police investigate racist hate crime at British Army base in Cyprus. 14 August 2020 (https://www.bbc.co.uk/news/uk-53780094)). For further commentary see The Economist, 'Black Lives Matter and the British army's culture war: Officers and squaddies march to a different tune,' 18 July 2020. https:// www.economist.com/britain/2020/07/18/black-lives-matter-and-the-british-armys-culture-war (accessed 15 April 2021).



The chairman of the Armed Forces Muslim Association, prays in the Birmingham Central Mosque, the largest mosque in Western Europe, which became the first mosque in the West Midlands to show its support for the military by signing the Armed Forces Covenant. Photo: Corporal Dek Taylor, Crown Copyright

Army 'Anglo-Saxon ideal.'¹⁹ Although superficially benign, this notion implies an exclusive anthropological boundary. It is a 'constructed form of closure ... and exclusion.'²⁰ When combined with other racial- and ethnicity-related myths such as 'martial race theory ... [and] ... an ideology of white supremacy that animated nineteenth-century Englishness,'²¹ a command of history and heritage becomes an increasingly important tool to address prejudice, racism, and the instrumental use of such theories witnessed in 'more recent times.'²² If unacknowledged and embedded, ignorance and/or unhelpfully exclusive myths could undermine inclusion and cohesion. Conversely, as this article now seeks to illustrate, if myths are acknowledged and challenged, knowledge of shared heritage could be powerful, helping to change the 'presumptions which some ... have learned.'²³

Heritage is a wide concept which embraces the historic environment both man-made and natural, landscapes and buried archaeology...museum and archive collections, artefacts and works of art and even our traditions, customs and languages.²⁴

The roots of British identity can be traced to 'the creation of the multinational British state in 1707,' which was forged when Britain was in geostrategic competition with France, through colonisation,²⁵ and through the

22 ibid, 25.

¹⁹ King, Anthony, 'Decolonizing the British Army: a preliminary response,' International Affairs, Volume 97, Issue 2, March 2021, 458. https:// doi.org/10.1093/ia/iiab001 (accessed 2 March 2021).

²⁰ Hall, Stuart, and du Gay, Paul, eds. Questions of Cultural Identity (London: SAGE Publications, 1996), 4.

²¹ Vron Ware, Military Migrants: Fighting for Your Country. (London: Palgrave Macmillan, 2012), 24.

²³ King, 'Decolonizing the British Army,' International Affairs, 459.

^{24 &#}x27;Better places to Live: Government, Identity and the Value of the Historic and Built Environment'. 23 March 2005.

²⁵ Ashcroft, Richard T. & Bevir, Mark, (2018) Multiculturalism in contemporary Britain: policy, law and theory, Critical Review of International Social and Political Philosophy, 21:1, 4 https://doi.org/10.1080/13698230.2017.1398443 (accessed 12 March 2021).

formation of the 'United Kingdom of Great Britain and Ireland' in 1801, then the UK of today in 1922.²⁶ This 'indelibly linked the very idea of Britain to its imperial role,'²⁷ which reached its summit of global dominance and self-righteous confidence during the 19th Century. Imperial strength diminished during the 20th Century, with the British Empire emerging from World War 2 'economically and strategically outmoded.'²⁸

As John Darwin argues, the 'grand illusion' of Britain as a world imperial power with a global role 'crashed to earth in January 1968' when Britain announced its withdrawal from 'east of Suez.'29 The surrender of Singapore to Japan on 15 February 1942 was perhaps a bitter foretaste of the UK's diminishing strength and confidence: Churchill wrote that it was 'the worst disaster and largest capitulation in British history.'30 Darwin's assessment and Churchill's remonstrations notwithstanding, between these two historic moments decolonisation shifted the UK geopolitically and ideationally. The imperial identity, which had been cultivated through centuries, was replaced by the current *island identity*, forged as the decolonising empire rapidly contracted into its imperial centre. As Ashcroft and Bevir argue, this threatened the UK's self-image and, accordingly, UK politicians tried to secure a 'postimperial Commonwealth vision' as a 'primarily symbolic way' of reasserting UK 'status as the 'mother-country."³¹

Before and as this vision came into being, the UK's net migration undulated irregularly, which is perhaps under-reflected in contemporary debates. For instance, as a manifestation of colonisation, during 1901-1931 emigration from the UK far exceeded immigration.³²

Then, 'for much of the twentieth century, the numbers migrating to and from the UK were roughly in balance, and from the 1960s to the early 1990s the number of emigrants was often greater than the number of immigrants.'³³ Within this broader context, UK legislation in 1948, 1962, 1971 and 1981 encouraged immigration of peoples from the former colonies to the UK. For example, until Jamaica's independence in 1962, people in Kingston-Upon-Thames had no greater claim to being British than people in Kingston, Jamaica, and both were entitled to move within the Empire and Commonwealth. The famous aphorism encapsulates British post-colonial migration for many peoples: 'We are here because you were there.'³⁴

The UK's legislation and contrapuntal migrations they encouraged created a 'political and legal legacy,' entwining 'race, citizenship and immigration' in the search for 'Britishness'.³⁵ It also meant designs of 'British nationality, identity and citizenship ... [became] very imprecisely drawn and understood,'³⁶ with those prone to 'territorialise their identity to the exclusion of 'the Other'' having to concede British identity and citizenship 'on a non-racial basis.'³⁷ The mythical 'White Anglo-Saxon Britain' was becoming an increasingly multicultural 'Brown Britain,' which created a 'tension between illusion (the all-English garden) and diverse reality.'³⁸

Arguably, as contemporary re-scripting of histories and UK anthropology have identified, a gap between illusion and diverse reality has existed for millennia. Specifically, for example, Britain has comprised 'mixed-race people of African heritage' - amongst other races - since at least Roman Britain,³⁹ centuries before Anglo-Saxons inhabited today's UK archipelago.⁴⁰ Looking beyond England's

- 29 Darwin, John, Unfinished Empire: The Global Expansion of Britain. (London: Penguin Books Ltd, 2013), 343.
- 30 Brendon, Piers, The Decline and Fall of the British Empire: 1781-1997 (London: Vintage, 2008), 422.
- 31 Ashcroft & Bevir, Multiculturalism in contemporary Britain, 5-6.

35 Ashcroft & Bevir, Multiculturalism in contemporary Britain, 4 & 6.

37 ibid, 55.

39 Olusoga, David, Black and British: A Forgotten History (London: Pan Books, 2017), 19.

²⁶ Johnson, Ben, 'The UK & Great Britain - What's the Difference?' Historic UK. https://www.historic-uk.com/HistoryUK/HistoryofBritain/The-UK-Great-Britain-Whats-the-Difference/ (accessed 4 August 2021).

²⁷ Ashcroft & Bevir, Multiculturalism in contemporary Britain, 4.

²⁸ White, Nicholas J., Decolonisation: The British Experience Since 1945 (London: Longman, 1999) 62-63.

³² Sturge, Georgina, 'Migration Statistics.' House of Commons Library: Briefing Paper; Number CBP06077, 27 April 2021, 15. https:// researchbriefings.files.parliament.uk/documents/SN06077/SN06077.pdf (accessed 20 July 2021).

³³ Sturge, Georgina, 'Migration Statistics.' House of Commons Library, 27 April 2021, https://commonslibrary.parliament.uk/research-briefings/ sn06077/ (accessed 20 July 2021).

³⁴ Younge, Gary, 'Ambalavaner Sivanandan obituary,' The Guardian, 7 February 2018. https://www.theguardian.com/world/2018/feb/07/ ambalavaner-sivanandan (accessed 11 April 2021).

³⁶ Cohen, Robin. 'Fuzzy frontiers of identity: The British case.' Social Identities (1995), 1:1, 35. DOI: 10.1080/13504630.1995.9959425 (accessed 10 April 2021).

³⁸ Littler, Jo & Naido, Roshi, eds, The Politics of Heritage: The Legacies of Race (London: Taylor & Francis Group, 2005), 118.

⁴⁰ Britannica, T. Editors of Encyclopaedia. 'Anglo-Saxon.' Encyclopedia Britannica, July 30, 2019. https://www.britannica.com/topic/Anglo-Saxon. https://www.britannica.com/topic/Anglo-Saxon (accessed 9 May 2021) and Britannica, T. Editors of Encyclopaedia. 'Roman Britain.' Encyclopedia Britannica, April 21, 2020. https://www.britannica.com/place/Roman-Britain. https://www.britannica.com/place/Roman-Britain (accessed 9 May 2021).



A Gurkha soldier pictured at the Gurkha Company pass out parade at Helles Barracks, Infantry Training Centre Catterick, 26 November 2020. Recruits of Gurkha Company graduated as Riflemen from the Infantry Training Centre Catterick in a pride-filled ceremony at Helles Barracks. 2020 saw the highest intake of Gurkha recruits to the Catterickbased institution, which moulds prospective soldiers into future frontline infantry. Photo: Corporal Danielle Dawson, Crown Copyright

borders to further challenge myths of predominant Anglo-Saxon UK genealogy, a very strong Celtic heritage and ideas are, of course, integral ingredients of the UK's multicultural melting pot. Additional challenge is provided by Stephen Oppenheimer, who explains that 'genetic analysis indicates that the Anglo-Saxons and Celts, to the extent that they can be defined genetically, were both small immigrant minorities. Neither group had much more impact on the British Isles gene pool than the Vikings, the Normans or, indeed, immigrants of the past 50 years.' ⁴¹

In other words, an 'Anglo-Saxon race' as a basis of Britishness is not representative of reality, even if it is a predominant myth; no one person today 'is purely *one* thing'⁴² and the heterogenous reality of the UK is difficult to condense. As Robin Cohen observes, 'British nationality, identity and citizenship are only very imprecisely drawn and understood ... a complex national and social identity is continuously constructed and reshaped in its interaction with outsiders, strangers, foreigners and aliens.'⁴³ Seemingly, a malleable and plural 'fuzziness' is more representative: some might identify as English, others as British-Irish, maybe Scottish-Asian, or perhaps Welsh-African, or even British-African-Caribbean-Asian, amongst many identities; the possibilities are enticingly numerous.

With a notion of heterogeneity being increasingly commonplace⁴⁴ and more representative of the UK's and, by extension, British Army's anthropological reality, two case studies of the British Army and Commonwealth nations' shared military heritage are now offered. First, to illustrate the inter-dependence of these peoples. And, second, to illustrate the irrelevance of racial or ethnic

42 Said, Edward W., Culture & Imperialism. (London: Vintage, 1994), 407.

⁴¹ Oppenheimer, Stephen, 'Myths of British ancestry,' Prospect Magazine, 21 October 2006. https://www.prospectmagazine.co.uk/magazine/ mythsofbritishancestry (accessed 17 July 2021).

⁴³ Cohen, 'Fuzzy frontiers,' 35.

⁴⁴ The Economist, 'Britain's mixed-race population blurs the lines of identity politics: It's not black and white,' 3 October 2020. https://www. economist.com/britain/2020/10/03/britains-mixed-race-population-blurs-the-lines-of-identity-politics (accessed 15 April 2021).



A completed COVID19 test kit gets handed back to a Soldier from 1RHA as she passed by in her vehicle. Elements of the British Army have deployed at short notice to support the local authority in Bolton with the continuing fight against Covid 19. 75 personnel from 1st Regiment Royal Horse Artillery are assisting with the delivery of Covid testing kits and delivering leaflets to residents to maximise awareness and help stop the spread of the virus. Photo: Sergeant Ben Maher; RLC, Crown Copyright

benchmarks against which non-UK, or non-Anglo-Saxon racialised 'Others' might be measured militarily.

The first case study is drawn from World War 1. The British West Indies Regiment (BWIR) was established in 1915 and recruited citizens from the Caribbean. Amongst them was Norman Manley, a brilliant scholar. sportsman and political activist who enlisted into the Royal Field Artillery and would later negotiate Jamaica's independence.⁴⁵ Prejudice and racism usually meant that capable leaders such as Manley were ineligible for commissioned service and, more generally, BWIR soldiers were not afforded the same opportunities as white soldiers; they were confined to duties as labour troops on the Western Front. Nevertheless, their desire to be used in combat roles was met in Palestine in September 1918.⁴⁶ Here, during the Battle of Megiddo, the 1st and 2nd Battalions BWIR, together with the 38th and 39th Battalions Royal Fusiliers (recruited from UK

Jewish communities), the 20th Indian Infantry Brigade and the Australian and New Zealand Mounted Division formed 'Chaytor's Force'. This heterogenous formation broke through Turkish lines in the Jordan Valley on 19 September and seized Amman six days later, cutting off the Turkish forces to the south along the Medina Railway. This operation captured 10,322 prisoners, 57 guns, 132 machines guns and 11 railway trains for the cost of 132 casualties of which 41 had been sustained by 2 BWIR.⁴⁷

And there may be few better examples of a multi-racial and multi-cultural British and Commonwealth Force operating in a war than Slim's Fourteenth Army in Burma during 1944-45. Although other theatres saw significant British and Commonwealth units deployed, such as the Anglo-Australasian-Indian forces in North Africa and the Anglo-Canadian-Indian forces in Italy, Burma was the only place where British, African and Indian units operated together to defeat a peer enemy in large-scale

⁴⁵ Costello, Ray, Black Tommies: British Soldiers of African Descent in the First World War (Liverpool: LUP, 2015), 74.

⁴⁶ Imperial War Museum, 'The Story of the British West indies Regiment in the First World War,' https://www.iwm.org.uk/history/the-story-ofthe-british-west-indies-regiment-in-the-first-world-war (accessed 17 July 2021).

⁴⁷ Falls, Captain Cyril, Military Operations Egypt and Palestine, Vol II. (London: HMSO, 1930), 547-559.

conventional conflict. Notable engagements include the Nigerian and Gurkha battalions fighting alongside the British troops at 'White City' during Operation THURSDAY in March-April 1944. Concurrently, between March-July 1944 the Anglo-Indian units of IV Corps repelled the Japanese attempts to invade India at the pivotal twin battles at Imphal-Kohima. As the Fourteenth Army moved onto the offensive in 1945, while XV Corps including West African, British and Indian units - pushed the Japanese out of the Arakan along the Burmese coast, IV and XXXIII Corps - including East African, British and Indian units - smashed across the Chindwin and Irrawaddy before driving south to reach Rangoon by 1 May. This was arguably the most heterogenous army ever deployed by the UK and the Commonwealth, operating at long range, in extreme environmental conditions and facing an implacable enemy.

If one scratches beneath the surface of these two military case studies, they will identify that unity of purpose, skill and heroism were ideals. These, along with other ideals, are as essential to the British Army today as they were to the multi-racial, multi-cultural British and Commonwealth Forces of the Great Wars.

If we can't see our past with clarity, the foundations of our society, how can we see ourselves in the present with any clarity at all?⁴⁸

Like Gareth Southgate and his players, the British Army has a duty to 'interact with the public [and each other] on matters such as equality, inclusivity and racial injustice.'⁴⁹ The Army cannot dial down the din of socio-political debate of so-called 'culture wars,' when legacies of the British Empire, such as national identity, are contested. And whilst the Army's D&I progress might need to quicken, the self-awareness and intent articulated by strategic leaders can yet be catalysts for a generational change and national example.

Critically examining British imperial history offers a way to provide events and narratives with 'width, depth and context, '⁵⁰ to navigate 'culture wars' within British society that can be divisive, and identify histories to promote inclusion. This examination of history can also act as an accelerant of D&I initiatives, by busting unhelpful myths



Paratroopers are on a live fire battle camp on the wintry and windswept STANTA training area in Norfolk. C Company, 3rd Battalion The Parachute Regiment is on exercise YELLOW ASSAULT, Photo: Corporal Jamie Hart, Crown Copyright

- such as of an 'Anglo-Saxon ideal,' and by explaining the UK's global story, the British Empire and Army better. This is equally relevant to UK and non-UK, ethnic minority and ethnic majority, because their histories are entwined.

Armed with knowledge of these entwined histories, the Army's Values and Standards provide a guiding light. This light can be projected into the past, onto the present and to the future, to illuminate different case studies, whether they be positive or negative. Curation of British imperial heritage, such as the short case studies employed in this article, could help to generate 'feelings of self-esteem, distinctiveness, and belonging ... a superordinate identity which brings together diverse groups.'⁵¹ After all, if people are not *in* the Army because people are the Army, then so are *all* their histories. There is plenty of valuable shared heritage to explore; improving understanding of British imperial heritage and legacies can be harnessed as a strategic opportunity.

⁴⁸ Kwarteng, Kwasi, 'Living with the Empire: Empire of the Seas.' BBC Radio 4. Podcast audio. 8 October 2018. https://www.bbc.co.uk/ programmes/m0000nfd (accessed 16 February 2021).

⁴⁹ Southgate, 'Dear England,' The Players' Tribune.

⁵⁰ Howard, Michael, 'The Use and Abuse Of Military History.' Parameters 11, no. 1 (Mar 01, 1981): 14. https://www.proquest.com/scholarlyjournals/use-abuse-military-history/docview/1306224946/se-2?accountid=11862 (accessed 12 June 2021).

⁵¹ Jaspal, Rusi, Cristina da Silva Lopes, Barbara & Breakwell, Glynis M., (2020): British National Identity and Life Satisfaction in Ethnic Minorities in the United Kingdom, National Identities, DOI: 10.1080/14608944.2020.1822793 (accessed 17 May 2021).

Project TULL: Activism & Empowerment in The British Army; A Case Study

Major Dom Dias, Captain Kidane Cousland and Corporal Priscille Quansah look at activisim and empowerment within the British Army.



Headquarters 20 Armoured Infantry Brigade are tested as the Headquarters for the United Kingdom's High Readiness Vanguard Armoured Infantry Brigade. Part of the 3rd (UK) Division, 20 Brigade have recently taken on the role of the Vanguard Armoured Infantry Brigade (VAIB). During Exercise SPECULAR 2017, the 3rd Division's Headquarters will test 20 Brigade in a gruelling two week exercise in the sub-zero temperatures of Northern Germany. Photo: Stuart A. Hill, Crown Copyright

n a year of unprecedented national challenge, it might have been possible to overlook societal differences, socio-economic factors, race, culture and pulled together as an institution; One Army against the global pandemic. Yet COVID-19 served as one of many catalysts to highlight deep lying issues of race and inequality that remain an issue today.

2020 was a difficult time for most Britons, living with minimal human connection and facing a national crisis the scale of which hasn't been seen in a century; discontent, frustration and mistrust fermented across society manifesting as a myriad of social issues. This national frustration compounded the niche pressure the crisis exerted on the Army's personnel whether deployed internationally on operations or domestically supporting the fight against COVID, and those working from home on routine business. In particular, Black, Asian, Minority Ethnic (BAME) soldiers were facing the social and political stresses presented by a reported increased BAME vulnerability to COVID-19. These were compounded in May when the horrific murder of George Floyd highlighted the pernicious and persistent influence of institutional racism.

In response, a small team of interested, dedicated, and perhaps most importantly empowered, members of the Army took the initiative and attempted to make a difference. This came at no monetary cost to Defence, being the work of volunteers, in their own time, without any formal allocation of time for their participation despite MOD policy.¹ The results had strategic reach, planting a seed of change in the minds of those that hold the real power.

UNDERSTANDING THE SITUATION

On 5 May Workforce Policy Branch (WFB) shared NHS insights with the A BAME N Committee. These identified that people from BAME backgrounds were being disproportionately affected by COVID-19. WFB also asked what 'the Army can do to support ..., particularly as part of the Army's return to work planning.' Coincidentally, in response to concerns raised by Network members that reflected a paucity of information and communications, the Committee had begun conducting analysis - Project TULL.

The emerging disparity that COVID-19 impacted ethnic minorities was widely - at times unhelpfully - reported, with explanations varying from genetics to socioeconomic and cultural factors. Project TULL started as a fact-finding mission to gain information early about the situation, and the impact on our Operational Effectiveness. Originating from the concerns of Network members, the work coincidentally linked directly to NHS insights shared by the Workforce Policy Branch. This presented an opportunity for the eclectic mixture of diversity represented in the Network to cohere 'The Lived Experience'² and demonstrate the strength of diverse thinking. The Network was able to provide impartial omnidirectional reach across Defence, crossing both geographical and metaphorical borders of race, colour and culture. It addressed a specific question: How were minorities really being effected by COVID-19 and how was that having an impact on our people and our business outputs?

In some ways, we were all shaken out of any complacency, apathy or dwindling hope by the coincidence of the COVID pandemic, George Floyd's death and the stubborn enduring inequalities unmasked ... again.³

Nine and a half minutes in May 2020 took this discussion to a whole new level. The murder of George Floyd, although across The Atlantic, sparked an awakening and brought historic wrongs and fresh wounds to the fore. Most importantly, there was a reaction which manifested itself in varying approaches for addressing racial issues. There was an increase in contact from BAME soldiers sharing stories of stress and traumatic experiences they had personally encountered as well as of close relations. We saw an increase in Chain of Commands being proactive as opposed to reactive.⁴ But the response was not entirely positive and the environment at times was toxic.⁵ Highly-charged racial debate alongside widespread and divisive BLM protests set the Army

3 Harris RA, Colonel Karl, in briefing ECAB in August 202

¹ Chairs and Committee Members of Civilian Networks in Defence are entitled to an allocation of time to fulfil their duties (20%/10%). Reference -Guidance for MOD Employee Networks, July 2018.

² The term 'Lived Experience' refers to a person's first-hand experience in everyday events. TIN 2.101 Defence Inclusivity Phase 2: The Lived Experience, Final Report, November 2020.

⁴ Letter from The Permanent Secretary's (5 June) and Chief of Defence Staff's (11 June) messages

⁵ Permanent Secretary message to all staff following the Race, Diversity and Inclusion all-staff dial-in on 17 June 2020



Soldiers of 1 Platoon, A Company, The 2nd Battalion The Royal Anglian Regiment training for deployment to Mali on Op Newcombe. The soldiers are all conducting Ex GAO DAWN which is a mission rehearsal exercise for their role as the Long Range Reconnaissance Group. This exercise is designed to test the soldiers in an environment that represents what the task group will face as the British contingent within the United Nations Mission in Mali (MINUSMA) on Operation Newcombe. Photo: Corporal Cameron Eden RLC, Crown Copyright

BAME Network discussion forums ablaze with debate. BAME soldiers described growing friction with fellow soldiers over these issues, with serving and veterans of the Army seen joining thousands of others at BLM counter protests alongside nationalist organisations.

Analysis of COVID's effects, the roots of Mr Floyd's death and social contexts indicated systemic and social inequities related to race, health and wealth are at the heart of both.⁶ These are pertinent to British Army ethnic minority representation⁷ many of whom felt impotent to effect change or have their voices heard during a time of palpable tension. With nowhere to direct this energy the debate could have soured into discontent without the conduit for positive meaningful change offered by the Army BAME Network's Project TULL.

THE GENESIS OF PROJECT TULL, TAKING THE INITIATIVE

Colonel Karl Harris, The Chair of the Army BAME Network, led a group that analysed the impact that the intersecting issues of COVID-19 and BLM Movement was having on the Army's operational effectiveness. The lived experience was balanced against the established wisdom of published independent studies on racial disparities; independent literature on Race; mainstream news and the most recent government guidance on COVID-19. The Lammy Review⁸, Race Disparities Report⁹ and Defence's own Wigston Report¹⁰ were used to understand race relations alongside the previously experienced secondary and tertiary impacts that social unrest have on this institutional vital ground. A litany of other studies. media and literature were used to add precedence and rigour to better understand the trends and impacts of the experiences communicated by the Army's BAME personnel.

⁶ https://www.gov.uk/government/publications/race-disparity-audit

⁷ DM(A)/WfPol/Race dated 21 Sep 18 – Planning Directive – Directing Interventions for Improving the Representation of Ethnic Minority Officers and Soldiers, in particular para 5 (Intent).

⁸ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/643001/lammy-review-final-report.pdf

⁹ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/974507/20210331_-_CRED_Report_-_ FINAL_-_Web_Accessible.pdf

¹⁰ https://www.gov.uk/government/publications/wigston-review-into-inappropriate-behaviours

The analysis took place outside of work and almost entirely on virtual platforms, as we adjusted to the new. The team produced a comprehensive SWOT analysis product¹¹ augmented by short, medium- and long-term impact of both inaction and action summarized in the following:

- Potential underappreciation of the effects on some Army personnel due to the combination of COVID-19's disproportionate impact on BAME people, reactions to Mr Floyd's death, and other race-related matters
- Emotional duress felt by some personnel due to these simultaneous events;
- An urgent need for leadership, analysis and communications to ameliorate the impact of these simultaneous events;
- A persistent denial of inequalities faced by BAME people in society by fellow soldiers and some in the British Army's traditional support base, which needs to be better understood and tackled; and,
- A poorly calibrated response could damage internal and external trust and confidence, with immediate and longer-term impact on the Army's BAME goals.¹²

The second phase of project TULL required the connection of this analysis to the strategic context before being subjected to rigorous red-teaming. The Army BAME Network utilised the staff officers in its ranks and sought the wisdom of its allies across all three services to deliver this effect. It is hard to do justice to the level of scrutiny and academic rigour applied during this phase, but it had the desired outcome. When presented to the 3* Army Race Champion, Lieutenant General Sir Tyrone Urch, he made commitments to take immediate action, and gave his consent that it be sent directly to The Chief of the General Staff (CGS), General Sir Mark Carleton-Smith, which was swiftly followed by an invitation for meeting (virtually) to discuss Project TULL and its findings. For some BAME soldiers this level of acceptance and senior attention was enough to encourage, assuaging fears that they would be ignored whilst providing genuine optimism for change or at least a meaningful discussion on issues that affect them.

I think people now need to be comfortable with challenge

...and be comfortable with being uncomfortable.¹³

The dialogue that ensued required hard truths to be discussed. CGS did not shy away from these and invited Colonel Harris to brief ECAB, in August 2020, on the reality of the situation. CGS believed it was a significant challenge, addressing behaviours, prejudice, ignorance and fundamentally testing the moral courage of our soldiers and leaders. He agreed with the need for a targeted and ruthless rooting out of blockers and felt that there were too many Nelsonian eyes or tin ears on display. The brief to ECAB that followed was a shock to some, but a success, discussing race in the same way we aspire to gender equality and mental health. The outcome of these meetings was strategic leadership muscle fully behind the project with 3 simple aims: boost confidence; catalyse understanding; and enhance empathy.¹⁴

No institution is beyond reform or improvement in its culture, in its behaviour or in its leadership.¹⁵

INFLUENCE - BREAKING DOWN BARRIERS BETWEEN THE TOP AND BOTTOM

An organisation as hierarchical as ours may from time to time need a fresh perspective in order to avoid chronic optimism bias or a never-ending echo chamber. Often, more experienced personnel almost always present the most diplomatic of perspectives and approaches. Although this is not always counterproductive, getting an unvarnished perspective from more junior employees provides senior leaders with more diverse information and raw data to inform critical decisions. As the saving goes 'you don't know what you don't know' and where will your diversity of thought¹⁶ come from if those around you all walk, talk, think (and look) just like you. Project TULL recommended the introduction of 'reverse-mentors' for Senior Army Leaders, in order to provide them with the opportunity to learn, get information from source and refine their leadership approach and practice. The BAME network played a key role in providing several individuals, mostly JNCOs, in the latter end of 2020 and early part of 2021 for this task.

¹¹ Annex A to Project TULL - 20200607-ABAMEN/ProjTull/OS - 7 June 2020

¹² The points are from The Army BAME Network Committee concerns raised to ECAB in June 2020

¹³ Army Sergeant Major, WO1 GH Paton MBE

¹⁴ The full list of 16 recommended actions are contained at Annex C to Project TULL - 20200607-ABAMEN/ProjTull/OS – 7 June 2020

¹⁵ The Chief of the General Staff, General Sir Mark Carlton-Smith introduction to Army BAME Network Conference 2021.

¹⁶ Rebel Ideas, The Power of Diverse Thinking - Matthew Syed.



Military personnel from the British Armed Forces Sikh Association take questions from the inviterd guests on the most prestigious of Sikh days, when Sikhs everywhere honour the bravery of their forebears at the deadly Battle of Saragarhi. Sikhs have made a long and valuable contribution to the British Army and a unique respect for each other's courage, skill and determination has led to a proud, shared military heritage. Photo: Sergeant Ross Tilly RAF, Crown Copyright

The report was also a conduit in accelerating culture change by 'Addressing blockers to progress', such as hostility and negligence displayed by individuals across the rank and file of the Organisation. This was identified by the numerous attestations in the form of email, social media posts, etc., showing disproportionate negative impact on junior soldiers. The highlighted conclusion was addressed at ECAB in 2020, with culture change in the Army becoming more proactive than reactive. Consequently, ECAB has directed an update in progress of the recommendations from Project TULL thus far in early 2021. The personal experiences shared by the JNCO cohort through emails, Defence Connect and social media, played a major role in the recommendations and subsequent positive changes that have resulted since the commission of Project TULL.

Our reputation is defined by how we treat our people.¹⁷

At the core of the topic are our values and standards, in particular 'Respect for others'; the experiences shared raised an awareness on the importance of cultural education. It was not enough to run courses and put together policies without an active interest in learning about the cultural implications of behaviours laying bare the futility of 'tick box exercises' in actually making a positive impact. Proactively treating everyone with respect is key in allowing all personnel to be honest about their feelings and concerns with respect to inclusion.

CONCLUSION - 'BAME IS A TOPIC NOT A QUALIFICATION'

At inception Project TULL was about discovery and understanding. However, in a year of extraordinary

17 The Chief of the General Staff, General Sir Mark Carlton-Smith introduction to Army BAME Network Conference 2021.

challenge it has evolved into a springboard for change and become a mechanism where interested, dedicated, empowered young men and women of any colour can seize the initiative and influence senior leaders and policy. The situation presented an opportunity for more concerted, sustained action, for the Army to exhibit empathy and compassion and prove our determination to tackle inequities. The first steps have been taken towards this goal as Engagement with BAME personal took place; the Network used it's voice; the Senior Leadership listened and reacted and progress has been accelerated. We are no longer in a position where we are hoping to be inclusive, but are moving towards an Army where it is the norm to be proactive about inclusivity. Unless you are proactively including you are probably accidently excluding. $^{\rm 18}$

Given that 'speaking truth to power' is an inherent part of good followership,¹⁹ Project TULL provides a vignette on how loyal dissent can be appropriately used for the benefit of the organisation. In this case there were no illegal or immoral orders preventing change, but the action of the few was not without risk. Seizing on the initiative, from OR3 to OF5, rather than waiting for a solution from on high at a time of global challenge; the decision to open the discussion on the topic and take it to the highest levels of the Army was not the action of activists²⁰, but rather an outstanding example of well planned and executed activism.²¹



The 1st Battalion Scots Guards have been shaking down their tactics, techniques and procedures and getting back to their more familiar role having spent much of the past six months supporting the United Kingdom's battle with the coronavirus pandemic. They have just spent a week on manoeuvres across Salisbury Plain on Exercise TARTAN STRIKE which was designed to test the Guardsmen on how to go into battle and assault the enemy from their armoured fighting vehicles. Photo: Sergeant Nick Johns, RLC

- 18 Rock, Dr David, Director and CEO of NeuroLeadership Institute
- 19 Expressing Loyal Dissent, Moral Considerations from Literature on Followership. GEORGE E. REED
- 20 A person who believes strongly in political or social change and takes part in activities such as public protests to try to make this happen, https://dictionary.cambridge.org/dictionary/english/activist
- 21 The use of direct and noticeable action to achieve a result, www.dictionary.cambridge.org/dictionary/english/activism

Azerbaijan's Victory -Winning In The 21st Century

Simon Anglim MA PhD FHEA, Department of War Studies, King's College London, analyses the Azerbaijani victory in the recent Nagorno-Karabakh war and provides the reader with some initial thoughts, observations and caveats for the innovative. This article was originally published in *Military Strategy Magazine* (formerly *Infinity*) and is reprinted here by kind permission of the publisher.



Pictured is the aftermath of a missile attack on Ganja in Azerbiajan by Armenian forces. Photo: Javid Nabizade, Creative Commons Attribution-Share Alike 4.0 International license, Wikimedia

ARTICLES

Autumn 2020 saw the Republic of Azerbaijan, a country in the South Caucasus, population around 10 million and annual military budget of just \$2 billion, achieve something the USA and UK had not for nearly thirty years - winning a war. 10 November brought an armistice, brokered by Russia, ending the six weeklong Azerbaijani offensive into Nagorno-Karabakh - the region of southwestern Azerbaijan which, according to viewpoint, was under illegal occupation by Armenia since the previous Armenia-Azerbaijan war of 1992-1994 or struggling for independence as the Armenian-majority 'Republic of Artsakh' - and the seven Azerbaijani districts also under Armenian occupation since 1994 surrounding it.¹ Under the terms of the armistice, Azerbaijan kept the territories it reconquered - four of the seven districts while the Armenians ceded the other three, Azerbaijan thereby regaining around two-thirds of the territory lost in the 1990s.² To Azerbaijanis³, 'The Patriotic War' is a historic triumph, the healing of a guarter-century old 'bleeding wound' central to their national identity, peaked by the recapture of the major historical and cultural centre of Shusha the week before the peace deal was signed.⁴ For Armenia it is the diametric opposite: the Armenian government and the armed forces of 'Artsakh' - the Nagorno-Karabakh Defence Force (NKDF) - failed demonstrably on every level despite obdurate fighting from soldiers on the ground and in the weeks after the peace deal mass demonstrations demanding the resignation of the government took place in Yerevan, some violent, and the period since February 2021 has brought persistent rumours of impending military coups in Armenia.⁵

Nevertheless, when a snap general election was called in June 2021, the government of Prime Minister Nikol Pashinyan became one of the very few in history to lose a war and then be re-elected, albeit with a reduced majority in the National Assembly. There have also been some outbreaks of fighting along the demarcation line since the armistice, with each side blaming the other for its instigation.



MAP 1: Map of the 2020 Nagorno-Karabakh war showing Azerbaijan day-to-day advances, peace deal evacuations, and Russian peacekeeper presence. Made using OpenTopoMap data. Heavily influenced by Ryan O'Farrell's (https://twitter.com/ryanmofarrell) and MapperKrumm's (https://twitter.com/Krummapper) work. Image: Rr016 Creative Commons Attribution-Share Alike 4.0 International license, Wikipedia.

- 1 Armenia, Azerbaijan and Russia sign Nagorno-Karabakh peace deal' https://www.bbc.co.uk/news/world-europe-54882564
- 2 Karabakh on the map: What Azerbaijan gains after war', https://www.eng.kavkaz-uzel.eu/articles/52755/

³ Azerbaijanis' refers to citizens of The Republic of Azerbaijan, 'Azeris' to the majority ethnic group, making up around 92% of the population of 9.8 million, the other 8% including Dagestanis, Russians and Armenians.

⁴ Victorious Commander-in-Chief, President Azerbaijan Ilham Aliyev calls Commander of the Joint Corps, Lieutenant General Hikmat Mirzayev', https://en.trend.az/azerbaijan/politics/3331351.html This paper examines military operations in the 2020 war, therefore those interested in a detailed discussion of the origins of the Nagorno-Karabakh conflict might wish to look elsewhere. Impartial analysis is very hard to come by, but some honourable exceptions to this include Thomas de Waal, The Caucasus: An Introduction (Oxford: OUP 2010), especially pp.98-130, while Suha Bolukbasi's Azerbaijan: A Political History (London: IB Tauris 2014) is a history of Azerbaijan's road to independence which centres on the issue.

^{5 &#}x27;Hundreds protest in Armenia after PM ignores deadline to resign' https://www.aljazeera.com/news/2020/12/8/hundreds-protest-in-armeniaafter-pm-ignores-deadline-to-resign



People try to remove car tires from a burning car shop after shelling by Azerbaijan's artillery in Stepanakert, Nagorno-Karabakh, October 23, 2020, Photo: Voice of America, Wikimedia, Released

Why does this matter beyond Baku and Yerevan? To begin with, these events demonstrate there might still be such a thing as 'victory' in 21st-century war and a place for conventional military force (i.e., force aimed at contesting territory and delivered by regular armies and air forces) in securing it. This flies in the face of some highly-publicized arguments that thanks to two decades of 'unprecedented' cultural and technological developments, 'conventional warfare is dead'; military confrontations revolving increasingly around non-kinetic assets aiming at largely non-kinetic effects through applying or countering 'hybridity' somewhere in the 'grey zone', meaning 'legacy' capabilities including heavy armour and conventional manned aircraft, should go firmly into the dustbin of history.⁶ However, most Western military punditry has focused on the most reported-on aspect of the war (at least outside the two belligerents) Azerbaijan's extensive use of mainly Turkish-made Unmanned Combat Aerial Vehicles (UCAVs) and its apparent implications for future warfare and current acquisition policy.

This includes some influential voices, at least in the UK. Writing on potential futures for post-Brexit British armed forces, the Conservative MP and defence pundit, Bob Seely, commented on 'how Azerbaijan's use of inexpensive Turkish drones [sic] has decimated expensive Armenian equipment such as tanks and armoured vehicles, changing the balance of power on the battlefield'.⁷ This view is shared, apparently, by the most senior British decision-makers, the Defence Secretary, Ben Wallace, describing Turkey's use of 'drones' in Libya, Syria and 'elsewhere' as 'game changing' and stating that the UK had some catching up to do, with implications for the upcoming UK Strategic Defence Review. Rumours abound of troop numbers and 'legacy' capabilities being cut in favour of greater 'automation' and 'innovation'. It was reported subsequently that the review would commit to purchase cheap 'attack drones' based directly on evidence from Nagorno-Karabakh.⁸ The former chair of the House of Commons Foreign Affairs Committee, Sir Richard Ottaway, was more nuanced, acknowledging the part played by Azerbaijan's

⁶ For just a small sample of this, see Ciaran McGrath, 'Conventional war is dead' Expert says West is 'wasting money' on weapon systems', https://www.express.co.uk/news/world/1148793/world-war-3-warfare-west-china-russia-south-china-sea-crimea-ukraine; Jahara Matisek, The Death of American Conventional Warfare', https://www.realcleardefense.com/articles/2017/11/06/the_death_of_american_conventional_ warfare_112586.html; R Jordan Prescott, 'Goodbye Conventional War. It's Been Fun', https://mwi.usma.edu/goodbye-conventional-war-fun/

⁷ Seely, Bob, 'Britain can lead in the new age of warfare', https://www.telegraph.co.uk/news/2020/11/19/britain-can-lead-new-age-warfare/

⁸ Rahimov, Rahim, 'Russia Versus Turkey: Drone Battles and Gas Disputes', https://www.wilsoncenter.org/blog-post/russia-versus-turkeydrone-battles-and-gas-disputes; Larisa Brown, 'Defence Secretary Ben Wallace signals drones could replace troops as he warns that the UK must be ready to fight 'tomorrow's battles, not yesterday's' because Britain's enemies have 'studied our vulnerabilities', https://www. dailymail.co.uk/news/article-8731999/Defence-Secretary-Ben-Wallace-signals-drones-replace-soldiers-battles-future.html; Dan Sabbagh, 'UK wants new drones in wake of Azerbaijan military success', https://www.theguardian.com/world/2020/dec/29/uk-defence-secretary-hailsazerbaijans-use-of-drones-in-conflict

careful alliance-building and acquisition policy but also claiming that the UCAVS were 'pivotal' in assaults on Armenian defensive positions and arguing the UK should develop its own low-cost equivalents to the Turkish TB2s employed in Nagorno-Karabakh to supplement the (highly expensive) Predators supplied by the US.⁹

No such nuance across the Atlantic, predictably, an article in *Forbes*, for instance, hailing the TB2s as a 'silver bullet', alluding to suggestions from some quarters that 'the massacre [sic] of Armenian armor signals the end of the tank' and that the acquisition of cheap UCAVs by small powers might provide challenges even to US forces. Radio Free Europe was even more effusive, proclaiming that 'In Nagorno-Karabakh, the Future of Warfare is Now'.¹⁰

This is the author's own contribution to this debate - his observations on what happened in Nagorno-Karabakh in autumn 2020, some suggesting many of the claims cited above may need to be nuanced or revised.

STRATEGY AND THE UTILITY OF FORCE - CONVENTIONAL WARFARE IS ALIVE AND KICKING ARMENIA

While the war demonstrates that conventional military force can still be brutally effective in securing policy aims, those aims must be clearly enunciated with an obvious and realistic political end-state in mind and enjoy strong public support - things we have emphatically not seen in the West since the mid-2000s. It also helps if those aims can be framed in terms of securing objectives of geopolitical significance - something which conventional ground forces are designed to do - rather than more diffuse ones of 'fighting terror' or 'implanting democracy'.

While popular at home - even more so, now - President

Ilham Aliyev is viewed widely outside Azerbaijan as an iron-fisted autocrat with an indifferent human rights record and allegations of industrial-scale corruption of Western legislators and officials laid against him.¹¹ However, in 2020, President Aliyev (and given the highly personal nature of his rule, we presume it was mainly him) formulated realistic policy aims centring on seizing key ground, as he made clear in an interview with the BBC on 9 November: if the Armenians committed to withdraw from the seven occupied regions around Nagorno-Karabakh (four largely re-taken by Azerbaijani forces by then) then he would halt the offensive and be willing to negotiate the future of Nagorno-Karabakh.¹² However, he promised he would 'fight to the end' if they didn't withdraw and also demanded a right of return for the Internally Displaced Persons (IDPs), Azeri families who fled to Azerbaijan from the occupied territories during and after the 1994 war, their numbers estimated by the United Nations High Council for Refugees as a possible 1.2 million by 2014.¹³



Pictured is the President of Azerbaijan Iham Aliyev addressing the nation on 27 September 2020. Photo: Official web-site of the President of the Republic of Azerbaijan, Wikimedia, Creative Commons Attribution 4.0 International License

9 Ottaway, Sir Richard, 'UK must learn lessons of the Nagorno-Karabakh conflict', https://ukdefencejournal.org.uk/uk-must-learn-lessons-ofthe-nagorno-karabakh-conflict/?no_cache=1610617346&fbclid=IwAR05Uv3WvbpsrQUWc2Ih3eAlBCfoPMUV354dWBT6TDdlS0dc7CwMNXa6N4

- 10 Hambling, David, The Magic Bullet, Drones Behind Azerbaijan's Victory over Armenia', https://www.forbes.com/sites/ davidhambling/2020/11/10/the-magic-bullet-drones-behind--azerbaijans-victory-over-armenia/?sh=128de7005e57; Mike Eckel, 'Drone Wars: In Nagorno-Karabakh, the Future of Warfare is Now', https://www.rferl.org/a/drone-wars-in-nagorno-karabakh-the-future-of-warfare-isnow/30885007.html
- 11 The term 'Caviar Diplomacy' was invented specifically to describe Azerbaijan's expensive lobbying particularly in the UK and Western Europe but also involving members of the US Congress allegedly accompanied by extravagant gift-giving and offering of lucrative business contracts to individuals. For a small sample of opinion, see 'Caviar Diplomacy: How Azerbaijan Silenced the Council of Europe', https://www.esiweb.org/publications/caviar-diplomacy-how-azerbaijan-silenced-council-europe ; Matthew Valencia, 'Caviar Diplomacy in Azerbaijan', https://www.economist.com/1843/2016/08/31/caviar-diplomacy-in-azerbaijan ; 'Azerbaijan revelations spark "great concern" at Council of Europe', https://www.theguardian.com/world/2017/sep/05/azerbaijan-revelations-could-herald-shake-up-at-council-of-europe
- 12 The whole interview can be viewed at https://www.youtube.com/watch?v=eP98bXyWBdc&feature=youtu.be
- 13 Ibid; UNHCR publication for CIS Conference (Displacement in the CIS) Conflicts in the Caucasus https://www.unhcr.org/publications/ refugeemag/3b5583fd4/unhcr-publication-cis-conference-displacement-cis-conflicts-caucasus.html ; 'Organisation of Statistics on Refugees and Internally Displaced Persons in the Republic of Azerbaijan', United Nations Statistics Division 2014, https://unstats.un.org/unsd/statcom/ doc15/Statement-3d-Azerbaijan.pdf

Compare this with the outcome: President Putin's peace deal mandated that Azerbaijan keep the four districts it had re-conquered while the Armenians handed over the whole of the remaining Aghdam, Kalbajar and Lachin districts at the beginning of December - so the war clearly achieved Aliyev's primary geopolitical aim while opening paths for the others.¹⁴

He had also strengthened Azerbaijan's hand via cultivating the right allies and if anything symbolised this, it is President Erdogan of Turkey being guest of honour at the victory parade in Baku on 10 December, a Turkish Army contingent marching past he and President Alivev to the strains of the Ottoman march, Cedin Dedden.¹⁵ President Aliyev's father, Heydar Aliyev, founder of modern Azerbaijan, described the relationship between the two countries as 'One Nation, Two States' - two Turkic peoples, with common ancestry and culture, speaking mutually-intelligible languages, with traditional enemies in common and therefore natural allies, an assumption shaping the younger Aliyev's external policy and suiting President Erdogan's ambitions for his country. Also Azerbaijan now provided a powerful bridgehead for Turkish influence in the Caucasus and Central Asia.¹⁶

The two countries cooperate closely in the export of oil and gas dominating Azerbaijan's economy and shaping the politics and society of this classic 'rentier' state, most prominently on the Baku-Tbilisi-Ceyhan oil pipeline through which up to 9 billion barrels per year flow on their way from Azerbaijan's oilfields in the Caspian Sea to Western Europe.¹⁷ Military cooperation is just as close, giving Azerbaijan the benefit of learning from a respected NATO military with credible warfighting capability tested for real in Syria and Libya. Turkey has provided Azerbaijan

with training support and military equipment since 1992. Azerbaijani cadets attend the Turkish Military Academy at Ankara and the two armies exercise together frequently. In 2010 Turkey and Azerbaijan signed a treaty in which each promised to come to the aid of the other if attacked: a formal alliance in all but name, and an obvious expression of this was Azerbaijan spending unspecified millions – out of that defence budget of \$2 billion per year - on buying 50 TB2 Bayraktar UCAVs from Turkey along with MAM-L laser-guided bombs (also Turkish made), the main weapons used by the TB2 in the war. Israel, another close security partner, provided Hermes and Heron reconnaissance UAVs while Azerbaijan's own Azad system was also used for reconnaissance. Israel also supplied Harop loitering munitions, which Azerbaijan first used during previous fighting along the line of control with Nagorno-Karabakh in 2016. Given the TB2s arrived just a few months before the offensive began, it is entirely possible that many, if not all, were flown by Turkish Air Force pilots, possibly from inside Turkey itself.¹⁸ Another, just as telling expression of the alliance was the thirteen-day long exercise in Azerbaijan in August 2020 in which up to 11,000 Turkish troops participated and saw Turkish and Azerbaijani Special Forces practicing airmobile assaults on high value targets alongside each other.¹⁹ This close relationship paid off in fighting the war.

FIGHTING THE WAR - WAS IT THE 'DRONES'?

The war presents a real-world example of Clausewitz's concept of strategy as 'the use of engagements for the object of the war', particularly as the very object of the war was seizing and securing territory, achieved through a series of battles.²⁰ President Aliyev was smart enough to leave the management of this fighting to

20 von Clausewitz, Carl, On War, translated by Michael Howard and Peter Paret, (London: Everyman's Library 1993), p.146

^{14 &#}x27;Main Points of Nagorno-Karabakh Peace Deal', https://www.themoscowtimes.com/2020/11/10/main-points-of-nagorno-karabakhpeace-deal-a72003 ; Matthew Bryza, 'Azerbaijan-Armenia peace deal could be the diplomatic breakthrough the region needs', https://www. atlanticcouncil.org/blogs/new-atlanticist/azerbaijan-armenia-peace-deal-could-be-the-diplomatic-breakthrough-the-region-needs/ ; Jack Losh, Russian Troops in Nagorno-Karabakh 'Clearly a Win for Moscow', https://foreignpolicy.com/2020/11/25/russian-troops-nagornokarabakh-peackeepers-win-moscow-armenia-azerbaijan/;The future of Nagorno-Karabakh has become ambiguous as it is now effectively under Russian control given the presence for at least the next five years of President Putin's 2000-man 'peacekeeping' force, established in Nagorno-Karabakh's capital, Stepanakert, and along the Lachin Corridor connecting it with Armenia, a strong and probably permanent Russian presence in the region. While pure speculation, it may be that Putin, a gifted strategist with a record of wrong-footing friend and foe alike, tailored the peace agreement to President Aliyev's stated aims and given the timing of President Aliyev's interview, he may have known this in advance.

^{15 &#}x27;One nation, two states' on display as Erdogan visits Azerbaijan for Karabakh victory parade' https://www.france24.com/en/asiapacific/20201210-one-nation-two-states-on-display-as-erdogan-visits-azerbaijan-for-karabakh-victory-parade; see also https://www.youtube. com/watch?v=SY_dUaV5uIA

¹⁶ Although not a common religion – Azerbaijan is one of three majority Shi'ite Muslim countries in the world while Turkey is predominantly Sunni. These differences have been blunted for much of the modern period by the culture and politics of both countries being heavily secularised and Mr Erdogan's attempts to re-Islamify Turkish politics and culture do not seem to have affected this.

¹⁷ The other major partner is British Petroleum, which manages the line. For a good intro to Azerbaijan's oil, see de Waal, Caucasus, pp.167-187

¹⁸ Mladenov, Alexander, 'Drone Wars in the Caucasus', Airforces Monthly, No.383 December 2020, p.81

¹⁹ Huseynov, Vasif, 'Azerbaijan, Turkey Hold Large-Scale Military Drills Amidst Escalation of Tensions With Armenia', https://jamestown.org/ program/azerbaijan-turkey-hold-large-scale-military-drills-amidst-escalation-of-tensions-with-armenia/;



Pictured is a Bayraktar TB2 unmanned combat aerial vehicle at the Victory Parade in Baku, Azerbaijan. Photo: Official web-site of the President of the Republic of Azerbaijan, Wikimedia, Creative Commons Attribution 4.0 International License

others: planning was carried out by the General Staff under Colonel General Najmedin Sadykov, like all senior Azerbaijani officers a product of the Soviet military education system, and a solid grasp of operational art is evident throughout.²¹

The offensive was carried out by 1, 2 and 3 Corps of the Azerbaijan Army - a force of sixteen motor-rifle brigades with two artillery brigades controlled centrally - and consisted largely of a methodical advance aimed at seizing key towns, villages and chokepoints, resolving into two broad foci of effort: a push in the northwest of Nagorno-Karabakh aimed directly at its capital, Stepanakert, resolving itself into positional fighting around the town, going alongside an advance in the south through the more open country of the occupied Azerbaijani districts of Fuzuli, Cebrayil and Zangilan, aimed at the town of Zangilan in the far southwest - taken on 20 October - securing the entire length of Azerbaijan's border with Iran. The taking of Zangilan was followed by a renewed offensive northward leading to the taking of Shusha, the centre of gravity of the whole of Nagorno-Karabakh. Not only does Shusha have enormous cultural and emotional significance for both sides but it dominates the Lachin Corridor, the only line of communication between Stepanakert and Armenia and so taking it rendered the Armenian position across the whole of Nagorno-Karabakh untenable.²²

Armenian/NKDF forces based their strategy on defence in depth with the apparent aim of making Azerbaijan's advance as costly as possible. Nagorno-Karabakh's mountainous terrain made such defences viable but the mountains also meant that lines of supply were limited and control of certain chokepoints was key - hence the importance of the Lachin Corridor.²³ This went alongside using artillery, a combination of BM-30 *Smerch* multiple rocket launchers and Scud-B and SS-21 ballistic missiles, to attack cities in Azerbaijan with the aim, according to source, of attacking Azerbaijan's deep lines

²¹ It is worth recalling that the Azerbaijan Army had operational experience prior to September 2020. Many veterans of the 1994 war serve in senior ranks, there were prolonged outbreaks of serious fighting along the Line of Control between Azerbaijan and the occupied territories in 2008, 2010, 2016 and July 2020 and small Azerbaijani contingents have participated in US/NATO led missions in Kosovo, Afghanistan and Iraq.

²² European Asylum Support Office, 'The course of the Nagorno-Karabakh armed conflict and its impact on the civilian population', 10 November 2020, accessible at https://coi.easo.europa.eu/administration/easo/PLib/2020_11_Chronology_Armenia_Azerbaijan_Nagorno_ Karabakh_armed_conflict_impact_civilian_population.pdf p.13; personal correspondence with contacts in Baku.

²³ See Sebastian Roblin, 'What Open Source Intelligence tells us about the Nagorno-Karabakh War' https://www.forbes.com/sites/ sebastienroblin/2020/10/23/what-open-source-evidence-tells-us-about-the-nagorno-karabakh-war/?sh=1917791a6f4b

of communication or of terrorising the population and putting the Aliyev regime under political pressure.

This began on 4 October with missiles fired at Terter, Mingachevir and then against Ganja, Azerbaijan's second largest city and nearly fifty miles behind the front.²⁴ Ganja was hit again on 5-8 October, 11 October and 17 October each time killing civilians (for balance, Azerbaijani forces barraged built-up areas with Smerches, sometimes with cluster warheads, throughout the war).²⁵ Indiscriminate targeting of civilians not engaged in hostilities constitutes a war crime.²⁶ It also perhaps constitutes a crass strategic error in this case - the oil refineries north of Baku are within range of Scud Bs fired from Nagorno-Karabakh and attacking them could have posited an existential threat to the Aliyevs' rentier regime, possibly inducing them to talk: nevertheless, there was just one report of an attempted attack, on 14 October.²⁷

The missile attacks proved a strategic distraction as the war was decided on the ground through some hard fighting. Combat seems to have been highly attritional, an advantage for Azerbaijan with its superior numbers, but for an outnumbered force supposedly being pulverised from the air by flying Terminators, the NKDF fought hard to the very end, inflicting heavy casualties on the Azerbaijanis in positional mountain combat in which, unsurprisingly, light infantry featured prominently and in which the Azerbaijanis clearly did not have it as easy as many Western pundits claim.

Official figures for killed in action from September to November are 2,783 for Azerbaijan and 2,317-2,425 for Armenia; by way of comparison, Israel suffered 2,656 KIA in the Yom Kippur War of 1973.²⁸ Azerbaijani troops - mainly conscripts and recently-mobilised reservists with varying degrees of training - had to fight uphill through prepared lines and other positions, frequently under artillery fire from the defenders, to take a long series of fortified towns and villages, lists of names being broadcast nightly in the media and turned into memes on social media.²⁹

Typifying this was the battle for Fuzuli on 29 September, which began with Azerbaijani Special Forces occupying the hills around Fuzuli, cutting its communications with the intent of forcing the NKDF to abandon the town without serious fighting, a pattern repeated throughout the war in the south.³⁰ However, this was followed up by a conventional advance combining tanks with mechanised forces, the Azerbaijanis suffering some considerable losses of armour and people as the NKDF carried out a fighting retreat, most losses being to portable ATGMs or artillery, an indicator of why the offensive in the north bogged down into positional warfare for the rest of the war.³¹

Azerbaijani forces had little close air support throughout the war: Azeri Mi-24s were not committed until 5 October, fully a week after the offensive began and their contribution seems to have consisted of firing rockets from maximum range, aimed at saturating areas rather than hitting specific targets and much of their heavier artillery, the MRLS, for instance, seem to have been committed to barraging Stepanakert rather than supporting the advance in the south.³²

NKDF forces were able to organise local counterattacks up to the closing days of the war, such as that on an Azerbaijani tank battalion which got within four miles of the Lachin corridor only to be driven back by MRLS fire with several tanks destroyed. The decisive moment of the war, the recapture of Shusha, actually took place in overcast weather restricting the use of UCAVS and any other air support, and was brought about by lightlyarmed Azerbaijani Special Forces advancing through the mountains behind the city to take its garrison by surprise.³³

²⁴ EASO Report, p.5

²⁵ Ibid, pp.5-6; Roblin, 'Open Source Intelligence'

²⁶ International Committee of the Red Cross, The Conduct of Operations, Part A: Common Features of the Law Applicable to all Operations, https://www.icrc.org/en/doc/assets/files/other/law3_final.pdf , especially pp.2-3 to 3-3

²⁷ EASO Report, p.7

^{28 &#}x27;Azerbaijan Says Nearly 3,000 Troops Killed in Nagorno-Karabakh Fighting', https://www.voanews.com/south-central-asia/azerbaijan-saysnearly-3000-troops-killed-nagorno-karabakh-fighting ; Azerbaijan says 2,783 soldiers killed in Nagorno-Karabakh clashes, https://www. aljazeera.com/news/2020/12/3/azerbaijan-says-2783-soldiers-killed-in-nagorno-karabakh-clashes ; 'Armenia sharply raises troop death toll in Nagorno-Karabakh as political crisis brews', https://www.latimes.com/world-nation/story/2020-11-19/armenia-raises-troop-death-tollnagorno-karabakh

²⁹ Mladenov, Ibidm p.82; Roblin 'Open Source Evidence'

³⁰ https://www.rferl.org/a/technology-tactics-and-turkish-advice-lead-azerbaijan-to-victory-in-nagorno-karabakh/30949158.html

³¹ https://warontherocks.com/2020/10/the-second-nagorno-karabakh-war-two-weeks-in/

³² Mladenov, Ibid, p.82

³³ How the special forces of the Armed Forces of Azerbaijan liberated Shusha from occupation. News "Moscow-Baku" with Anna Nemolyakina, https://archive.is/NdmgM

So, what part did the UCAVs play in all this? Certainly, an important one but perhaps not as all-encompassing as some claim. 'Drone' strikes began on 27 September, concentrating heavily on the NKDF's short-ranged air defences, over the first few days destroying fourteen SA-8s/SA-13s, four SA-10s and eight air defence radars, all struck by TB2s with a SA-3 near Stepanakert being taken out by a Harop. With these strikes we offer our first point of contention, that these were elderly Soviet-era systems largely incapable of tracking targets with radar signatures as small as the UCAVs presented; moreover, NKDF radars were jammed extensively by Turkishsupplied systems and, indeed, further TB2 attacks took out the NKDF's two Russian-supplied Repellent 1 counter-UAV systems which detect incoming UAVs by their control signals.³⁴ Consequently, NKDF forces often operated blind and without any serious air defence, a major force multiplier for the Azerbaijanis and their Turkish allies. Following this, the UCAVS were switched to attacking ground targets with priority given to artillery, MRLS, tanks and supply dumps and vehicles moving along roads behind the battlefield.³⁵ Noteworthy incidents included that of 1 October, where a NKDF armoured force massing for a counterattack in the north came under sustained UCAV attack, losing 'many tanks' and by 23 October independent open-sources were estimating that



A woman walks through a housing complex destroyed by bombardment from Azerbaijan during a recent battle in Nagorno Karabakh, October 10, 2020. Photo: Yan Boechat, Voice of America, Wikimedia, Released.

34 Mladenov, 'Drone Wars', pp.78-79; Roblin, 'Open Source Evidence'

35 Roblin, 'Open Source Evidence'



Azerbaijani people celebrating victory of the Azerbaijani Armed Forces in Karabakh on 10 November 2020. Photo: Voice of America, Wikimedia, Released

the NKDF had lost 144 T-72s, 35 BMPs, 310 soft-skinned vehicles and 116 artillery pieces; which system was hit by what was unclear, but the same sources estimated Azerbaijani Harops had destroyed 34 targets and ground-launched ATGMs 21 with much of the balance, presumably, going to the TB2s.³⁶

Impressive figures, but context helps here. UCAV footage featured prominently on Azerbaijani television and on electronic billboards in Baku, forming a key part of Azerbaijan's intensive multi-lingual social media campaign, 'snuff movies' posted to YouTube and Twitter selling the narrative of Azerbaijan smashing its detested foe with impunity. There is little surprising here for the experienced eye, the films reinforcing the eternal adage that on the modern battlefield, being seen is being hit, one tank, AFV or truck after another getting 'plinked' in masses of smoke and flame by MAM-Ls or other systems the Bayraktars and other UAVS are spotting for. Just as evident is the poor discipline and drill of the crews: on one level, there was the extensive use of mobile phones with GPS and even postings to social media by soldiers of both sides, showing their locations for all to see; on another, the films show target after target moving and sometimes parked in the open in broad daylight with no camouflage or overhead cover when stationary or even in prepared

positions, so making life easier for the UCAV pilots than better trained and disciplined opposition might do.³⁷

Michael Kofman of the Wilson Centre and Jack Watling of the Royal United Services Institute (RUSI) both investigate these phenomena in detail, contending that NATO/ Western mechanised forces would be just as vulnerable when manoeuvring, particularly given the modern battlefield is swept by long-range radars and electronic surveillance and most camouflage will not protect against modern infra-red detection systems. However, solutions differ, Kofman arguing for smaller forces with more extensive air defence, while Watling contends that 'swarming' can be forestalled by dispersing forces in non-tactical phases such as Armenia and Azerbaijan did not do. Consequently, the tank might is not obsolete but needs to fit into a new tactical system emphasising moving dispersed but concentrating rapidly for the tactical phase.³⁸ To this we can add that NATO or Russian formations are likely to have air defences far more capable of engaging small, evasive targets. It is also remarkable that despite the Azerbaijani acquisition of the TB2s being 'open book', NKDF forces were not equipped with smoke generators or laser detection systems which would have given their vehicles at least some degree of forewarning and protection against laser guided weapons like the

- 36 Kofman, Michael and Nersisyan, Leonid, 'The Second Nagorno-Karabakh War, Two Weeks In', https://warontherocks.com/2020/10/thesecond-nagorno-karabakh-war-two-weeks-in/; Stijn Mitzer and Jakub Janovsky, 'The Fight For Nagorno-Karabakh: Documenting Losses on The Sides Of Armenia and Azerbaijan', https://www.oryxspioenkop.com/2020/09/the-fight-for-nagorno-karabakh.html
- 37 Rob Lee of King's College London has studied the war extensively, and stresses the poor mobile phone discipline of both sides on https:// www.iiss.org/events/2020/12/the-nagorno-karabakh-conflict-military-lessons-for-middle-powers; refer also to https://www.militarytimes. com/news/your-military/2020/09/30/armor-attrition-in-nagorno-karabakh-battle-not-a-sign-us-should-give-up-on-tanks-experts-say/; https:// www.youtube.com/watch?v=O5M-bATygy8 (which also shows UAVs guiding artillery strikes and strikes on soft-skinned vehicles all the way down to UAZ jeeps; https://www.youtube.com/watch?v=TFcH5zt2rCw; https://www.youtube.com/watch?v=rJR6K_tTSq0 for just a small sample of this.
- 38 Kofman in https://www.iiss.org/events/2020/12/the-nagorno-karabakh-conflict-military-lessons-for-middle-powers ; Jack Watling, 'The Key to Armenia's Tank Losses: The Sensors, not the Shooters', RUSI Defence Systems, 6 October 2020, https://rusi.org/publication/rusi-defencesystems/key-armenia-tank-losses-sensors-not-shooters

MAM-L.³⁹ Claims of yet another 'revolution in military affairs' might therefore need some qualification and those making these claims might wish to consider their sources.

CONCLUSIONS

The Nagorno-Karabakh war is significant for those with professional or academic interest in 21st-century war in that, alongside recent action in Ukraine, Iraq and Syria, it suggests claims about the death of conventional warfare might be premature. Rather, it might just have a present and a future, too.

The war saw a series of conventional operations carried out by the Azerbaijan Army, with assistance from Turkey, attaining most of the geopolitical objectives their President and Commander in Chief set them. These operations hinged on high-intensity attritional combat aimed at seizing key ground, culminating in the securing of a major centre of gravity unhinging the entire Armenian position in Nagorno-Karabakh – so the basics of land warfare still count in scenarios like this one. Casualty figures were high for small countries engaged in a short war, but given we are dealing with two intensely nationalistic cultures fighting over territory, and the public and political reactions on both sides, the sacrifice seems to have been deemed worth it at least by Azerbaijan. However, when divorced from this they indicate eternal issues of attacking prepared positions in rough country and the need to coordinate infantry with support fires, something which might not have been done very efficiently here.

The much-hyped UCAVs contributed to Azerbaijan's success in two ways, both important but hardly 'revolutionary' in that they provided a cheaper means of achieving things done traditionally by manned aircraft. First was suppressing enemy air defences in the opening stages, opening the Armenians up to the second impacting factor, deeper attacks destroying armour and disrupting lines of communication, tipping the balance of attrition in Azerbaijan's favour in what was still a costly win for them.

Here is something else transferable to other scenarios: 'swarms' of small UAVs and UCAVS might be a good and cheap - investment but the conditions for best use need to be present, one being tactically inept opposition with air defences which can be overwhelmed early by swarming SEAD attacks; while dealing with the layered air defences forming an umbrella over large Russian formations might be a different problem. It might also be that the real messages here are not so much about the future of armour as that of tactical 'fast air' and attack helicopters, the Bayraktars in particular producing similar desired effects as these systems have for two generations for a fraction of the cost and with systems unlike fast air and attack helicopters - their users could afford to lose and were cheap to replace. That might be the real transferable military message here while the political one might concern the acquisition policies of certain NATO countries, such as the UK, based on buying small numbers of highly expensive systems, and what those systems offer in reality.

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Destroyed armour at the Military Trophy Park in Baku. This was taken during the opening of the Park when President of Azerbaijan Ilham Aliyev attended. Photo: President. AZ, Creative Commons Attribution 4.0 International licence, Wikimedia

Sleep Deprivation: Time to Stop Pretending to be Super Human

Captain Tristram Reames, Grenadier Guards, argues that a change in the attitude toward sleep is imperative: 'pretending to be superhuman is very dangerous.'



Challenger 2 tank barrels are lined up whilst the crew sleep during Exercise TRACTABLE designed to test the ability of 3 (UK) Division's Lead Armoured Task Force (LATF) to deploy from barracks via a centralised Staging Area or Mounting Centre, to air and sea points of embarkation. Photo: Corporal Daniel Wiepen RLC (Phot), Crown Copyright

¹ Shay, Jonathan. 'Ethical standing for commander self-care: the need for sleep.' The US Army War College Quarterly: Parameters 28, no. 2 (1998) p100.

rom basic training through to operations, sleep has a huge impact on the moral, physical and conceptual components of fighting power.² Making decisions and acting in extremely challenging conditions are unavoidable parts of being in the military; individuals take pride in their mental and physical robustness, but are we putting lives at risk by not taking it more seriously? The Integrated Review is expected to lead to cuts in personnel for 'the excitement of new capabilities.'3 The likely decrease in workforce will put increasing pressure on individuals in what is already a sleep-deprived society.⁴ This article will briefly describe the systems at play when we sleep, outline clear evidence-based issues in a military context and suggest solutions to those issues. Ultimately, it could be argued that the major barrier to exploiting opportunities is our own mindset.

WHAT IS SLEEP AND WHY DO WE NEED IT?

There are two basic types of sleep: rapid eye movement (REM) and non-rapid eye movement (NREM). REM is typically associated with dreaming and is characterised by muscle paralysis, a mechanism thought to stop you acting out your dreams. It is important for memory consolidation and learning of new facts.⁵ As well as regenerating the body's physical needs and immune system, NREM sleep is associated with creative thinking and the building of connections for emotional development and creative problem solving.⁶ Both play different parts in sleep cycles and both are interrupted by sleep restriction, deprivation and fragmentation (more below on these). As figure 1 shows, your body moves through three stages of NREM sleep before moving into REM sleep. Throughout a normal night's sleep, these stages repeat several times.

Two mechanisms control sleep: circadian rhythm and sleep-wake homeostasis. Circadian rhythm is an innate 24-hour clock that synchronises itself with the environment to control several biological functions.⁷ The sleep-wake homeostasis drives the desire for sleep and keeps the body in a state of sleep-equilibrium; too much sleep leads to more wakefulness and vice versa.⁸ Although there are wide individual differences, on average, adult humans require more than seven hours sleep a night before it impacts on their functionality.⁹ The factors that alter these mechanisms are particularly prevalent in a military setting and include: a lack of sleep schedule, intake of legal substances like caffeine, alcohol and nicotine, poor light environment and exposure to hot or cold temperatures.¹⁰ These elements are what should be targeted with the practical solutions that are discussed towards the end of the article.

*The Commander's Guide to Sleep*¹¹ details three key terms: sleep restriction, sleep deprivation and sleep fragmentation. All are relevant and will be familiar to military readers. Sleep restriction is a shortened amount of sleep (anything under six hours) and can be considered chronic or acute. Total sleep deprivation is a constant period of 20 hours or more without sleep; eventually becoming completely unsustainable.



Figure 1: The 4 Stages of Sleep from The Commander's Guide to Sleep

² Ministry of Defence. 'ADP Land Operations.' (2017).

³ Beale, Jonathon. 'Does size matter for Britain's Shrinking Army?' BBC News. https://www.bbc.com/news/uk-56007073 (accessed 25 February 2021).

⁴ Johnstone, Ian. "Catastrophic' lack of sleep in modern society is killing us, warns leading sleep scientist." The Independent. https://www. independent.co.uk/news/sleep-deprivation-epidemic-health-effects-tired-heart-disease-stroke-dementia-cancer-a7964156.html

⁵ Walker, Matthew. Why we sleep: The new science of sleep and dreams. Penguin UK, 2017.

⁶ Ibid.

⁷ National Institute of Neurological Disorders and Stroke. 'Brain Basics: Understanding Sleep.' https://www.ninds.nih.gov/Disorders/Patient-Caregiver-Education/Understanding-Sleep

⁸ Ibid.

⁹ Ibid.

¹⁰ Ibid.

¹¹ Ministry of Defence. 'Commander's Guide to Sleep.' (2020)



Pictured are soldiers resting during Exercise TEMPLERS TRIUMPH on the Longmoor Training Area. This image was a winner in the 2017 Army Photographic Competition. Photo: Bombardier Murray Kerr, Crown Copyright

Finally, sleep fragmentation is sleep that is consistently interrupted. Lack of sleep is associated with problems in cardiovascular, mental, metabolic and general health as well as with physical performance.¹²

SLEEP IN A MILITARY SETTING

The first time sleep becomes an issue is during basic training. Research from American establishments suggests a clear drop in both sleep quantity and quality during initial training.¹³ There are few who would deny that the early stages of training are categorised by long periods of wakefulness and intense work schedules. There is guidance at training establishments that sleep deprivation is not productive and Royal Military Academy Sandhurst has an enforced break from administrative tasks between 0600 and 2300. However, the reality is that recruits would still be medically classed as chronically sleep-restricted and they have little to no chance of hitting the required hours for optimum attentiveness.¹⁴ Lack of sleep is proven to reduce the capacity for memory and learning in an academic setting; less sleep equals poorer academic performance.¹⁵ Considering the vast amount of information recruits are required to learn, it is counterintuitive to add sleep deprivation to the pressures, particularly if the knowledge is expected to be retained. Time allocated for extended sleep is time saved on revision periods and re-teaching. However, sleep deprivation provides an opportunity to put people

12 Grandner, Michael A. 'Sleep, health, and society.' Sleep medicine clinics 12, no. 1 (2017): 1-22.

14 Interview with CSgt instructor 23 Feb 2020.

¹³ Ritland, Bradley M. et al. 'Sleep health of incoming Army trainees and how it changes during basic combat training.' Sleep health (2020).

¹⁵ Curcio, Giuseppe, Michele Ferrara, and Luigi De Gennaro. 'Sleep loss, learning capacity and academic performance.' Sleep medicine reviews 10, no. 5 (2006): 323-337.

under intense pressure in a way that cannot be replicated by any other method. The Army needs to produce robust soldiers who are comfortable in chaos; balance is key. It is something training establishments are already aware of and intelligent program structures with a teach phase, under good sleep conditions, and then execute or test phase, under more strenuous conditions, would go some way to allowing soldiers to learn and be tested.

On arrival in units, the problem persists. A 2020 request for information showed a staggering 22% of full time Army personnel were either Medically Limited Deployable (MLD) or Medically Non-Deployable (MND).¹⁶ Force Protection is, therefore, vital, and although sleep is not directly linked to these figures, it may have a significant contribution. More injuries lead to less manpower, which leads to less people doing more work, with sleep the first casualty. A survey on over 7500 US Army soldiers from the Special Operations Command found that soldiers with less than four hours sleep a night were 2.35 times more likely to get injured than those with adequate sleep.¹⁷ Lack of sleep leads to guicker physical exhaustion, drop in aerobic output and numerous impairments in cardiovascular and respiratory capabilities.¹⁸ It has been shown to limit recovery in high intensity interval training, even after just one night of limited sleep and it is implicated in decreasing motivation.^{19 20} The Army should encourage positive sleep behaviour in order to get more from our soldiers through physically robust training programmes. Simple changes like later morning parades and breakfast servings could make vast differences in performances.

The tempo of operations is hard to predict, plan for and adapt to. Furthermore, the environment is often uncomfortable, light and noisy and there is requirement for 24 hour alertness. All are disruptive to the body's natural circadian rhythm. This makes sleep one of the first

sustainment casualties. Elements of logistical planning can take higher precedence as it is easier to link lack of food or water to failure of a mission. But sleep deprivation causes innumerable issues. At a lower level, vigilance and monotonous activities are more greatly affected by tiredness. Missions in Afghanistan that were affected by mistakes or accidents were more common in sleep deprived situations and one survey found 34% of soldiers reported falling asleep at some point whilst on guard.²¹ Basic soldiering ability of the individual is altered. As well as the physical side effects mentioned earlier, skills like marksmanship, particularly the selection and then accurate engagement of targets, are effected in those who are sleep deprived.²² When combined with operational and environmental stress there is an even greater effect on an individual's ability to perform their job. This degradation is worse in the early morning and late night due to the circadian rhythm, a time chosen for many of the actions conducted in our operations.²³ Even on exercise, lack of sleep has a damning effect on performance. A study in 1994 showed a marked decrease of 15-25%, per hour lost of sleep, on productivity in an Artillery unit over 21 days.²⁴ The evidence is clear, commanders need to find a way to prioritise sleep in enduring operations.

Readers will have personal examples of tiredness directly impacting decision-making; it is a view strongly supported by data. Experimentation with Norwegian Officer Cadets showed a lack of ability to deal with moral dilemmas after sleep restriction. Sleep deprivation could lead to, 'disproportionate use of power' as well as a lack of motivation for subordinates to follow leaders.²⁵ Lack of sleep inhibits the ability to understand and act in a complex environment where the needs of multiple stakeholders must be considered. The role of the leader is key and in sleep-deprived conditions military officers lose their ability to use transactional and transformational leadership. They frequently lose sight of the end-state

21 McDonald, JJennifer L., et al, 'Sleep knowledge, goals, and habits in soldiers.' Sleep health 5, no. 4 (2019): 426-428.

¹⁶ Ministry of Defence, Defence Statistics Health. FOI2020/00248. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/ attachment_data/file/905424/Information_regarding_medical_downgrade.pdf

¹⁷ Grier et al, 'Sleep duration and musculoskeletal injury incidence in physically active men and women: A study of US Army Special Operation Forces soldiers.' Sleep health 6, no. 3 (2020): 344-349.

¹⁸ Altevogt, Bruce M., and Colten, Harvey R., eds, 'Sleep disorders and sleep deprivation: an unmet public health problem,' (2006)

¹⁹ Rae, Dale E. et al, 'One night of partial sleep deprivation impairs recovery from a single exercise training session.' European journal of applied physiology 117, no. 4 (2017): 699-712.

²⁰ Alhola, Paula, and Päivi Polo-Kantola, 'Sleep deprivation: Impact on cognitive performance.' Neuropsychiatric disease and treatment (2007).

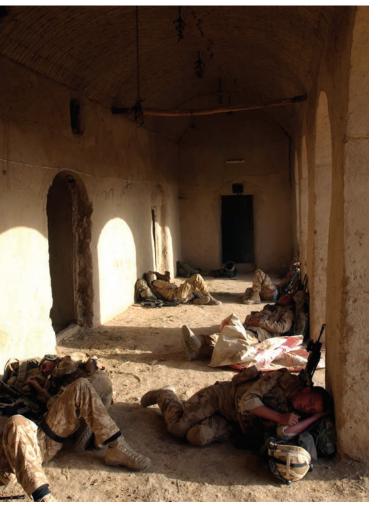
²² Belenky, Gregory et al, 'The effects of sleep deprivation on performance during continuous combat operations.' Food components to enhance performance (1994): 127-135.

²³ Harris, R., et al, 'Effects of caffeine, sleep loss, and stress on cognitive performance and mood during US Navy SEAL training.' Psychopharmacology 164, no. 3 (2002): 250-261.

²⁴ Gregory, et al, 'The effects of sleep deprivation on performance during continuous combat operations.' Food components to enhance performance (1994): 127-135.

²⁵ Olsen, Olav Kjellevold, Ståle Pallesen, and Eid, Jarle, 'The impact of partial sleep deprivation on moral reasoning in military officers.' Sleep 33, no. 8 (2010): 1086-1090, p1089.

goal and resort to more aggressive behaviour.²⁶ Many feel they are immune to the effects of sleep deprivation; it simply isn't true. People consistently underestimate their tiredness or fatigue compared to objective measurements - so whilst they may feel they are sleeping well, they are in fact, not.²⁷ Indeed, subordinates are unlikely to tell their Commander that he or she is not functioning well and should go to bed.



Soldiers from Three Company, Grenadier Guards find whatever space they can to rest before resuming operations against the Taliban in Helmand, Afghanistan. Photo: Sqt Will Craig RLC, Crown Copyright

There is a duty to protect those who are on and returning from operations. Post-Traumatic Stress Disorder (PTSD) incidences increased in the Army after deployments to Iraq and Afghanistan and will present long-term issues for the organisation.²⁸ Experience of nightmares predeployment was an early predictor of a post-deployment diagnosis of PTSD, with sleep likely to play some role in extinguishing fear.²⁹ This could be leveraged by units to highlight at-risk individuals and identify early sufferers.

ARE THERE SOLUTIONS?

The research presented so far outlines clear implications for force health and operational output. What is less easy is to provide solutions. They fall broadly into two categories: education and practical solutions. Education needs to address attitude (an individual's mindset), norms (the patterns of those around an individual and those he aspires to reach) and agency (an individual's perceived control of the situation).³⁰ The Army has a commander's guide but it is guestionable whether it is taken seriously. Leadership needs to buy into the severe impacts that sleep can have. It is deeply entrenched in the military psyche that sleeping is a sign of weakness. Some experts have clear opinions: assumption that motivation alone will defeat the enemy and drag soldiers through tough situations is simply not good enough.³¹ Educate soldiers in the importance of sleep and they will sleep more. A recent study found that soldiers with a sleep goal of 7 hours were nearly 3 times more likely to get adequate sleep than those who had no goal.³² Education will further benefit training establishments who will continue to ask: are courses being used to test mental and physical robustness or to teach and develop our soldiers? If the answer is both, then the course needs to understand the environmental distinctions they need to make between each objective. There is need for better research and there are few studies on British Armed Forces. Simple studies can be designed cheaply using wearables for simple data collection.

Practical solutions are numerous and easy to implement. Caffeine can be used as a short-term solution to enhance vigilance and prevent basic motor function issues. Soldiers tend to have ready access to caffeine

- 26 Olsen, Olav Kjellevold, et al, 'The effect of sleep deprivation on leadership behaviour in military officers: an experimental study.' Journal of Sleep Research 25, no. 6 (2016): 683-689.
- 27 Banks, Siobhan, and Dinges, David F., 'Behavioral and physiological consequences of sleep restriction.' Journal of clinical sleep medicine 3, no. 5 (2007): 519-528.
- 28 Press Association. 'PTSD rates increase in UK military personnel, research suggests.' The Guardian. https://www.theguardian.com/ society/2018/oct/08/ptsd-rates-increase-in-uk-military-personnel
- 29 van Liempt, Saskia, 'Sleep disturbances and PTSD: a perpetual circle?.' European journal of psychotraumatology 3, no. 1 (2012): 19142.
- 30 Grandner, 'Sleep, Health and Society.' 1-22.
- 31 Shay, 'Ethical Standing.'
- 32 McDonald, et al, 'Sleep Knowledge.' 426-428.

on operations and the US Army has food and gum with added caffeine in it. Taken at the right time, it negates the effects of sleep deprivation on marksmanship and a number of other tasks.³³ There are other pharmacological treatments such as modafinil which have a similar effect.³⁴ The general effects on higher order functions are less clear and thought needs to be given to subsequent sleep individuals get and any adverse side-effects. On operations, the mission is essential and prioritising sleep becomes more difficult. However, those involved in the planning and execution of activities should keep sleep at the forefront of their minds. A period of extended sleep in the run-up to an event, known as sleep-banking, can lead to faster recovery times and more resilience to the adverse effects of sleep restriction.³⁵ Sleep shifts and intelligent splitting of expertise throughout the day allow



The Coldstream Guards conducted an exercise on the Longmoor training area where their skills and drills were tested. Although it was just 24hour exercise, the tempo was fast and consistent which meant there would be no time for sleep. Photo: Corporal Jamie Dudding, Crown Copyright

³³ Tharion, William J., Barbara Shukitt-Hale, and Harris R. Lieberman, 'Caffeine effects on marksmanship during high-stress military training with 72 hour sleep deprivation.' Aviation, space, and environmental medicine 74, no. 4 (2003): 309-314.

³⁴ Wesensten, Nancy J., William DS Killgore, and Thomas J. Balkin, 'Performance and alertness effects of caffeine, dextroamphetamine, and modafinil during sleep deprivation.' Journal of sleep research 14, no. 3 (2005): 255-266.

³⁵ Rupp, Tracy L., et al, 'Banking sleep: realization of benefits during subsequent sleep restriction and recovery.' Sleep 32, no. 3 (2009): 311-321.



Exhausted soldiers and officers sleep in place on a Polish helicopter on Op CABRIT. Junior soldiers from across NATO's Battlegroup Poland had just completed an intense and arduous Potential Non-Commissioned Officer Cadre in Drawsko Pomorski, Poland. The Cadre culminated in a relentless 10-day field exercise, teaching and testing leadership, fieldcraft, teamwork, determination and physical fitness. After a lengthy final attack they just had time to put on a fresh set of combats for the two hour journey home, much to the gratitude of the Polish pilots! This image was Highly Commended in the Army Film and Photographic Competition 2020. Photo: Captain Same Davies, Crown Copyright



appropriate rest for key individuals. Studies have shown that episodic memory (conscious recollection of events) is still impaired after two nights of recovery sleep and there is further evidence that cognitive abilities are still affected after three nights.³⁶ Where possible, key tasks must be spaced accordingly. Appropriate areas need to be given to sleep in - not a noisy corner in a busy tent. Cheap solutions like 'sleep packs' which improve the environment with eye masks and ear plugs are feasible options.³⁷ In napping, there is another immediate gain to be made and it is one recommended in current policy. It has benefit, however limited, in short-term memory and endurance.³⁸

SUMMARY

If we don't act we are, 'handing the enemy a dangerous and unearned advantage.'39 Quality of sleep is as essential in our sustainment as food and water, yet it is mentioned sparingly in our doctrine. Can sleep deprivation be avoided completely? No, but it can be mitigated and even exploited. If understood properly, good sleep habits can be used to maximise the potential of our soldiers and gain an advantage over our adversaries. Solutions are easier to enact with support from a larger force size but the truth is that sleep is often not taken as seriously as it should be.⁴⁰ This is evidently true in society today, but these are stigmas that are heightened in a military setting.⁴¹ If anything, smaller force size perpetuates the issue and is more reason to do something constructive. Detrimental to the ability for personnel to embrace a new culture is the lack of research involving British Armed Forces. Proper empirical evidence would convince commanders of the importance of sleep and drive the need for change from the top-down. The onus should be on the chain of command at all levels to ensure their troops are rested and they themselves are rested.

- 36 Alhola and Polo-Kantola, 'Sleep Deprivation.'
- 37 Troxel et al, 'Sleep in the military: Promoting healthy sleep among US servicemembers.' Rand health quarterly 5, no. 2 (2015).
- 38 Good, Cameron, H., et al, 'Sleep in the United States military.' Neuropsychopharmacology 45, no. 1 (2020): 176-191.
- 39 Shay, 'Ethical Standing.' p100.
- 40 Johnstone, 'Catastrophic lack of sleep.'
- 41 Troxel, et al, 'Sleep in the military.'

Deciding at the Speed of Relevance

Major Andrew Breach 7th Infantry Brigade looks at tactical planning from a British, wider NATO and our adversaries' perspective, and defines a set of principles against which to judge tactical planning, and recommends a revised framework fit for 21st century warfare.



Following a dawn Raid, soldiers from 3 Rifles conduct kit administration overlooking the Carpathian Mountains of Romania. The 3rd Battalion the Rifles (3 RIFLES) are deployed on Exercise NOBLE JUMP in Romania, which is part of a wider exercise called Exercise DEFENDER 21. The Support and Headquarters Companies of 3 RIFLES are at Cincu Training Area, Romania, to partner with the UK's NATO Allies. Photo Corporal Paul Watson, Crown Copyright

uring the past year, Headquarters 7th Infantry Brigade (The Desert Rats) has been fortunate to have been re-engaged as a manoeuvre formation headquarters while being validated as the Light Brigade in the Warfighting Division. This was a significant task; only two members of the headquarters had any experience of planning at formation level (the Commander and the Chief of Staff) and the headquarters had three months to go from a standing start to validation in a Divisional context on Ex CERBERUS 21. The journey yielded many lessons and one critical insight; our current planning processes are not relevant enough for warfare in the 21st Century and must be transformed if the British Army is to prevail in land combat. We are not alone, nor the first, to reach this conclusion. Indeed, this conclusion has been reached in the Divisional and Corps context through a series of Command Post exercises, along with research to understand how the British Army has found itself in this position. With the refocussing on formationlevel manoeuvre heralded in the Integrated Review, the time has come to ensure that our planning processes are suitable for 21st Century conflict.

What follows is not a criticism of those in our institutions who teach and validate our current processes. Rather it reflects a wider realisation that our current planning processes do not give Commanders and their staffs the ability to gain a decision-making advantage in the current tactical context. Therefore, the problem needs addressing now rather than at some point in the distant future. The recurrence of the argument is linked to the modernisation cycle and now is the time to look at our planning processes if we are to win the next conflict.

HOW ARE OUR ADVERSARIES PLANNING?

Before looking at how the British Army and its Allies plan, it is worth evaluating how our adversaries approach the issue. Benchmarking against Russia, our immediate term competitor, as the high-intensity and sub threshold pacing threat is the key lens through which we can evaluate our planning processes. Applying this lens will have longevity, given that China is expected to be NATO's principle threat by 2030 and the fact that both the Russian and Chinese armies are undertaking similar modernisation programmes.¹ Using these two countries as the pacing threat, particularly against the timeframes in which they aim to complete their planning processes, enables the following analysis to be placed into a framework. This puts the subsequent recommendations into a context through which the ability to achieve a decision-making advantage can be evaluated.

Russian land forces have been undergoing a process of modernisation for over a decade.² Part of this modernisation drive has been a revision of the tactical echelon system (creation of the Brigade Tactical Group), supported by investment in a robust tactical communications network, and through a revision of the formation planning process.³ The Russian planning process is vastly different from the Western model. In Russia, the staff largely provide a feasibility check for a plan directed by the Commander, concurrent to the Commander conducting their terrain reconnaissance. Figure 1 is an approximation of that process.

Prior to the current reforms a Russian brigade operations section would spend up to 24 hours conducting the staff verification in the production of the brigade battle plan. Recognising the same systemic issues as the British Army, the Russian General Staff aimed to achieve 'superiority of management,'⁴ specifically to make their planning process faster than that of potential adversaries (NATO), and reduce planning at the Brigade to under six hours.⁵ During Russia's recent expeditionary deployment to Syria, the Russian military aimed to test its modernisation efforts, where it adapted its process of superiority of management against ISIS, wider Syrian rebel groups, and the US Forces deployed there.⁶ In its

¹ Remarks by NATO Secretary General Jens Stoltenberg on launching #NATO2030 - Strengthening the Alliance in an increasingly competitive world, North Atlantic Treaty Organization, accessed 24 May 21. https://www.nato.int/cps/en/natohq/opinions_176197.htm

^{2 &#}x27;An introduction to Russia's Military Modernisation,' International Institute for Strategic Studies, accessed 6 Feb 2021, https://www.iiss.org/ blogs/analysis/2020/09/rmm-introduction .

³ Radin, Andrew, et al., The Future of the Russian Military, (Santa Monica, Ca, RAND, 2019), 6.

⁴ The Russian military defines command and control as an internal process conducted by commanders on one's own subordinates in combat operations. Management is contrarily a recurring, cyclical process carried out on both friendly and opposing forces – analogous to the Western tactical planning process.

⁵ Bartles, Charles K. and Grau, Dr Lester W., The Russian Way of War: Force Structure, Tactics and Modernization of the Russian Ground Forces, (Fort Leavenworth, Foreign Military Studies Office, 2016), 57

⁶ Clark, Marson, The Russian Military's Lessons Learned In Syria, (Washington D.C., Institute for the Study of War, 2021), 16.

KEY INPUTS	STEPS	KEY OUTPUTS			
Receipt of mission (Senior Commander's Decision) Intelligence Reports Order allocating additional attached/supporting units	Step 1: Commander's Plan	Commander's Plan			
Coordinating Instructions Attached/supporting artillery Engineer support Logistics	Step 2 Commander's Terrain Reconnaissance (with key subordinates)	 Staff issues warning orders Updated running estimates 			
Correlation of Forces and Means (COFM) analysis from higher headqaurters if provided Coordinating instructions Attached/supporting artillery Engineer support Logistics	Step 3: Staff Verification	 Correlation of Forces and Means (COFM) analysis Mathematical verification Back brief to commander of plan viability Route and area designations 			
 Correlation of Forces and Means (COFM) analysis Running estimates 	Step 4: Issue Final Plan	 Final plan in the form of a map Possibly with a 2-3 page written annex Signature of the commander Signature of the chief of staff Subordinate commander's receipt of mission Updated running estimates 			
Higher level contingency options Running estimates	Step 5: Preparation for Combat	Contingency mission consideration/coordination			

Figure 1: Approximation of Russian Tactical Planning Process⁷

reflections on the Syria Campaign, the Russian General Staff consider the revised brigade planning process (and its associated timeline of six hours) broadly a success, which they have coupled with a refined combined arms staff structure that they aim to introduce to the wider Russian Army by 2025.⁸

Looking wider than Europe (accepting that Russia's activities are much broader than their western border), the Chinese People's Liberation Army (PLA) has embarked on a programme of military modernisation replicating those taking place in Russia.⁹ As part of these reforms the PLA Navy (PLAN) Marines have been recast not only in the traditional role of marines (the opposed theatre entry force), but as China's principal force for expeditionary operations.¹⁰ Given China's activity in Africa¹¹ and wider Asia,¹² the PLAN Marines are the most likely Chinese force that British land forces might

encounter in either high intensity conflict or sub threshold operations. The PLAN Marines have close ties with Russia, regularly exercising alongside their Russian counterparts up to formation level in an annual bi-national naval exercise series that has run since 2012.13 Given that so little evidence exists, it is difficult to accurately surmise the direction that the Chinese military planning is taking, but since they cooperate militarily with the Russians, and have noted their own shortcomings in formation training¹⁴, it is possible that they would look to develop similar procedures and tempo. These modernisation efforts by the current pacing threat are key to situating the British Army tactical planning timelines; if we are to decide and act faster than our adversary, we must be able to issue a brigade plan in under six hours (more likely four) as a matter of routine. Given that the apparent success of the Russian modernisation programme that has been demonstrated in

⁷ Clark, Lessons Learned in Syria, p 18.

⁸ Bartles and Grau, The Russian Way of War, 55.

^{9 &#}x27;Learning from Russia: How China Used Russian Models and Experiences to Modernize the PLA,' Mercator Institute for China Studies, accessed 6 Feb 2021. https://merics.org/en/report/learning-russia-how-china-used-russian-models-and-experiences-modernize-pla.

^{10 &#}x27;China's Marine Corps Is on the Rise,' US Naval Institute, accessed 6 Feb 2021. https://www.usni.org/magazines/proceedings/2020/april/ chinas-marine-corps-rise .

^{11 &#}x27;Chinese, Russian, South African Navies Conduct Trilateral Naval Exercises,' The Diplomat, accessed 6 Feb 2021. https://thediplomat. com/2019/11/chinese-russian-south-african-navies-conduct-trilateral-naval-exercises/.

^{12 &#}x27;China, Russia Kick Off Bilateral Naval Exercise 'Joint Sea,' The Diplomat, accessed 6 Feb 2021. https://thediplomat.com/2019/04/chinarussia-kick-off-bilateral-naval-exercise-joint-sea/.

^{13 &#}x27;Russia And China Hold Joint Naval Exercises In The Baltic,' Radio Free Europe, accessed 6 Feb 2021. https://www.rferl.org/a/russia-chinahold-joint-naval-exercises-in-the-baltic/28631179.html.

^{14 &#}x27;China's Troops Have a Training Problem,' The National Interest, accessed 6 Feb 2021. https://nationalinterest.org/blog/reboot/chinas-troopshave-training-problem-174408.



Image of the Desert Rats tactical recognition flash captured during joint UK/India Exercise ALEYA WARRIOR in India, 2017. Photo: Jay Allen, Crown Copyright

Syria, and its anticipated emulation by the Chinese, it is highly likely that the British Army would be 'out-decided' if we were to go to war with either of these countries now.

THEORY

If Russia, as the current pacing threat, can produce a formation level plan in six hours, what is the theoretical basis that would underpin a British Army approach that could produce a quicker and better plan? British Doctrine is already built on solid theoretical foundations. Both the Staff Officer's Handbook (SOHB) and the Planning and Execution Handbook (PEHB), unsurprisingly, capture the requirement to match the frequency (how often a formation decides) and tempo of the opponent.¹⁵ So while our planning doctrine captures the requirement to achieve planning tempo through increased frequency of planning, it currently focusses solely on the three low frequency functions of the Defence Integrated Operating Concept (Protect, Engage, and Constrain).¹⁶ It stands to reason that unless the planning process allows a formation to plan for both low and high frequency operations (for example counter-insurgency versus high intensity warfighting), then planning during high frequency operations will become increasingly difficult.¹⁷

While the Combat and Tactical Estimates are suitable for low frequency functions, they are unsuitable for high intensity warfighting, and any associated increase in planning tempo will have broad utility across low and high frequency conflict. Unless the current planning methodologies can be conducted quicker (in under six hours in order to act faster than the enemy and achieve tempo), doctrine must be adapted so that the British Army can increase tempo relative to the pacing threat, an essential element for victory.¹⁸

There will undoubtedly be those who argue that the length of our current planning process is required because, due to advances in technology, war is now more complex than ever before. The first issue with this argument is that British Doctrine does not understand the concept of complexity. For example, *Army Doctrine Publications (ADP), Land Operations*¹⁹ characterises the operational environment, terrain, logistics and coastlines as complex but without definition.²⁰ Absent a common definition, a useful benchmark can be drawn from Social Science and Complex Systems Theory. A complex system is a system which is made up of many interacting parts and the interactions between them often lead to

- 18 Leonard, Fighting by Minutes, 91.
- 19 Army Doctrine Publications (ADP), Land Operations, Land Warfare Development Centre, 2017.

¹⁵ Staff Officer's Handbook, 1.6_8.

¹⁶ Integrated Operating Concept, 11.

¹⁷ Leonhard, Robert R., Fighting By Minutes: Time and the Art of War, (Scotts Valley, Ca, CreateSpace Independent Publishing Platform, 2017), 89.

²⁰ Muir, Gordon W., 'The Fallacy of Complexity.' British Army Review 170 (December 2017): 42 – 47, https://akx.sps.ahe.r.mil.uk/sites/vault/ BAR2/BAR%20170/08%20BAR%20170%20The%20Fallacy%20of%20Complexity.pdf#search=muir%26complexity.

large-scale behaviours which are not easily predicted from a knowledge only of the behaviour of the individual components.²¹ Using this definition, it is obvious that war, and conflict more widely, is a complex system and always has been. However, the misuse of the term 'complexity' in British Doctrine to describe everything from terrain to problems as complex causes confusion, leading to the fallacy that war is now more complex than previously. It is the combined effect of misunderstanding complexity and its causal usage in doctrine that has led to a misdiagnosis of why commanders and their staffs have struggled to understand and act within the modern tactical environment. Warfare itself has always been complex and has not become more so because of advances in technology.

However, rather than warfare being more complex it is the unfamiliarity with high intensity tactical problems that we currently face, which requires an extended planning process to understand them. These problems are unfamiliar because of the British Army's recent focus on counter-insurgency operations (COIN). In 2009, the British Army was placed on a campaign footing under Op ENTIRETY to optimise for COIN. It was not until 2016 that Op ENTIRETY ended, meaning an entire generation of officers and soldiers became unfamiliar with high intensity warfighting tactics, both within their professional military education and their vocational experiences at Regimental Duty. This unfamiliarity has led to both a misunderstanding of warfighting tactical actions and the planning process in high intensity scenarios, which in turn necessitates a longer planning process.²²

This unfamiliarity is compounded by the lack of routine training at the Brigade level and above, limiting the exposure to the frictions of operating at that scale. The lack of routine brigade command post exercises and live training has compounded the lack of theoretical familiarity with a lack of understanding of the coordination that operating at that scale requires.²³ It is this compound effect that has been, misdiagnosed as complexity because the staff lack the experience to draw cause and effect, which adds time to the planning process. The Collective Training Transformation Programme, the upcoming refresh of the Intermediate Command and Staff College (Land) and Junior Staff Centre syllabi, and the refocussing by the Integrated

Review on the Brigade Combat Team level should ensure that the current generation of Officers and soldiers become familiar both with the tactical problems across the spectrum of warfare and are, therefore, able to speed up their planning process.

In the unfamiliar tactical environment, there is a substantial benefit to planning and deciding quickly even if the decisions that result are not optimal. Professor Jim Storr posits that if a Commander is able to decide twice as fast as their opponent, then they can initially make a bad decision, and even if their opponent makes a good decision, they will not lose as long as they make a second decision quicker.²⁴ Therefore, in the context of the Russian Brigade Tactical Group planning horizon of six hours, if a formation can produce a plan in four hours, then in a twelve hour period the formation will make three decisive decisions for the adversaries' two. By increasing the frequency of decision-making, the first decision made can be poor, as long as the two remaining decisions are good. This allows the initial decision-maker a significant advantage (as long as they keep making decisions faster than their adversary). Figure Two is a pictorial representation of Professor Storr's theory and illustrates that combined with the complex nature of war and its associated unpredictability, planning faster than an adversary creates the conditions for victory.

HOW ARE WE DOING?

Having laid out how the British Army's most likely adversary has modernised their planning process, and the theory that underpins the advantages to planning and deciding in under six hours, how does the British Army's extant doctrine and planning processes compare? Currently, our doctrine declares that a brigade should have the ability to produce a plan between six and 30 hours.²⁵ Assuming that a brigade could conduct the Combat Estimate in six hours (which using the current doctrine is improbable given the briefing requirements alone equate to six and half hours if it applies the templates included in the PEHB), current doctrine does not afford an advantage in decision-making terms, it merely affords parity with the pacing threat. However, historically the British Army has been able to issue a brigade plan in under six hours. In the Second World War, Divisions planned nine hours ahead and a Brigade six hours maximum, and a Battalion four.²⁶ General Dempsey, commander of the British Second

26 Storr, The Human Face of War, 134.

²¹ Mitchell, Melanie and Newman, Mark, Complex Systems Theory and Evolution, (Sante Fe, Sante Fe Institute, 2011), 1-3.

²² Authors own experience in training 7 Inf Bde HQ for validation on Ex CERBERUS.

²³ Storr, Professor Jim, presentation to 7 Infantry Brigade Command Group, 12 January 2021.

²⁴ Storr, Jim, The Human Face of War (London: Continuum, 2009), 134.

²⁵ PEHB, 1-10.

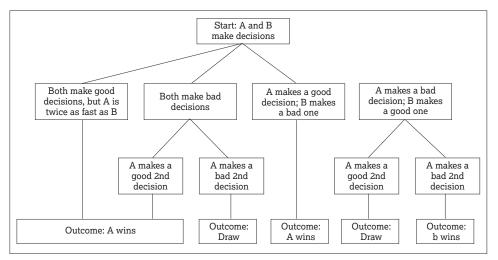


Figure 2: Professor Jim Storr's Decision Tree 27

Army in Normandy, thought an Infantry Battalion given four hours to prepare for an attack on a prepared defensive position should have a 100% chance of success.²⁸ Acknowledging the argument already presented that war is no more complex, just increasingly unfamiliar, the British Army at formation level should be aiming to emulate our predecessors by becoming intimately familiar with the tactical problems it could face, be that high intensity warfighting or other lower frequency types of operations, so that a quicker planning tempo can be achieved. By 1944, the British Army had developed a deep familiarity with the tactical problem that the Wehrmacht presented. The speed at which it was expected to plan and achieve success adds credence to the argument that familiarity with the tactical environment is a key factor in reducing the brigade's planning horizon.

More recently, during Op TELIC, the last high frequency conflict that the British Army fought, it was unable to plan at the frequency required to maintain tempo. This is despite a familiarity with the method of warfare and the environment (1 (UK) Armoured Division and 7 Armoured Brigade had fought in Op GRANBY a decade before). There were numerous contributing factors; partly due to the increase in the size of formation headquarters (an increase of 25% over 10 years)²⁹, but mainly due to the expectation that the formation plan produced had to

33 Ibid, 4-5.34 Ibid, 4-11.

result in detailed operations orders which were tens of pages long.³⁰ These resultant orders hid the critical detail required to undertake the operation; for example, in a 25-page operation order issued by 7th Armoured Brigade 'the mission first appeared on page 10. It was almost impossible to gain a sense of the order by reading it',³¹ and mission statements ran up to 20 lines long in places.³² It was also commented that plans emanating from the same headquarters were often 'half-baked, uncoordinated and invariably running within an unrealistic timescale.'³³

The starkest example of the overly prescriptive orders produced by 7th Armoured Brigade during Op TELIC can be seen in the taking of Basra between 5th - 8th April 2001. The Brigade issued a Warning Order on the 6th April 2001 for an operation to take the City on the 8th April. However, the city was occupied on the morning of 6th with nothing issued by either 1 (UK) Division or 7th Armoured Brigade for either the attack or occupation, as both headquarters had been consumed with over planning for the initial attack.³⁴ Official reports often miss the wider military, cultural (as well as tactical) context within which the tactical actions take place, but even having taken that into consideration, the Planning Process³⁵ did not result in a formation level plan that could be executed in a timely fashion by their subordinate units.

²⁷ Storr, The Human Face of War, 133.

²⁸ Ibid, 134.

²⁹ Operations in Iraq: An Analysis from a Land Perspective, 4-5

³⁰ Ibid ,4-10.

³¹ Ibid ,4-10.

³² Ibid, 4-12.

²⁵ INIU, 4-11.

³⁵ While the planning process conducted was not the Combat Estimate, the planning horizons employed remain the same.



Army Reserves from the Royal Yeomanry will deploy to Poland as part the UK's commitment to NATO's enhanced Forward Presence (eFP) in Eastern Europe. They are pictured conducting pre-deployment training at Warcop Training Area in Cumbria and are undertaking a series of live-fire tests. These take place day and night, both on foot and from the latest Jackal 2 vehicle to practice their fire and manoeuvre skills. Photo: Corporal Watson, Crown Copyright

HOW ARE OUR ALLIES DOING?

Is it just the British Army that has not kept pace with advancements in the Russian military modernisation or is our predicament symptomatic of a wider issue? A straw poll of NATO Allies would suggest that is the case. German doctrine suggests that the Bundeswehr takes a more deliberate approach at the Brigade level, where a Brigade has 24 hours from receiving an order to executing the action. They also employ the 1/3 - 2/3 rule, and therefore the Brigade has eight hours to issue its order.³⁶ French Brigades do not have a set planning timeline but common practice is to complete planning between eight to ten hours to issue an order. In common with wider NATO member planning protocols, they employ the 1/3 - 2/3 rule.³⁷ As usual, the US are already grappling with (and are ahead of the remainder of NATO) on this issue. While their standard Brigade planning

horizon is eight to 12 hours ³⁸, US Doctrine acknowledges that our collectives experiences of planning during the engagements in Irag and Afghanistan are not appropriate for the current character of conflict; and in a similar vein to the PEHB, that 'planning horizons...and decision cycles are generally shorter in large-scale combat operations than in a counterinsurgency operation, and as a result streamlining staff processes and the unit's battle rhythm to those related to the defeat of the enemy is essential.'39 As a result, the US has formalised the Rapid Decision-Making and Synchronisation Process (RDSP), in which leaders combine their experiences and intuition to understand the situation guickly and develop a Course of Action (COA) in a process that seeks a timely and effective solution.⁴⁰ It is this conceptual approach that should form the basis of a British solution to the very real risk of being out-decided during the next conflict.

³⁶ Ruppelt, Col (GS) Hagen, Bundeswehr, email to Maj A Breach, 25 Jan 21.

³⁷ Michelin, Lt Col Jean, Armee de Terre, email to Maj A Breach, 24 Jan 21.

³⁸ Trottier, Major K., US Army, email to Maj A Breach, 12 Feb 21.

³⁹ Army Doctrine Publication 5 - 0, The Operations Process, (Washington D.C., Department of the Army, 2019), 1-6 - 1-7.

⁴⁰ The Operations Process, 2-18.

PROPOSAL

What follows is a result borne of 7 Infantry Brigade's Readiness journey and has been tested through the crucibles of Ex CERBERUS 21 (Brigade HQ Warfighting Validation), Ex URBAN LION (LWC sponsored experimentation CAST) and War Fighter 21.4 (where the Brigade was detached to 1 (US) Armoured Division), and a result of the Brigade's Professional Military Education Programme, which has focussed on decision-making and 21st Century warfare.

The Combat Estimate is fit for purpose to produce the Baseline Operations Order prior to combat but

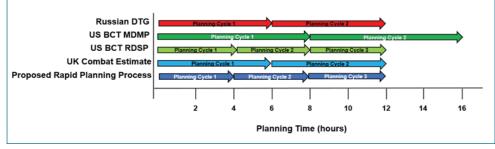
thereafter is of limited utility: Given over 12 hours to plan, the Combat Estimate works. It is well taught during the British Army's staff training, and if allowed enough time, staffs are able to use it to set the tactical context for an operation. To dive straight in to truncated planning before using extant estimate process to become familiar with the tactical environment and problem set would be a folly, but once the fighting starts, the Combat Estimate does not result in a timely plan.

A Rapid Planning Process must be introduced to doctrine and formally taught to allow tactical planning to be conducted in four hours at the

Brigade level:⁴¹ Russian Military Modernisation has reinstated the requirement to produce a formation level plan in under six hours and Figure 3 visually depicts how producing a brigade plan in four hours confers a decision-making advantage. While war and conflict are complex, it is not complexity that makes modern tactical problems difficult to address. The combination of unfamiliarity with these tactical problems (brought about by the lack of training opportunities at the battle group level and above) and a process that is designed for low frequency planning that results in slow decision-making makes modern tactical planning relatively slow. When driven by necessity and familiarity, the British Army has been able to plan at the Brigade Level in four hours and can do so again. 7 Infantry Brigade uses a simple, Commander-led, four step process (Receipt of Orders, Mission Analysis, Course of Action Development (COA Dev), and Operations Short of War (OSW) production) to achieve this, and has done so in the Divisional context. The truncated and focussed process, harnessing the Commander's intuition and experience, forces simplicity in the plan and results in simple Operational Staff Work that are briefer and clearer, describing only the essential information.

In the Combat Estimate, the planning process is Commander directed, but staff led. In the Rapid Planning Process, the Commander leads the planning process and therefore it removes the requirement for lengthy briefings as both the Commander and Staff develop their understanding concurrently. The Commander can issue planning guidance for a single course of action once they have an understanding for the form of the operation (the 'art'). Equally, by harnessing the staff behind one directed course of action, the coordinating instructions required to facilitate the Commander's intent (the 'science') is achieved much more guickly. The simplicity of the plan (underpinned by detailed coordinating instructions) also facilitates the creativity and freedom of action of the subordinate commanders, allowing them to work within a broad, well-coordinated intent, delivered in a timely fashion. The simplicity of plan removes the requirement for wargaming, but wargaming can be used post OSW publication to refine the plan in light of an evolving situation. Figure 4 depicts the process map that lays out the proposal in detail.

The Operations Order must be brief, clear, and provide a framework within which subordinate Battle Groups can operate: A constant refrain from all levels of command is the excessive and overly detailed OSW issued from higher headquarters, which hides the crucial detail required to execute the mission. As outlined above, a shorter planning process results in briefer, clearer





⁴¹ This would follow a planning times of six hours for the Division, four hours for the Brigade, and two hours for the Battle Group.



Pictured is a 1st The Queen's Dragoon Guards with a 40mm Grenade Machine Gun photographed during multinational Exercises in Poland as part of NATO's Enhanced Forward Presence. An Army Air Corps Apache AH1D Attack Helicopter is flying overhead. Photo: Corporal Tom Evans RLC, Crown Copyright

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Figure 4: Rapid Planning Process Map

orders which are easier to understand and implement. In each of the training events that 7 Infantry Brigade Headquarters has participated in, the more succinct the orders, the better coordinated they were and the easier they were to execute. Prior to an operation, the Brigade should produce a Baseline Order using the Combat Estimate and structured using the traditional operational staff work template (OSW). This builds the framework for the operation and allows the headquarters to adapt an existing plan during the operation rather than have to produce an entirely new one under pressure. Figure 5 depicts a Fragmentary Order (FRAGO) template that 7 Infantry Brigade has adopted (and is widely replicated at formation level) to communicate the adapted orders with brevity and clarity which has been developed during the readiness training cycle.

CONCLUSION

Current British planning processes do not give Commanders and their staffs the ability to make rapid decisions in the current tactical context and therefore limit our potential to prevail in land combat. Russian military modernisation has driven our most likely adversaries' planning cycle to six hours at the formation level, which at best will lead the UK to achieve planning parity. The Chinese PLAN Marines are likely to modernise their planning process in a similar fashion to their Russian counterparts, so it can be safely assumed that in the near future, the PLAN Marines will also be capable of formation-level planning in six hours. While the PEHB does state that the Combat Estimate can be conducted within six hours, in practice that is impractical and does not confer a decision-making advantage. Our doctrine already recognises that when warfighting, planning must take place at both a higher frequency and tempo than we have been used to, but currently we lack a process to practically implement a quicker planning cycle.

There will, of course, be those who propose doing the extant processes faster. The British Army must make a transformational jump in its tactical decision-making to infer an advantage. By combining the instigation of a Rapid Planning Process that allows the formation to plan in four hours or less with a focus on building a renewed familiarity with tactical problems, it will allow the Formation Commander to out-decide their opponent at a ratio of two to three. The proposed Rapid Planning Process harnesses the Commander's intuition (the 'art') with detailed coordinating instructions ('the science), in a manner akin to the Russian staff feasibility check, which when combined with the British Army Mission Command philosophy will allow British Army planning to be truly revolutionary. Without embracing the opportunity to evolve our planning process to decide at the speed of relevance, the British Army risks being out-decided in the next major conflict. In line with the 'Future Soldier' concept, now is the time to transform in order to win.

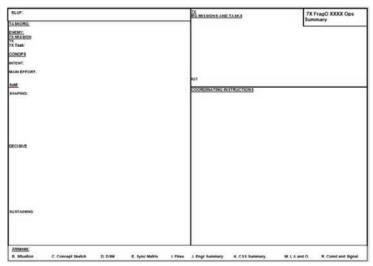


Figure 5: Operations Summary Example



Russian Tactical Training with motorized rifle brigade units at the Molkino training ground, Krasnodar region, Russia. Photo: Ministry of Defence of the Russian Federation, Mil.ru, Creative Commons Attribution 4.0 Lisence, Wikimedia

Cultural Heritage and Armed Conflict

Tim Clack (Oxford University), **Maj Mark Dunkley** GSC, **Maj Toby Gane** RLC, **Captain Lee Rotherham** GSC take the threats to Iranian cultural sites at face value and use them as a case study to frame a wider discussion on the inappropriateness of using cultural property to gain military advantage.



Pictured is the Tower of Silence, Yazd, Iran ID 11650. Photo: Diego Delso, Delso Photo. License CC-BY-SA, Creative Commons Attribution-Share Alike International license, Wikimedia

On 3 January 2020, the US conducted a strike against Iran's Major General Qassem Soleimani. Shortly afterwards, amid expectation of Iranian retaliation, the then US President tweeted, 'Let this serve as a WARNING that if Iran strikes any Americans, or American assets, we have targeted 52 Iranian sites ... some at a very high level & important to Iran & Iranian culture, and those targets, and Iran itself, WILL BE HIT VERY FAST AND VERY HARD'.¹ This tweet was unexpected because, in its threats to Iranian cultural sites, it indicated a course of action that violated the protections of international law and went against international norms.

This took the international community by surprise and received widespread challenge and condemnation. This was largely due to the undefined legality of such an action but also because the threats contradicted much doctrinal and legal work undertaken by nations worldwide after World War II to better protect cultural property during conflict. But what should commanders consider when looking for advantage within the battlespace that might involve cultural property? What is in or out of scope, and what is proportionate, necessary and even ethical in the pursuit of operational effectiveness?

The President, on 5 January, while speaking to reporters aboard Air Force One remarked, 'They're allowed to kill our people. They're allowed to torture and maim our people. They're allowed to use roadside bombs and blow up our people. And we're not allowed to touch their cultural sites? It doesn't work that way.'²

Although the putative US target package is unknown, if it existed, it may conceivably have included Iran's 24 UNESCO World Heritage Sites. These are of both global and Persian archaeological, historical and cultural significance, which represent religious, economic, architectural and social achievements throughout the Islamic Republic.³ Whilst unlikely, it is also possible to interpret the Presidential remarks as intended to refer to sites of iconic significance to the regime rather than cultural significance to the nation; for instance a



Pictured is a building in Maybod Iran. Photo: Diego Delso, Delso Photo. Creative Commons Attribution-Share Alike International license, Wikimedia

prominent parade ground, near-contemporary revolutionary memorial, a site of public executions, or Soleimani's workspace. However, for our purposes here, we assume that targets are 'cultural' in the legal meaning of the term. UNESCO define immovable cultural heritage sites, for instance, in reference to tangibility and recognise monuments, archaeological sites, and architecture.⁴

THE CULTURAL HERITAGE OF IRAN

The material heritage of Iran is widely regarded to be of the highest global significance. The long history of regional dynasties and empires has left an astonishing legacy, with a rich narrative woven into the architectural and monumental fabric. For example, historic centres such as those at Yzad, Eşfahān, Mashhad, and Shīrāz, and archaeological relics, such as, the tomb of Darius the Great at Naqsh-e Rostam.

The identification of 52 cultural sites by the President was not random; it related directly to the 52 American hostages seized from the US Embassy in Tehran in Nov 1979, and who were finally released in Jan 1981 in an episode known as the 'Iran Hostage Crisis'. See Farber, D. Taken Hostage: The Iran Hostage Crisis and America's First Encounter with Radical Islam. Princeton, NJ: Princeton University Press.
 https://www.independent.co.uk/news/world/americas/us-politics/donald-trump-iran-cultural-sites-soleimani-war-crimes-a9271566.html

³ https://eu.usatoday.com/story/news/world/2020/01/07/iran-cultural-sites-22-images-unesco-heritage-sites/2830806001/

⁴ http://www.unesco.org/new/en/culture/themes/illicit-trafficking-of-cultural-property/unesco-database-of-national-cultural-heritage-laws/ frequently-asked-questions/definition-of-the-cultural-heritage/

This rich heritage is the product of Iran's considerable ethnic diversity The country's population is made up of an intricate diversity of groups, including: Persian, Azeri, Kurd, Lur, Baloch, Arab, Turkmen and Turkic tribes, such as the Qashqai.⁵ Most of these fragment further into ethnic sub-groups, each with their own distinct cultural heritage. Some of these ethnic groups are the descendants of the original inhabitants who populated the Iranian plateau in the third millennium BC.

CULTURAL HERITAGE AND INTERNATIONAL LAW

The then President's threats received considerable condemnation from the international community who were quick to point out that the intentional targeting of cultural and religious sites (that are not legitimate military objectives) is prohibited in international humanitarian law, LOAC, and the 1954 Hague Convention on the Protection of Cultural Property in the Event of Armed Conflict (ratified by Iran in 1959 and the US in 2009). Some observers also pointed out that targeting cultural sites would constitute a war crime under additional protocols to the 1949 Geneva Conventions (articles 53 and 85(4)(d)) and referred to the 2017 UN Security Council Resolution 2347 on the protection of culture in the event of armed conflict in relation to the maintenance of international peace and security.⁶

In response, the US Defense Secretary strongly suggested on 6 January that the US military would not violate the laws of armed conflict. Asked whether he was willing to target cultural sites, the Secretary told Pentagon reporters: 'We will follow the laws of armed conflict.' Pressed on whether he would then not target such sites, because that would be a war crime, he replied: 'That's the laws of armed conflict.'⁷ The following day, the President told reporters that he would, in fact, observe international law and avoid striking cultural sites.⁸

THE UK POSITION

Over the past few years, the UK has committed significant resources into the protection of cultural heritage. This followed world-wide indignation over the destruction of cultural sites across the Middle East by Daesh and its affiliates between 2015 and 2017. In Syria, for example, Daesh engaged in the systematic destruction of pre-Islamic heritage sites and artefacts, including at the World Heritage Site of Palmyra, in order to illustrate the irrelevance of this past to their vision of the future. Other motivators for this destruction included: attention-seeking, provocation, show of capability, and the inducement of fear.

In late 2017, the UK Government ratified the 1954 Hague Convention on the Protection of Cultural Property in the Event of Armed Conflict, which allows for the armed forces to develop 'a spirit of respect for the culture and cultural property of all peoples' and to establish, within the armed forces, personnel 'to secure respect for cultural property'. For the UK, ratification led to the establishment of the tri-service Cultural Property Protection Unit (CPPU) in 77th Brigade as a Reserve formation.⁹

Army Doctrine Note 19/05 on Cultural Property Protection was published in December 2019. Available on the Army Knowledge Exchange (AKX), this sets out how cultural heritage, its protection and promotion, can play a significant part in the execution of military campaigns. It also provides the doctrine (and legal context) to better equip Land Forces to succeed in operational theatres. As cultural heritage is linked to both peoples' identity and human rights, the protection of cultural property, as announced by the UK Secretary of State for Defence in April 2019, forms a central activity area of the UK Centre of Excellence for Human Security, alongside expanded training on Women, Peace and Security, Children and Armed Conflict, Human Trafficking, Protection of Civilians, Sexual Exploitation and Abuse.¹⁰ It is because of its close ties to identity that attacks against heritage can be particularly harmful. They can, for example, offer amplificatory dimensions to propaganda outputs, denude the morale of communities, and, through the denial of culture, act as a vehicle of domination.

A spokesperson for the UK Prime Minister said on 6 January 2020 that there were 'international conventions in place that prevent the destruction of cultural heritage,' and implied that the UK did not believe the threats to target Iranian cultural sites would be carried out.¹¹

- 5 CIA World Factbook: https://www.cia.gov/library/publications/the-world-factbook/geos/ir.html
- 6 http://unscr.com/en/resolutions/2347
- 7 https://uk.reuters.com/article/uk-iraq-security-iran-culturalsites/pentagon-says-will-not-break-law-of-war-despite-trump-threatidUKKBN1Z526T?il=0
- 8 https://eu.usatoday.com/story/news/2020/01/07/trump-backs-off-threat-attack-iranian-cultural-sites/2833116001/
- 9 The US recently also committed to training a new group of Cultural Heritage Preservation Officers. Based at the Civil Affairs and Psychological Operations Command at Fort Bragg, North Carolina, the unit will be composed of commissioned officers of the Army Reserve who are museum directors or curators, archivists, conservators and archaeologists in addition to new recruits with those qualifications.
- 10 https://www.gov.uk/government/news/mod-to-establish-centre-of-excellence-for-human-security
- 11 https://www.theguardian.com/world/2020/jan/06/no-10-uk-would-not-back-us-bombing-of-iranian-cultural-sites



Pictured is the Chehel Sotoun at Isfahan, Iran. Photo: Amirpashaei, Creative Commons Attribution-Share Alike 4.0 International license, Wikimedia.

Nonetheless, a future episode like this, perhaps involving allies and/or UK facilitation and capabilities, raises potential political and policy concerns for the UK, not least as it could compromise UK treaty commitments and result in significant reputational damage. As demonstrated by the castigation of Daesh for their attacks on heritage at Palmyra and the Taliban at Bamiyan, the stigma attached to attacks on heritage is particularly prominent.

MODERN US-IRAN RELATIONS

Since the overthrow of Mohammad Reza Shah, in early 1979, which lost the US its key ally in the region, the perception of Iran in the US and *vice versa* has been informed by four decades of toxic relations. The overrun of the US Embassy in Tehran in late 1979 resulted in a hostage crisis notable not only for the number of hostages (52) and duration (444 days) but also the enduring television coverage. The 1980s also saw a

sustained tempo of terrorist attacks against US interests in Lebanon by Iran's client, Hezbollah, including the US Embassy attack in Beirut in April 1983, which killed 63 people.¹² More recently, the Iranian regime via the IRGC were behind the arming of insurgents in Afghanistan, the attempts to sabotage US-Afghan cooperation,¹³ and providing support to the Assad regime in Syria.¹⁴ Informing social memory, these traumatic episodes have shaped US national identity. Indeed, via what we might term intangible 'dark' heritage, the state's perception of itself is informed and so, too, are relations with others, principally Iran.

Iran's perspective embodies considerable symmetry. The leadership in Tehran thrives on the perception of foreign threats, principally from the US. Such threats create anxiety, serve to distract from domestic difficulties, and ensure the regime can paint itself in the role of guardian.

12 Baer, R. 2002. See No Evil: The True Story of a Ground Soldier in the CIA's War on Terrorism. London: Crown Publishers.

- 13 Nader, A., A. Scotten, A. Rahmani, R. Stewart and L. Mahnad 2014. Iran's Influence in Afghanistan. London: RAND.
- 14 Kozhanov, N. 2018. Iran's Strategic Thinking: The Evolution of Iran's Foreign Policy, 1979-2018. Berlin: Ger-lach Press, p. 145-6.

Once again, there is a long history that can be called upon to furnish anti-US narratives and sentiment. The US is seen as responsible for repeated attempts to sabotage Iranian interests, by covert military and intelligence operations on the one hand, and encirclement by hostile states on the other.¹⁵

Despite the centrality of the Iranian military in the 1953 coup that ousted the democratically-elected Prime Minister, Mohammad Mosaddegh, it is remembered by Iranians as a US and UK plot to undermine their interests.¹⁶ With the death of around 1 million Iranians, the Iran-Iraq War (1980-8) was, and continues to be, a traumatic episode mobilised in national identity. Iranians are acutely aware that the US favoured Iraq in the confrontation and supported Saddam's regime with arms, logistical support, training, diplomacy, and attacks on Iranian naval vessels.¹⁷

Further to this perception that the long-term US posture is to sabotage Iranian identity, the heritage threats become even more potent. To attack significant heritage sites would be to undermine the very identity of the state.



Pictured is the interior of Gin Garden, Kashan, Iran identified by the ID 238 as one of Iran's cultural monuments. Photo: Amirpashaei, Creative Commons Attribution-Share Alike 4.0 International license, Wikimedia

¹⁵ At great cost, the US has been the primary architect of the recent enhancements in Iran's regional influ-ence: it dispersed the Taliban in Afghanistan and toppled Saddam in Iraq. These actions have also made other states in the region wary of backing US-driven containment policies because they make confronta-tion and, in turn, proximal instability, more likely.

¹⁶ The CIA disclosed publicly its involvement in the coup in 2013. As such, Op Ajax was likely the first covert action during peacetime by the US to overthrow a democratically-elected government. See Byrne, M. 2013. CIA confirms role in 1953 Iran coup. The National Security Archive. https://nsarchive2.gwu.edu/NSAEBB/NSAEBB435/

¹⁷ Johnson, R. 2011. The Iran-Iraq War, New York: Palgrave, pp. 151-63.

In effect, such attacks would be recognised as an attempt to uproot the state, to erase the physical manifestations of its historical legitimacy and existence. The history of US-Iranian antagonism is woven into the tapestry of the state. Conflict sites and memorials become powerful tangible primers of such historic events and present opportunities for the regime to spread ideology. For example, supported by Tehran, every year thousands of Iranians visit battle sites of the Iran-Iraq War – a pilgrimage known as *Rahian-e Noor* ('the passenger of light').¹⁸ The battles sites have become a form of dark heritage.

REPERCUSSIONS: FROM THREATS TO STRIKES

Moving beyond the legality of the deliberate kinetic targeting of Iranian cultural heritage, there is merit in also considering the wider repercussions of such US action. Strategically, Iran would be compelled to retaliate after an attack against its cultural heritage. Such an attack would be against not only the regime's legitimacy but also Iran's sovereignty and vision of itself. In the popular consciousness, Iran's national identity is inextricably bound to cultural representations of being one of the earliest civilisations in the world. These deep roots are manifest symbolically in identity and political discourse via narratives of authenticity, legitimacy and piety.

In response to an attack against its heritage and, by extension, its identity, Iran would be eager to mount retaliatory attacks. Given that cultural heritage goes to the core of identity and the targeted destruction of significant heritage on the scale outlined would be at once unexpected and uncommon, it is difficult to anticipate precisely how Iran would respond. However, we can speculate that Iran would look to conduct attacks against the US footprint in the region, including diplomatic installations, monitoring and early warning stations, and troop deployments. Tit for tat destruction against cultural heritage sites of US allies in the region, such as Israel and Saudi Arabia, is also possible. In addition, Iran might aspire to disrupt the supply to the West of oil and petrochemicals. Mindful of the obvious disparity of military power and recent experience of proximal regimes, Iran may look to find a delicate balance between a response considered proportional by the international community, in particular Russia (an ally of Tehran and key strategic player in Iran's efforts to combat

Western aspirations in the Middle East) yet significant enough to satisfy domestic audiences. To do otherwise might lose the perception of the moral high ground and, in reality, an escalatory response would likely result in the loss of international sympathy and support.

Having signed a MoU for cultural heritage cooperation with Russia in November 2017, Iran would anticipate and court support from Moscow after such an attack. This bilateral agreement secured collaboration between the Iranian Cultural Heritage and Tourism Organization and Russian State Hermitage Museum and included clauses on joint training, the conduct of collaborative archaeological projects, and, crucially, repair and protection of historical monuments. Russia is thus a stakeholder in the Iranian cultural heritage sector and would use this position as a vehicle to pursue information operations in assorted theatres and otherwise exacerbate US reputational damage.

Iran would certainly look to use an attack against it to cultivate Russian protection and support beyond the realm of cultural heritage.¹⁹ Russia does not want to see instability or regime change in Tehran. US air strikes would likely result in Russian support, both public (diplomatic) and covert (materiel, training and intelligence). For example, Russia would undoubtedly veto any attempts by the US to get UN Security Council Resolutions (UNSCRs) against Iran on operations or nuclear enrichment.

Iran's military doctrine has been pretty consistent since the 1980s. It is primarily defensive in nature - seeking to avoid force on force confrontations - and constructed on deterring perceived threats from adversaries.²⁰ Noting the importance of deterrence, in 2016, Supreme Leader Ayatollah Khamenei claimed that they would not limit their missile procurement whilst the US and others, 'constantly threaten Iran'.²¹ Iranian deterrence by punishment posture, including the subversive use of proxies, and extensive missile capabilities, makes it likely that they would employ missiles as part of any retaliation.

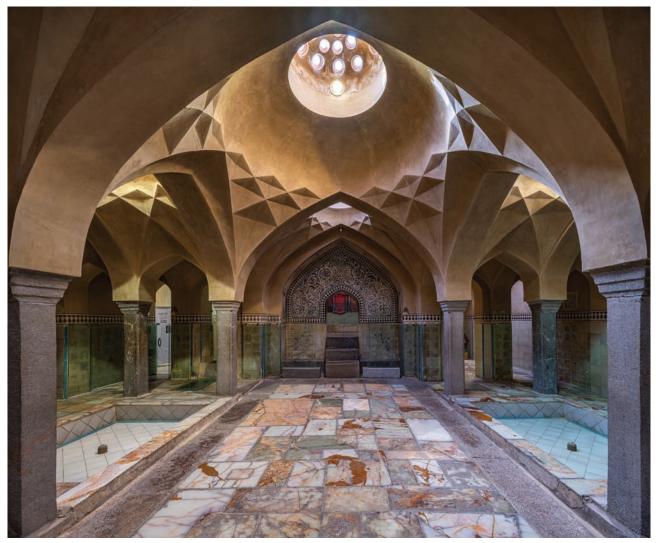
The regime has demonstrated previously its willingness to mount missile attacks, e.g., against the Abqaiq-Khurais oil plant in Saudi Arabia (September 2019) and US military bases in Al Asad and Irbil, Iraq (January

¹⁸ https://www.theguardian.com/world/2020/jan/20/passengers-of-light-visit-iran-iraq-war-memorials-a-photo-essay

¹⁹ Russia's relationship with Tehran is complicated by a number of strategic factors. These include: anxiety about instability in its near abroad; concerns about antagonising Muslim populations in the Caucasus; exploitation of economic opportunities (optimised through the limitation of Western footprint); and the prevention of US-Iranian rapprochement.

²⁰ IISS 2016. Missile Defence Cooperation in the Gulf. London: IISS, pp. 13-42.

²¹ IISS 2016. Missile Defence Cooperation in the Gulf. London: IISS, p. 55.



Pictured is the Ali Gholi Agha hammam at Isfahan, Iran identified by the ID 226 as one of Iran's cultural monuments. Photo: Amirpashaei, Creative Commons Attribution-Share Alike 4.0 International license, Wikimedia

2020). Indeed, Iran has an extensive arsenal of missiles. Although China stopped their sales of silkworm missiles, ongoing transfer of knowledge and technology helped ensure Iran was able to develop its own production capabilities, including the Nasr system.²² Shore-based cruise missiles and naval capabilities have been threatened against shipping in the Persian Gulf.²³ It is possible that precision missiles could be directed at scale against regional cultural heritage sites in the knowledge that 'huge retaliation' would be unlikely.²⁴ As seen during the recent identity wars in Iraq, Yemen and the former Yugoslavia, sectarian and extremist violence is often targeted at cultural heritage sites. Because such attacks are highly personal and emotive, such transgressions against one's identity often precipitate a similar response.

In parallel, Iran could respond through 'subthreshold' means: cyber operations and deniable attacks by proxy forces. The regime could, for example, seek to use

²² The short-range Oghab and Nazeat, long-range Shahab 3, and Raad-500, a ballistic missile with a range of 500km, would be utilised. In addition, Iran would deploy its Remotely Piloted Aircraft Systems (RPAS), in-cluding the Shahed 129, Mohajer-2, Ababil-1. See Harold, S. and A. Nader 2012. China and Iran: Economic, Political and Military Relations. London: RAND, p.6-8.

²³ In early July 2020, Rear Admiral Ali Reza Tangsiri reported that, 'Iran has established underground onshore and offshore missile cities all along the coasts of the Persian Gulf and the Gulf of Oman that would be a nightmare for Iran's enemies'. See Stone, M. 2020. Iran claims it has 'missile cities' as 6 incidents prompt theories it is under attack. Sky News https://news.sky.com/story/coincidence-or-attack-what-isbehind-the-six-curious-incidents-in-iran-12021907

²⁴ https://www.thenationalnews.com/world/mena/iran-s-rocket-arsenal-puts-middle-east-peace-at-risk-1.1032312

insurgent formations, including terror units, fedayeen, and irregular naval raiding capabilities. Hezbollah and Hamas, for example, could be encouraged to mount attacks, particularly against cultural heritage sites in Israel.²⁵ It is worth noting in this context that Iran has supplied up to 1,000 inertial guidance kits to upgrade Hezbollah's stockpile of missiles, which increases the vulnerability of regional targets.²⁶ The IRGC does not routinely coordinate the attacks of its clandestine networks in remote theatres, preferring decentralised command and control, but it can and, in these circumstances, might well be motivated to plug in specialist Quds Force teams to amplify the scale and reach of targeted operations.²⁷

Whilst the strategic aim of the US is to degrade Iran's regional influence, Washington would also be wary of destabilising Iran or becoming embroiled in another expeditionary intervention. Despite the rhetoric, the costs of recent campaigns in Iraq and Afghanistan make a ground intervention unlikely. For the US, a large intervention would be unpopular and expensive, with many adverse effects, including to the oil market. Thus, it would be in the interest of the US to maintain an effective regime in Tehran. That noted, US pressure is intended to generate compliance or at least a more tolerable foreign policy. Indeed, leaving room to amplify pressure at a later time, it is possible that the US President erroneously considered attacks against cultural heritage to be a lesser measure than attacks against military targets. If this was the case, it was a huge miscalculation. Cultural heritage is of global, regional, local and intergenerational value - it is not a conflict actor. Thus, the Iranian response (and that of the international community) would have seen such acts as disproportionate and cruel. Such targeting would cede the moral legitimacy to Tehran.

Whilst attacks on cultural heritage are often intended to denude an adversary's will to fight, sometimes the opposite effect is apparent. Whilst the bombing of British urban centres by the German Luftwaffe in 1940-1, for example, did deliver social and psychological damage, the aftermath also saw a galvanising effect (the so-called 'Blitz spirit'). Thus, in the case of Iran a relative boost to morale might have been observed. This could have been amplified further if, and when, other states started to castigate the US for their actions.

SO WHAT?

The episode and likely repercussions described here is a striking case, but one that usefully highlights the complex relationship between heritage and conflict. The implications for the national interests are potentially wide-ranging from reputation and diplomatic to kinetic retaliation and operational advantage. As such, the protection of cultural heritage by UK Forces in global theatres is militarily important for three key reasons:

- 1. It's the law. The Cultural Property (Armed Conflicts) Act 2017 paved the way for the UK's implementation of the 1954 Hague Convention (and its two protocols) and sets out that all persons subject to UK service jurisdiction must respect cultural property by a) not making protected cultural property the object of attack and b) not undertaking acts of vandalism against or theft of cultural property. This applies solely to cultural property defined within the Convention as 'property of great importance to the cultural heritage of every people' identified by an individual State.
- 2. It's good practice. Customary international humanitarian law indicates that each party to a conflict must respect cultural property and that special care must be taken in military operations to avoid damage to buildings dedicated to religion, art, science, education or charitable purposes and historic monuments, excepting when they are military objectives.²⁸
- 3. It's a force multiplier. When planned and executed correctly as tactical and strategic objectives, the protection of cultural heritage provides for a more secure operational context by amplifying consent and contributing to domestic and international stability.²⁹ Also, understanding local cultures is a crucial part of human terrain analysis, which enhances understandings of the drivers of actions of local networks and populations. It can also contribute to postconflict reconstruction by stimulating tourism and strengthening national identities.

²⁵ As a Sunni organisation, Hamas was never a client of Tehran, although it did accept financial and materiel assistance. Nonetheless, Iran could incite and facilitate attacks against Israel and US.

²⁶ Watling, J. 2020. Iran's rocket arsenal puts Middle East peace at risk. The National https://www.thenational.ae/world/mena/iran-s-rocketarsenal-puts-middle-east-peace-at-risk-1.1032312

²⁷ Watling, J. 2020. Iranian C2 for proxy warfare. RUSI https://rusi.org/multimedia/iranian-command-and-control-proxy-warfare

²⁸ https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_cha_chapter12_rule38

²⁹ https://www.aiamilitarypanel.org/wp-content/uploads/2019/02/Final-CPP10-26-3.pdf

The 1954 Convention is not without limitations. States populate the list with their chosen cultural property. Where internal divisions exist, for example in civil conflict, the controlling faction is likely to prioritise and include the cultural property that is important to them. On the other hand, minority ethnic groups, non-state actors, and rebel factions caught up in the conflict may not benefit from the protection, leaving their cultural and material legacies at risk. Nonetheless, cultural property protection remains a vital concern for those nations whose militaries aspire to be a force for good in the world, a prominent idea in British foreign policy in recent decades.

CONCLUSION

The soft power value of the UK's international work to protect heritage in conflict theatres was recognised in HMG's *Integrated Review.*³⁰ Indeed, the protection of cultural heritage has become an important consideration, even a line of operations, for UK forces. As is the case in any operational theatres, Iran's cultural heritage is at risk from threats of targeted and collateral damage. Unintentionally, the US President's threat to strike Iranian cultural sites actually served to bring the military's responsibility to protect them to the attention of publics in the West and beyond.



Palace of Darius the Great in Persepolis (The Persian City), situated 60 kilometres (37 mi) northeast of the city of Shiraz in Fars Province, Iran. The UNESCO World Heritage Site since 1979 dates back to 515 BC and it was the ceremonial capital of the Achaemenid Empire. Photo: Diego Delso, Delso Photo CC BY SA license, Creative Commons Attribution-Share Alike International License, Wikimedia.

30 See HMG 2021. Global Britain in a competitive age: the integrated review of security, defence, development and foreign policy.

The UK is well-placed to deliver capabilities to ensure that heritage sites are considered within the operational planning cycle, whilst working to ensure that all parties perhaps through example even adversaries – are similarly minded. On the world stage, the UK approach diverges markedly with the actions of other states. For example, Russia has used heritage sites as cover for covert assassination operations in the UK,³¹ and sites in Syria and other countries, to leverage regional advantage. ³²In Syria, at the World Heritage Site of Palmyra, to celebrate its recent liberation from Daesh by Russian and Assad regime forces, for example, the Russians staged and broadcasted a concert by the Mariinsky Symphony Orchestra at in the Roman amphitheatre. This was a first-class propaganda stunt which to many audiences positioned Russia - and not the West - as the world's cultural protectors.

At once a driver of conflict and stability and potent instrument of propaganda, cultural heritage choreographs identities, histories and relationships. To attack (or threaten) it militarily can have significant strategic and operational implications and cede legitimacy and advantage to an adversary.



31 https://www.bbc.co.uk/news/uk-51722301

32 Dunkley, M., 2018, 'The Russian Weaponization of Cultural Heritage', in British Army Review Culture in Conflict special report.

First Mover Advantage -Pre-Emptive Deployment of Multi Domain VHR Forces

Major James Beckett, JFHQ, argues that a small re-calibration of Very High Readiness (VHR) forces, anchored by a core spine of crisis response SMEs from the 1* Extremely High Readiness (EHR) Joint Force Headquarters, could offer a pathway to increasing our ability to compete sub-threshold.



Romanian BDRM vehicles transit the Cincu training area in Romania as a part of Exercise SABER GUARDIAN. The 3rd Battalion the Rifles (3 RIFLES) are deployed on the US Army Europe led Exercise Saber Guardian in Romania. The Support and Headquarters Companies of 3 RIFLES are at Cincu Training Area, Romania, to partner with the UK's NATO Allies. Photo: Corporal Paul Watson, Crown Copyright

n marketing strategy a company's early entry into a new market, industry or product category provides that firm with an insuperable advantage; the same rings true of emerging crises or conflicts. Early engagement provides the 'first-mover' with time to accumulate and master their advantage over others providing that actor with the space to exploit relations, build networks and seize and hold key terrain.¹ There are, of course, arresting factors to this advantage; the political relevance of that particular crisis (which may wane) and the expansion of that crisis to other actors (flooding the market). Aligning resource to exploit that opportunity in the first instance is crucial to future strategic success.

The recently published Integrated Operating Concept (IOpC) recognises that we have ceded this advantage by allowing our adversaries the freedom to drive the conditions and tempo of strategic activity.² Our adversaries have recognised our warfighting strength and sought to compete through (sub) liminal warfare; flirting with the threshold of detectability across a spectrum of state levers all below the Western definitions of war.³ IOpC offers direction for strategic realignment in order to tackle this problem. A small re-calibration of Very High Readiness (VHR) forces, anchored by a core spine of crisis response SMEs from the 1* Extremely High Readiness (EHR) Joint Force Headquarters, could offer a pathway to increasing our ability to compete sub-threshold.

Since the West demonstrated its significant military capability during the Gulf War in 1991, our adversaries, both state and non-state, have sought to avoid our conventional strength. The 2003 invasion of Iraq illustrates the limitations of our high-tech, precision centric approach that dominated the battlefield. Small, low profile autonomous groups were able to draw us into a protracted campaign exposing our weaknesses. The current security environment has evolved as a reaction to these capabilities. This environment is further complicated as non-state actors have acquired traditional state capabilities (e.g. Cyber and UAS) and states have embraced non-state activities (e.g subversion or political warfare).⁴ In light of this, the traditional linear description of a 'spectrum' of conflict is no longer suitable. The span of conflict has moved beyond our definitions of warfare as our adversaries seek to compete across multiple domains utilising multiple state levers. Like the Romans, the Chinese believe that the battlefield is everywhere, and warfare is everything. Colonels Qiao Liang and Wang Xiangsui, in their book Unrestricted Warfare, broadened the Chinese definition of war to include 'non-military war operations'. They combine property and infrastructure purchases, port and supply chain ownership with criminal networks and civil organisations to achieve military outcomes.⁵ Similarly, at the core of Russian liminal warfare lies the integration of political, economic, cyber, military and criminal activity to shape the environment in advance of committing to an objective. The West is now faced with a much broader range of threats by more agile systems. The West's vulnerability to this is twofold. First, slow collective decision-making by the UN and NATO, especially for activity that does not reach the Article 5 threshold, provides our adversaries with time and space to reach an irreversible conclusion. Second, our Government structures are not suited nor culturally prepared to compete coherently across all our national capabilities. This provides our adversaries with the time and space to enter a crisis or conflict as the 'first mover'.

To achieve 'first mover' status we must mitigate this slow Western collective decision-making; a key vulnerability exploited by our adversaries in order to achieve this status. Whilst it is not legally necessary to have UN or NATO approval for responding against our adversaries, they do play a significant role as a legitimising stamp of endorsement required by the public and for generating political support. The key failure lies with arguments for UN and NATO involvement which are centred on definitions of 'war' that preclude liminal activity. A simple realignment, to counter adversarial activity, should instead be through increasing routine operations rather than entering conflict or 'warfighting' because of enemy activity. This requires increased engagement overseas, an agile network to identify the right time and place to conduct this activity and, crucially, precludes collective decision-making.

2 MOD, The Integrated Operating Concept 2025, 2020.

4 Kilcullen, D., The Dragons and Snakes: How the Rest Learned to Fight the West, London, C Hurst & Co Publishers Ltd, 2020.

¹ Suarez, F. and Lanzolla, G., The Half Truth of First Mover Advantage, Harvard Business Review, 2005.

³ The Changing Strategic Threat Picture, World of Intelligence, D. Kilcullen, London, Janes Intelligence Unit, 2020, https://www.janes.com/ defence-and-security-advisory/podcast, (10 Jun 2020).

⁵ Liang, Q., and Xiangsui, W., Unrestricted Warfare, China, People's Liberation Army Literature and Arts Publishing House, 1999.



The 1st Battalion The Princess of Wales's Royal Regiment (1 PWRR) and Estonian troops from a Mechanised Infantry Company attack an enemy stronghold on Sennelager Ranges during the final stages of Exercise VENERABLE GAUNTLET for the NATO Very High Readiness Joint Task Force (VJTF). Photo: Mr Dominic King, Crown Copyright

The Integrated Operating Concept seeks to establish the doctrine through which we tackle part of this problem; to compete decisively with our adversaries through a modern, Government competitive, integrated approach.⁶ This approach would serve to mitigate our structural challenges both within the MOD and across government, for as Rupert Smith described, 'we retain the form...of another age'.⁷ Whilst our integration with government departments continues to improve, the link is only as ever as good as the individual assigned to fulfil that role. General Stanley McChrystal, when reflecting on his time as Commander Joint Special Operations Command, identified that overcoming and integrating 'silos' was heavily dependent on behavioural factors which were vulnerable to the gravitational pull of their own hierarchies.⁸ Therefore, hierarchical organisations

are at a significant competitive disadvantage due to their formal structures. In contrast, individuals brought together through common cause utilising modern communications will form networks faster and more effectively than large bureaucracies.⁹

The solution is not to add a veneer of new technology over our existing organisation concept but address the hierarchical structure itself. The Army has long been looking at how to disperse its command and control (C2) locations due to concerns over signature and profile. Instead it should subtly alter its approach, moving to a pro-active distributed constellation of small autonomous C2 nodes, as routine, rather than viewing the requirement through a solely defensive or protectionist lens. The idea is firmly rooted in the British Army's command philosophy,

⁶ MOD, The Integrated Operating Concept 2025, 2020.

⁷ Smith, R., The Utility of Force: The Art of War in the Modern World, London, Penguin, 2006.

⁸ McChrystal, S., Team of Teams: New Rules of Engagement for a Complex World, London, Penguin, 2015.

⁹ Patrikarakos, D., War in 140 Characters: How Social Media is Reshaping Conflict in the Twenty First Century, New York, Basic Books, 2017.

'Mission Command'. It is 'founded on the clear expression of intent by commanders, and the freedom of subordinates to act to achieve that mission'¹⁰ The concept of a 'C2 constellation' model acting autonomously, yet within the intent, is simply the next step in our doctrinal evolution.

The other limiting factor to creating government networks is cultural integration. The Army should see itself, and seek to be seen, as more than a blunt warfighting tool within Government but rather an enabling department 'fighting' to achieve the same ends. This will take time to achieve and will require consistent and carefully balanced messaging to achieve. It is also likely that the Army would only be a small contributor to any Joint or Inter-Agency Task Force (JIATF). Our cultural differences with Other Government Departments (OGDs) will challenge our soft skills and will require careful selection and training to accomplish. But the Army has pedigree in leadership, planning and execution which makes it an ideal platform to enable a JIATF; to pull together disparate teams and drive them towards an objective. However, to properly 'orientate' HMG we must also cut through our adversaries' ecosystem of disinformation and propaganda. 'First movers' can take advantage of an immature operating environment and accumulate accurate information in advance of adversarial shaping operations. Georgia, Crimea and Ukraine illustrate how much obfuscation of the facts can occur through multiple false narratives. Our adversaries secured plausible deniability and an amplifying media resonance that increased their reach across target audiences.¹¹ Colonel Thomas Hammes, in his book *Sling and the Stone* argued that integration is key to overcoming this 'chaos'. The complexity of decisionmaking in such uncertain operating environment means that no single commander can meet this demand and instead, we should favour a networked system that encourages flexibility and multi-dimensional communications rather than centralisation through our own hierarchy.¹²



A Soldier from 3 Rifles provides overwatch support from the Jackal vehicle whilst deployed on a Recce Screen for Exercise SABER GUARDIAN in Romania. The Support and Headquarters Companies of 3 RIFLES are at Cincu Training Area, Romania, to partner with the UK's NATO Allies. Photo: Corporal Paul Watson, Crown Copyright

- 10 MOD, Army Doctrine Publication: Land Operations, 2017
- 11 US Department of State, GEC Special Report: Pillars of Russia's Disinformation and Propaganda Ecosystem, 2020.
- 12 Hammes, T., The Sling and The Stone: War in the 21st Century, London, Zenith Press, 2004.

Force elements deployed pre-emptively may serve to mitigate the impact of decision-making in a 'post truth'¹³ environment. Rather than simply answer CCIRs, they can help inform decision-makers as to the right questions to ask, which can often be hidden in confused and time pressured environments. David Kilcullen argues that the reconnaissance and intelligence communities should re-orientate the way they present their understanding of situations by becoming 'decision support advisors'; a platform for dialogue with cross domain teams of experts.¹⁴ This could be delivered by forward deployed teams providing HMG the ability to identify where and when to compete across multiple domains.

However, a shift from reacting to threats to a culture of multi-domain competition requires some significant changes to how the Army operates and how it is understood. Defence currently holds forces at EHR and VHR in order to respond to an emerging crisis or conflict. Committing them to a country pre-crisis or in a country identified as a theatre to counter Hostile State Activity (C-HSA) would commit our finite resource of high readiness forces. This subtle change to pre-emption could see these forces shape the operating environment in our favour and, in doing so, our adversaries may be denied the very freedom of action for which our high readiness forces are held to defend against. Further, the UK would achieve strategic overwatch; the ability to identify opportunities, establish multiple networks and provide HMG the flexibility to back an organisation or host nation partner and suffocate our adversaries' freedoms.¹⁵ By achieving 'first mover advantage' we would further serve to generate greater tempo by orientating to issues with greater understanding and insight. Colonel John Boyd argued that



Turkish Vuran with Spanish URO VAMTAC prepare for the forward passage of line manned by elements of 3 Rifles during Exercise SABER GUARDIAN in Romania. 3 RIFLES are working alongside the 66th Turkish Brigade, as well as elements of the Italian, Spanish and US Armies. The Exercise will see the soldiers of different nationalities conduct interoperability training together as part of the VJTF(L) (Very High Readiness Task Force (Land)). Photo: Corporal Paul Watson, Crown Copyright

- 13 Post Truth relating to or denoting circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief.
- 14 The Changing Strategic Threat Picture, World of Intelligence, D. Kilcullen, London, Janes Intelligence Unit, 2020, https://www.janes.com/ defence-and-security-advisory/podcast, (10 Jun 2020).
- 15 Boulton, J., and Allen, P., The Complexity Perspective, Advanced Strategic Management, 3rd Edition, 2017.

orientation to a problem is the most critical phase; if the wrong judgements were made through poor orientation it could lead to fatal decisions.¹⁶ The utilisation of EHR/VHR forces as a Strategic Reconnaissance Force, in advance of our adversaries, would contribute to greater enablement of tempo and help contribute to effective decision-making. Critically, it is not necessarily the speed at which decisions are made but the speed at which you can secure ground truth and orientate to the problem requiring individuals who can deploy at short notice.

Therefore, to achieve 'first mover advantage', any competitive platform must be held at an appropriate readiness. Without the means to deploy at pace and achieve this status, a multi domain, HMG platform may not enjoy the same successes. At 'extremely high readiness' Defence holds Operational, Liaison and



Headquarters. OLRTs are scalable, multifunctional teams Reconnaissance Teams (OLRTs) from the Joint Force of deployable staff officers that provide Defence with situational awareness, liaison and reconnaissance capabilities in support of global contingency planning and response.¹⁷ OLRTs are held at 4hrs and 12hrs NTB and can flex quickly to emerging situations. It is conceivable that OLRTs could form the spine of an interagency task force providing C2, CIS and contingency planning expertise. Through augmentation this can scale up and down in size and expertise. The composition of augmentation will flex to the requirements; from countering adversarial Chinese economic development by deploying FCDO and Treasury SMEs or deploying FE's to conduct TA3E¹⁸ Operations with a host-nation partner force to secure the UKs economic interests in a country. But the concept of readiness and the requirement for it is not necessarily understood or easily replicated across OGDs and will likely be the limiting factor to pursuing this model. In the short term, the Army should expect to contribute to this requirement by identifying key individuals, enablers and forces to be held at short notice with the intent to demonstrate the capability and encourage broader conceptual engagement across Government.

Our requirement to meet the challenges of the current operating environment are therefore minimal; we already have the people, technology and training. The hope is that IOpC is the authority required to adapt our operating models by decentralising into autonomous, competition seeking opportunists. But this may be decentralisation beyond which senior commanders are comfortable with and this is our greatest cultural hurdle. It may also be argued that persistent engagement overseas will increase our ability to sense and warn or that we have a Defence Attaché (DA) network in situ which can fulfil this task. Whilst both deployed elements would be part of a JIATF network they have competing priorities and are not necessarily staffed or enabled for pre-emptive competition. The requirement falls to high readiness forces who can flex, at short notice, to the point of need. Whilst this solution is not perfect and would likely suffer from many frictions the Army should be comfortable to experiment and, when it fails, iteratively adapt to continue our evolution in pursuit of Strategic Advantage.

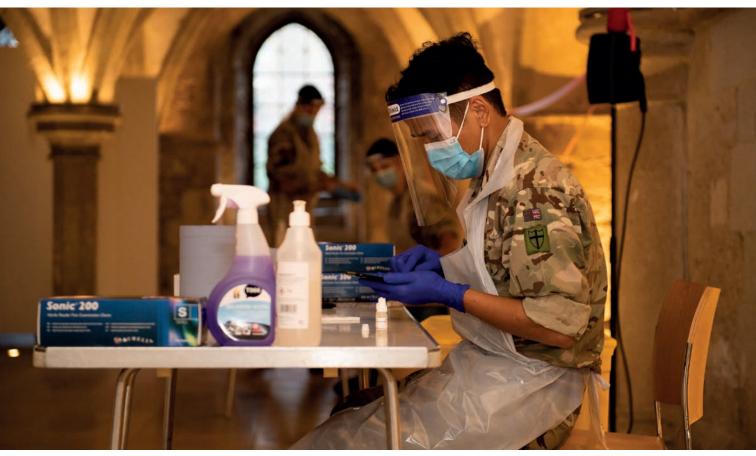
16 MOD, Army Doctrine Publication: Land Operations, 2017

17 Joint Force Headquarters, Operational Liaison and Reconnaissance Team Handbook, 2020 Gold Edition.

18 TA3E - Train, Advise, Assist, Accompany, Enable.

Home Front: Resilience in a Time of 'Durable Disorder'

Captain Patrick Hinton RA suggests there is a need for enhanced consideration of domestic resilience tasks undertaken by the British Army. What was recognised as a limited portfolio of seasonal flood relief has now expanded. Recent developments indicate this increase may not be temporary, instead becoming a norm to which, the Army must adapt.



Pictured of a sapper processing a covid test at the Forth Medway Covid Testing Centre, set up in the Crypt of Rochester Cathedral. Military Command (South East) has deployed 175 Armed Forces personnel in the Medway Towns as the Medway Resilience Unit (MRU). 35 Engineer Regiment is an Explosive Ordnance Disposal and Search unit based in Carver Barracks, Essex. Photo: Cpl Wakefield; Royal Logistics Corps, Crown Copyright

The British Army is an expeditionary organisation. It deploys troops overseas in order to deal with perceived threats to national security and offer support to allies and those in need. Currently, personnel are deployed in Iraq and Afghanistan as well as in Estonia and Poland. More widely, Operation GRITROCK in 2014, where medical personnel deployed to Sierra Leone to counter the Ebola outbreak is one example of expeditionary activity. Another was Operation RUMAN where troops from all three services deployed to the Caribbean in the aftermath of Hurricane Irma. Such interventions will likely remain at the forefront of the military's efforts to navigate a complex modern operating environment.¹ A fractious mixture of violence and humanitarianism is familiar by now.

However, it is not just the international environment which is unsettled. Increasingly, it appears that domestic issues, from extreme weather to terrorism, require the intervention of the Armed Forces to provide rapid and agnostic support to a range of problems. This article discusses these developments, which pick up on a long history of domestic military operations. Going forward, the question might be asked whether a more permanent and directed domestic focus might be worthy of consideration for the military. In this piece, a consideration of the international and national environment is offered first. Second, the developments of 2020 and the expanded portfolio of domestic tasks are analysed. Finally, a path forward is suggested whereby a larger focus on civil resilience operations begins at initial training and forms a focal part of a career in the armed forces.

'DURABLE DISORDER'

Sean McFate, a former US army officer and professor at Georgetown University, employed the term 'durable disorder' in his 2019 book, *Goliath: Why the West doesn't win wars. And what we need to do about it.*² McFate focuses on the fragility of states and the end of defined military victories. It adds to the canon of work surrounding the 'grey space' and sub-threshold activity which has filled defence journals and military education.³ It relates to the unsettled environment in which the military operates. Softer borders allow flows of people, finance and information in a manner with which international law and the regulatory environment cannot keep pace. This notion contributes to the legacy of a 'deepening' and a 'widening' of the scope of definitions of security which have been studied since the end of the Cold War.⁴ A transition has been seen from a focus on state adversaries, through non-state actors, to more nuanced ideas like migration flows and vulnerable critical national infrastructure. The United Kingdom must now reckon with an uncomfortable hybrid of all the above. It is recognised that instead of increased homogeneity in a globalised world, divergence is rife.⁵ Planners and strategists must contend with the 'weaponization of everything'.⁶ Such complications are not confined to the international environment.

An unsettled domestic picture suggests that a shift to looking inside Britain's borders in terms of military planning and effort would pay dividends, as it has for the pandemic.⁷ It would be unwise to think that the events of 2020 are a one-off and that things will return to what used to be perceived as *normal*. Notions such as strained national infrastructure, threatening natural events and the extrication from the EU form a potent mix.

Biologically, Covid-19 was the latest in a series of disruptive viruses which have affected the world, joining the inauspicious line up of MERS, SARS, avian and swine flu. Zoonotic viruses are those which make the dangerous leap from animals to humans and they are unlikely to disappear. The increased pressure on the ecosystem due to population growth and the proximity of population centres to habitats makes them ever more likely.⁸ The military has proven itself as a capable partner in the provision of pandemic prevention and reaction operations. The speed with which an infectious disease can tear through a population lends itself to military aid which can be requisitioned in short order.

Pandemics are not the only security issue which are likely to become more problematic as time goes on. Severe weather events have become more frequent

¹ Ministry of Defence (2015), 'Future Operating Environment 2035', Strategic Trends Programme, p.33

² McFate, S., 2019, Goliath: Why the West doesn't win wars. And what we need to do about it', London: Penguin.

³ Raine, J., 2019, 'War or peace? Understanding the grey zone', https://www.iiss.org/blogs/analysis/2019/04/understanding-the-grey-zone, (accessed on 1 December 2020).

⁴ Tarry, S., 1999, 'Deepening' and 'Widening': An Analysis of Security Definitions in the 1990s', Journal of Military and Strategic Studies, 2 (1).

⁵ Mousavizadeh, N., 2015, 'The weaponization of everything: Globalization's dark side', Reuters, http://blogs.reuters.com/great-

debate/2015/09/24/the-weaponization-of-everything-globalizations-dark-side/, (accessed on 5 December 2020). 6 Ibid.

⁷ Watts, G., and Wilkinson, E., 2020, 'What the NHS is learning from the British Army in the Covid-19 Crisis, British Medical Journal, 369: 2055, https://www.bmj.com/content/369/bmj.m2055, (accessed on 24 April 2021).

⁸ White, R., and Razgour, O., 2020, 'Emerging zoonotic diseases originating in mammals: a systematic review of effects of anthropogenic landuse change', Mammal Review, 50, pp.336-352.



39 Workshops 53 Field Engineers setup the testing facility located at the IM Marsh Campus Liverpool John Moore's University Gymnasium. Pods were delivered by the Royal logistics corps to each venue and then man-powered off to be setup. Photo: Corporal Andy Reid, Royal Logistics Corps, Crown Copyright

over time, and records are being set for hottest and wettest months.⁹ Both of these natural developments require significant investment as well as international cooperation to manage and solve. Threats like terrorism are often placed at the top of lists of threats to national security. At the time of writing, 150,000 people have had Covid-19 mentioned on their death certificates.¹⁰ Meanwhile, between 1970 and 2018, 3,411 deaths were attributed to terrorism.¹¹ All avoidable deaths are a tragedy, but such figures go some way in illustrating the significance of non-traditional security threats. The threat picture has shifted, and the military must put itself in a position to best react to the most significant threats to national security, in whatever guise they appear.

A WIDENED PORTFOLIO

By now, the British Army has reconciled the winter months with a need to send personnel to contribute to flood relief efforts. 2015 saw 2nd (King's) Battalion, the Duke of Lancaster's Regiment deploy to Cumbria in the aftermath of Storm Desmond. November 2019 witnessed 2nd Battalion, the Royal Anglian Regiment strengthening flood defences in Doncaster and in February 2020 damage caused by Storm Denis required the support of 4th Battalion, the Royal Regiment of Scotland.¹²

Domestic military operations are a recognisable portfolio.¹³ As described above, the winter period often sees the periodical flood support by the standby battalions. Operation TEMPERER's support to policing has taken a backseat since two iterations in quick succession in 2017. Supporting delivery fuel supplies in the event of industrial action covered by Operation ESCALIN has remained in suspended animation. A steady tempo of other tasks, including explosive ordnance disposal, has continued.¹⁴

2020 has seen a step-change in this pattern and the number of soldiers committed to UK resilience tasks. The Covid-19 pandemic precipitated a wholesale reorientation of the military's output in short order.

⁹ Huth, R., 2020, 'State of the UK Climate 2019', International Journal of Climatology, 40 (1).

¹⁰ Gov.uk (2021), 'Coronavirus in the UK: Summary', https://coronavirus.data.gov.uk/details/deaths, (accessed on 24 April 2021).

¹¹ Allen, G., and Kirk-Wade, E., 2020, 'Terrorism in Great Britain: the statistics', House of Commons Library, Briefing Paper No. CBP7613.

¹² Gov.uk (2015), 'Army engineers help with storm Desmond response', Gov.uk, https://www.gov.uk/government/news/army-engineers-helpwith-storm-desmond-response, (accessed on 24 April 2021); British Army (2019), '200 UK troops deploy to support flood relief', Army.mod.uk, https://www.army.mod.uk/news-and-events/news/2019/11/200-uk-troops-deploy-to-support-flood-relief/ (accessed on 24 April 2021); BBC News (2020), 'Storm Dennis: Army called in to help shore up defences', BBC News, https://www.bbc.com/news/uk-51512824, (accessed on 24 April 2021).

¹³ National Army Museum (2020), ' In case of emergency: The Army and civil assistance', National Army Museum, https://www.nam.ac.uk/ explore/civil-assistance, (accessed on 24 April 2021).

¹⁴ British Army (2020), ' A busy year for the bomb squad', British Army, https://www.army.mod.uk/news-and-events/news/2020/12/a-busy-yearfor-the-bomb-squad/, (accessed on 24 April 2021).

In March, 20,000 personnel were put on standby to deliver Personal Protective Equipment, administer testing, and construct Nightingale hospitals as part of Operation RESCRIPT.¹⁵ Personnel spent months living in temporary accommodation and spending their days in car parks testing the general public for the disease. Others drove face masks and aprons around the country and constructed temporary wards in exhibition spaces. This is a far cry from the activities contained in military marketing material. Latterly, the MOD supported the mass testing pilot in Liverpool, providing the model for further efforts in England and Wales. Heading into winter, 14,000 troops remained on standby as part of the Winter Preparedness Package.¹⁶ Over the Christmas period, soldiers were sent to Kent to ease the backlog of freight after France closed the border to combat a new virulent mutation of the virus.17

Whilst Covid-19 was the focus of people's attention, 2020 also saw the employment of military Remotely Piloted Air Systems (RPAS) in support of the Home Office and Border Force.¹⁸ Watchkeeper was employed alongside civilian RPAS and crewed aircraft to monitor migrant crossings of the English Channel. Aircraft from the RAF also supported the task over the summer period.¹⁹ The pandemic meant a reduced number of freight and passenger voyages across the channel which reduced the normal opportunities for migrants to attempt to make it to British shores. This led to an uptick in crossings by by dinghies and other small craft, stretching existing civilian capabilities. Employing military equipment in such a way is useful. It offers training opportunities and demonstrates utility to the government. It also enhances national resilience in lightening the load on other elements of the public sector.

While the subjects covered above might not leap out of basic military lexicon, NATO recognises that importance of civil preparedness, calling it 'the first line of defence'.²⁰ Civil preparedness harks back to the Cold War and hunkering down in the event of a nuclear fallout.



Pictured is a Metalsmith of the Royal Electrical and Mechanical Engineers (REME) using his skills in a mobile Workshop built into a MAN Truck SV to help in the construction of a mobile laboratory by constructing a support frame. A team of Royal Electrical and Mechanical Engineers, spread across four projects designed, built or supported a range of mobile laboratories which provide the next level of processing capabilities to support the Governments Mass Testing Programme. Photo: Corporal Wakefield, Crown Copyright

However, in today's unsettled environment, 'the resilience of civil structures, resources and services' is of paramount importance.²¹ It is acknowledged that resilient societies are better able to bounce back from crises, whether this is a pandemic, flooding, or enemy action.²² As such, it forms an integral part of NATO's model of deterrence. A resilient nation is a stronger adversary than one that will fall apart when elements of its infrastructure are tested in some way. A robust civil society is better able to cope with division and misinformation, which has become prominent in recent years.

- 15 Ministry of Defence (2020), 'COVID Support Force: the MOD's contribution to the coronavirus response', Gov.uk, https://www.gov.uk/ guidance/covid-support-force-the-mods-contribution-to-the-coronavirus-response, (accessed on 24 April 2021).
- 16 Ministry of Defence (2020), 'COVID Support Force: the MOD's continued contribution to the coronavirus response', Gov.uk, https://www.gov. uk/guidance/covid-support-force-the-mods-contribution-to-the-coronavirus-response, (accessed on 5 December 2020).
- 17 Rawlinson, K., and Halliday, J., 2020, 'Army to take over Covid testing for hauliers trapped near Dover', The Guardian, https://www. theguardian.com/world/2020/dec/24/french-firefighters-arrive-in-dover-with-10000-covid-tests-for-lorry-drivers, (accessed on 24 April 2021).
- 18 Forrest, A., 2020, 'British Army drone to fly over English Channel to monitor migrant boats', The Independent, https://www.independent. co.uk/news/uk/home-news/british-army-channel-crossings-migrants-drone-monitor-a9696956.html, (accessed on 24 April 2021).
- 19 Ibid.
- 20 Roepke, W., and Thankey, H., 2019, 'Resilience: the first line of defence', NATO Review, https://www.nato.int/docu/review/ articles/2019/02/27/resilience-the-first-line-of-defence/index.html, (accessed on 1 December 2020).
- 21 Ibid.
- 22 European Commission (2020), 'A resilient tomorrow: Covid-19 response requires societies to transform', EU Science Hub, https://ec.europa.eu jrc/en/news/resilient-tomorrow-covid-19-response-requires-societies-transform, (accessed on 24 April 2021).

CHOICES, CHOICES, CHOICES

The British Army has geared itself to cope with contingency. Reorientation following the drawdowns of the wars in Afghanistan and Iraq saw a focus on conventional warfighting. Serials like Exercise TRACTABLE's projection by road and rail demonstrate a continued focused on the expeditionary. A rejuvenation of the armoured warfighting division is ongoing. More widely, the procurement of two aircraft carriers and the F-35 Lightning programme are also a testament to this idea.

All this is not to say that the UK is blind to the importance of civil resilience. The topic has a long history, borne out of the Home Guard and subsequently the need to be able to weather a nuclear exchange with the Soviet Union.²³ The subject also forms part of the first National Security Objective - 'Protecting our People'.²⁴ This aims to ensure 'we identify how we can better utilise shared and riskagnostic capabilities to effectively meet the challenges of traditional and hybrid threats to the UK'.²⁵

The Integrated Review also notes the importance of 'increasing the UK's preparedness to withstand and recover from crises'. The Defence Command Paper, which outlines the Ministry of Defence's contribution to the overarching Integrated Review, highlights 'building resilience at home and overseas' as part of four central objectives.²⁶ Whilst commitments on paper are important, it is how those translate into action which makes the real difference. 2020 provided a catalyst for the rapid development of relationships and networks to allow the military to effectively contribute to the Covid-19 pandemic response, orchestrated by Standing Joint Commander (SJC).²⁷

SJC is the headquarters tasked with dealing with British domestic operations. The Civil Contingencies Act 2004 is the current legislation that provides authority to deploy the military domestically.²⁸ Of note is the idea that the Armed Forces have no statutory requirement to plan for

and resource civil contingencies.²⁹ Therefore requests for support received by local authorities or other government departments will be dealt with on a case-by-case basis. In other words, resources such as personnel and equipment will be reoriented from their normal roles. This was illustrated when the headquarters went into overdrive in March 2020 as the impact of the Covid-19 pandemic was recognised. It was bolstered with Liaison Officers and dispatched planning teams across the British Isles. It administered hundreds of Mobile Testing Units (MTUs) from its location in Aldershot. Normally, it is staffed with just 23 people, drawn from all three armed services as well as civil servants.³⁰ When required, the headquarters trawls for personnel from the military's various formations and commands. The Army's units have released personnel to this effort whilst also trying to maintain their regular outputs.

This raises the question of those regular outputs and how domestic operations are viewed within the military establishment. The British Army's training offers little in the way of an insight into domestic resilience. Short lessons are given on various education courses, yet it has been recognised for some time that such activities are taking up an increasing amount of time and resources.³¹ The Army has earned its money this year in its contribution to the counter-pandemic efforts. The Army prides itself in being able to adapt in short order and take on new tasks. However, as these tasks become more frequent and more prolonged, a certain professionalisation might be considered. An important observation is that the doctrine and planning processes employed by the military for 'traditional' manoeuvres and deployments are effective in a domestic setting. The Estimate and Orders process can be used to plan the distribution of medical PPE as well as a Platoon Attack.³²

The practicalities of a domestic pivot provide food for thought. Reserve forces played a significant part in

31 Waring, M., 2013, 'The Domestic Deployment of the British Army', The RUSI Journal, 158:3, pp.62-69.

²³ Baraniuk, C., 2017, 'How prepared are we for the impact of a nuclear war?', BBC, https://www.bbc.com/future/article/20170821-howprepared-are-we-for-the-impact-of-a-nuclear-war, (accessed on 16 May 2021).

²⁴ HM Government (2019), 'National Security Strategy and Strategic Defence and Security Review 2015: Third Annual Report 2019', Gov.uk, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/819613/NSS_and_SDSR_2015_Third_ Annual_Report_-_FINAL_2_.pdf, (accessed on 1 December 2020).

²⁵ Ibid.

²⁶ Ministry of Defence (2021), 'Defence in a Competitive Age', Command Paper 411, p.8

²⁷ Wallace, B., 2021, 'Covid-19 Response: Defence Support', House of Commons, https://www.theyworkforyou.com/debates/?id=2021-01-12b.180.0, (accessed on 16 May 2021).

²⁸ Brooke-Holland, L., 2020, 'Coronavirus: Deploying the armed forces in the UK', House of Commons Library, Briefing Paper 08074.

²⁹ Civil Contingencies Act 2004, c. 36, Schedule 1, https://www.legislation.gov.uk/ukpga/2004/36/schedule/1, (accessed on 16 May 2021).

³⁰ HM Government, 'Headquarters Standing Joint Command (United Kingdom) (HQ SJC (UK))', Gov.uk, https://www.gov.uk/government/ groups/headquarters-standing-joint-command-united-kingdom-hq-sjc-uk, (accessed on 1 December 2020).

³² Infantry Training Screw (2019), 'The Non-Combat, Combat Estimate', The Wavell Room, https://wavellroom.com/2019/09/03/the-noncombat-combat-estimate/, (accessed on 24 April 2021).

Operation RESCRIPT and there is no doubt that those with medical, engineering, and logistical specialities will be in demand going forward. Employers will be more likely to support absences from their reserve employees when their engagements are shorter and domestically focused. It is easier to cover a two-week gap as opposed to several months. Equally, the handoff of the mobile testing effort from the military to outsourcing specialists like Mitie and Serco raises the topic of rapidly negotiated and expensive contracts in national resilience efforts.³³ The pandemic saw numerous issues with companies overpromising and underdelivering.³⁴ MACA tasks can only be authorised when 'commercial alternatives have been discounted'.³⁵

However, as such tasks become more regular, is a place recognised for a more established domestic military output? Today, the military is a stopgap when a commercial alternative cannot be found quickly. This is the case during flooding, instances like the Saddleworth Moor fire, and the Covid-19 pandemic. As the security picture changes, time should be spent considering how the military can best serve the British national interest. Unlike traditional notions of an external outlook, time should be spent considering those issues closer to home. One might investigate the appetite and ability to focus Reserve training primarily on civil resilience or perhaps establishing part of the Reserves on a more specific 'Home Guard' footing. Devising a 'Soldier First' Syllabus for civil resilience tasks would also provide a useful thought experiment and avenue for exploration. This might feature education on the workings of Critical National Infrastructure, and organisations like the police and NHS. The ever-popular Liaison Officer role might also be discussed and training formalised.

CONCLUSION

McFate's assertion that the future will be disorderly appears to be ringing true. *Goliath* was published in June 2019, before much of the turmoil we are witnessing today. It is unlikely that the horizon will be any more settled. The latter part of the Autumn saw a spate of terror attacks in Europe, once more raising the spectre of attacks within Britain's shores. The Joint Terrorism Analysis Centre raised the threat level to 'Severe' to reflect the chance of an attack being 'highly likely'.³⁶ Climate change will bring harsher weather events and increase the likelihood of flooding and related emergencies.³⁷ Pandemics are unlikely to become sparse, and the country must gear up to respond to them efficiently and in short order.

Great Power conflict attracts headlines and cash injections from the government.³⁸ It involves attack helicopters and armoured vehicles. It provides the spectre for the narrative that the United Kingdom should punch above its weight, field a fighting division, and meet its NATO investment liabilities. It makes for good viewing. All of that means little when hospitals cannot receive the supplies they need, or severe weather events threaten water and electricity provision. Going forward, the Army and its sister services must be able to add value in such instances. Serious consideration should be put to bolstering civil preparedness plans. Increased focus on training for such eventualities will pay dividends going forward.



A soldier from the 4th Battalion Princess of Wales's Royal Regiment explains how to carry out a Covid 19 test to a haulier during Op ROSE, the military's code word for the operational deployment of troops in support of the Department of Transport in the testing of all lorry drivers and hauliers bound for continental Europe. Photo: Corporal Rob Kane, Crown Copyright

- 37 NASA, 'Global Climate Change: Effects', NASA, https://climate.nasa.gov/effects/, (accessed on 24 April 2021).
- 38 Sabbagh, D., and Butler, P., 2020, 'Boris Johnson agrees £16bn rise in defence spending', The Guardian, https://www.theguardian.com/ politics/2020/nov/18/boris-johnson-agrees-16bn-rise-in-defence-spending, (accessed on 24 April 2021).

³³ Plimmer, J., 2020, 'Serco tops UK outsourcers for Covid-19 contracts', Financial Times, https://www.ft.com/content/d217b789-3ca7-42a8bac0-16fd0b24c60d, (accessed on 24 April 2021). Bhagawati, D. (2020), 'Our government's obsession with outsourcing is harming the UK and costing lives,

³⁴ Bhagawati, D., 2020, 'Our government's obsession with outsourcing is harming the UK and costing lives, The Independent, https://www. independent.co.uk/voices/government-outsourcing-covid-19-uk-boris-johnson-b573331.html, (accessed on 24 April 2021).

³⁵ HM Government, '2015 to 2020 government policy: Military Aid to the Civil Authorities for activities in the UK', Gov.uk, Policy Paper, https:// www.gov.uk/government/publications/2015-to-2020-government-policy-military-aid-to-the-civil-authorities-for-activities-in-the-uk/2015-to-2020-government-policy-military-aid-to-the-civil-authorities-for-activities-in-the-uk, (accessed on 2 December 2020).

³⁶ Security Service, 'Threat Levels', Security Service, https://www.mi5.gov.uk/threat-levels, (accessed on 24 April 2021).

Subterranean Operations

Major Chris Duncalfe 2 PARA looks at why the British Army should train for subterranean operations and how doctrine should evolve to support it.



2 Para Battlegroup are training to fight in underground tunnels as part of Exercise WESSEX STORM, in an underground tunnel complex in the South West. Photo: Corporal Rob Kane, Crown Copyright You may not be interested in subterranean operations, but subterranean operations are interested in you.

Curiosity for subterranean operations has re-emerged. A doctrine note¹ was published in 2020 and the latest iteration of Ex WESSEX STORM (a Battlegroup validation exercise) included a phase in Corsham Mines. Given the perennial challenge of finding time to train and the absence of recent significant British Army subterranean operations there are key questions: why should we spend limited training time preparing for subterranean operations, and does the doctrine note set the right conditions for commanders to prepare and consider the challenge?

The following conclusions are based on 2 PARAs experience on Ex WESSEX STORM and further research into subterranean warfare. The challenges of operating underground remain similar to other environments and critically the Clausewitzian view of the fundamental nature of combat is extant. However, the novelty of operating in an environment many are unfamiliar with encouraged experimentation and an open-mindedness to adapting and changing existing tactics, techniques and procedures (TTPs). Therefore, training for subterranean operations encouraged a frame of mind that assessed suitability of existing TTPs and provided benefits for TTP development across multiple environments.² The psychological demands of operating in the subterranean are greater than other environments which make it ideal for developing commanders' understanding of our Mission Command philosophy and Manoeuvrist Approach doctrine through practical experience. The existing subterranean doctrine is useful but over emphasises the psychological impact on our own troops rather than how this factor might be exploited to undermine our adversaries' will to fight (a critical component of the Manoeuvrist Approach). The doctrine provides useful high level considerations but there is an absence of considerations for commanders at sub-unit level and below which could be rectified via the recommended Tactical Aide Memoire (TAM) included in this article.

WHY SHOULD WE SPEND PRECIOUS TRAINING TIME PREPARING FOR SUBTERRANEAN OPERATIONS?

Soldiers are always preparing to fight the last war.³

Subterranean operations are not new. Indeed, the subterranean doctrine note provides numerous case studies, but even a rudimentary search identifies a rich history including Stalingrad during WW2, the Vietnam War, or the Soviet occupation of Afghanistan. Contemporary examples from Iraq and Syria can also be found.⁴ So, what is the likelihood the British Army might find itself involved in these operations? There are two simple reasons; try and think of an urban area that does not have a subterranean element, and if an adversary believes the subterranean environment will offer an advantage then they will use it (e.g. as a counter to US airpower⁵). Three factors influence this answer. Where there is a high asymmetry between combatants, the duration of the conflict increases, and there is a strong history of use of subterranean environments in that operational theatre, then the likelihood of use of the subterranean will increase (visualised at figure 1).

US doctrine states 'Entering and fighting in a subterranean environment is extremely high risk and should be avoided whenever possible.'6 A mindset focused on avoiding the subterranean may prove problematic. The recommended alternative is to recognise the high risk nature but develop doctrine which recognises those risks and views the subterranean environments as neutral, similar to the argument that urban environments should be viewed as neutral.⁷ Despite the high risk nature of operating in the subterranean, there are advantages to be gained and opportunities to exploit. This approach could also prevent unintended consequences where investment in capability development and methods for fighting underground are constrained by a doctrine of avoidance. If we do not prepare to fight in the subterranean then our immediate response will be constrained if an adversary adopts that environment.

6 2019 US Army 'ATP 3-21.51 Subterranean Operations' (https://fas.org/irp/doddir/army/atp3-21-51.pdf)

¹ Doctrine Note 20/05 'Subterranean Operations in the Urban Environment'.

² We used many of the lessons we learnt from the subterranean experience to adapt how we operated in both urban and forest environments.

³ Warner, Edward P., 1934, 'Present Conditions under the N.R.A', American Marketing Journal 1:12

⁴ Bulmer, Marco, 2015, 'Contemporary Military Use of Subterranea' British Army Review 175 Summer Edition

⁵ Heilig, Donald, 2000, 'Subterranean Warfare: A Counter to US Airpower', Research Report for Air Command and Staff College (https://apps. dtic.mil/dtic/tr/fulltext/u2/a394095.pdf).

^{7 2019} British Army Review 'BAR Special Report: Urban Operations Vol 2', pg 08.

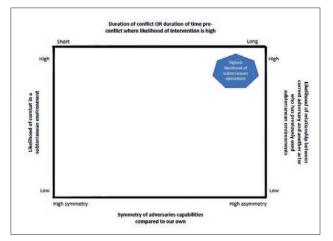


Figure 1: Factors influencing likelihood of subterranean operations

If the subterranean environment is a likely operating environment and one we should be willing to fight within then we must prepare our people, that is assuming the British army wishes to fight in such an environment. Training in a subterranean environment will come at the expense of a different environment, unless we are able to find more time to train... Fortunately the fundamental nature of combat in the subterranean is the same as anywhere – bloody, chaotic, and psychologically

demanding. There are also similarities with other environments (particularly urban) which mean the lessons and skills learnt are likely to be applicable outside of the subterranean. Most importantly, the unfamiliar nature of the environment makes it ideal for encouraging experimentation, trialling new TTPs or adapting TTPs from other environments. This could act as a catalyst to provoke thought about the underlying reasons why we use certain TTPs/doctrine.



Troops from the 39th (Skinners) Signal Regiment practice fighting in Tunnels and Caves through the extensive labyrinth carved out of The Rock of Gibraltar. Photo: Cpl Ralph Merry ABIPP RAF, Crown Copyright



The 3rd Battalion the Parachute Regiment have been training to be validated as the next air manoeuvre battlegroup, within 16 Air Assault Brigade Headquarters on Exercise JOIINT WARRIOR. 3 Para conducted a vast range of training which includes: fighting in tunnels, live fire ranges, conducting parachutable stores drops with a A400M aircraft, and mission planning. Photo: Corporal Ben Beckett RLC, Crown Copyright

TRAINING FOR SUBTERRANEAN OPERATIONS OPTIMISES TTPS FOR OTHER ENVIRONMENTS

TTPs for subterranean operations share noteworthy commonality with TTPs for operating in darkness, in claustrophobic conditions, where communications are constrained, and where manoeuvre options are limited. These similarities mean the lessons learnt in the subterranean may well be applied to other TTPs for other environments. Some examples from 2 PARA's experience at Corsham Mines during Ex WESSEX STORM illustrate this.

Firstly, the importance of blending the full range of night viewing devices was emphasised. Secondly, the absence of mapping prior to the mission emphasised the importance of considering fratricide and control measures from a different perspective. For example, the Platoon Commanders were given limits of exploitation based on when all their sections were committed to tasks rather than a limit dictated by the ground. This helped maintain momentum by avoiding echeloning before it was necessary to do so.

Challenging communications were helpful for developing Standard Operating Procedures (SOP)s for both operating on radio silence and overcoming challenges with BOWMAN. The experience emphasised the importance of giving a clear intent and main effort during orders so Mission Command would enable commanders to make decisions on the ground in accordance with their objectives. Finally, the environment promoted a mindset of being focused on the objective (our task was to deny an air vent rather than to clear the tunnel network). We lacked enough personnel to clear and hold all the ground from entry point to objective. Therefore, we chose to embrace a 360-degree fight. We focused on finding a single route to the objective and bypassed all enemy not directly on that route. We redefined the enemy obstacle plan, using the obstacles to barricade entry points to our chosen route. The end state was the enemy had to leave their pre-built defensive positions and come to us if they wanted to fight.

These lessons influenced the TTPs we used for other environments and activities (including urban, Fighting In Woods And Forests (FIWAF), dispersed operating) and improved our overall performance, demonstrating that training for subterranean environments could mutually support skills for all environments. Whilst, currently there is a lack of British Army codified TTPs

Diama lun d							
Planning Considerations Command Flatter command structure, increased delegation, Mission Command critical Primary, secondary, contingency, emergency comms methods Alternative commandersidentified at all levels Actions on lost comms Consider field telephones for comms underground (wire can also mark routes, fight in Move in darkness, fight in Horse in darkness, fight in Entry & ext register to record		Use above grou capabilities to c entrance/exit p Mapping (Geo C sensors, most III sketch maps) Continuously up maps, increase l reference point	 Continuously update sketch maps, increase use of reference points) 		Sustainability Psychological impact likely to require frequent rotation/rest Casually extraction implications (every hour you walk in a tunnel will take 10 hours to extract a stretcher) Stretchers mounted on trollev		
darkness, search in light Momentum and mass difficult to achieve – consider slow methodical backed by increased firepower • Searches of cleared areas with white light • ID culmination points/LOEs In defence ID passageways for RESDEM or early denial FLOT marking (R torch, white light, cylumes, spray paint) • Route marking (Pumes, spray paint, chalk, mine tape, rope, field telephone wire)	those above/below ground Consider increasing PPE (mandible, side plates + enhanced blast portection collar etc) Hearing protection Ballistic shields Feelers for detecting trip wire Consider physically blocking side tunnels to prevent flank interference. Welding equipment for hasty defence/denial Claymores, tripflares Wire as an obstacle Air preathing appartus	/below ground reasing PPE 			d trailers, elbarrow ipment eased bat RS securit ainable r king met asacks rem ormatio sider mes ians prese erground sider mes suade en isider the chological of being	moved on Activity essaging sent d essaging to to withdraw reats & al impact of	
 Ropes & ladders (ascent 	Fire fighting eqpt GRN detector paper Gro			underground) upings			
techniques) Firepower Integrate above ground fires (direct & indirect) to cover enemy entrance/exit points Weagone effects will be enhanced by confined spaces		Investment Grou Isolates entry porta cordon to prevent interference	up Command Post Repose located at entry. The relay from underground above to bigher HO		Reserve Position to support above & below gnd		
Exploit remotely delivered effects & remote vehicles Breaching equipment (explosive & non-explosive) Combat Shotgun & pistol (for CQB/confined spaces) Stun grenades Consider reducing tyt of sharpshooter & GPMG Exploit MWD dogs – attack & search		Breaching Group Break in at entry point. May deny tunnels post op	Teams to clear re tunnels & conduct re		Teams reinfor	nment Group to provide cement, ly, extract 'CAS	

Figure 2: Chart showing the Planning Considerations procedures for subterranean operations. Image: Author

for subterranean environments⁸, there is a doctrine note. This note would benefit from being complemented with a Tactical Aide Memoire insert to assist commanders with planning considerations (an example of what this could look like is at Figure 2).

HOW SHOULD THE EMERGENT DOCTRINE EVOLVE?

The doctrine note is useful but could evolve to better mutually support our capstone doctrines. The linkages to the Manoeuvrist Approach are not clearly sign posted (there is only one direct reference to the Manoeuvrist Approach in the doctrine note). Junior commanders may not automatically seize upon the inferred linkages and so these should be made explicit. The subterranean environment is ripe for exploiting the psychological aspects of combat which enable will and cohesion to be undermined. The likelihood of close guarters battle is high, as is the threat of booby traps, and options to manoeuvre are restricted. However, these factors apply to everyone operating underground. We should plan to deliberately exploit sensory deprivation, fear and claustrophobia, building upon these using non-lethal and lethal effects to target the enemy's will to fight.

Understanding our rules of engagement is critical; could we deliberately collapse tunnel networks, fill them with water, or deprive them of oxygen? Could we use similar tactics as the Russians did in Afghanistan, using explosives specifically for their concussive effects to compel an opponent to surrender.⁹ It might be possible to conduct these actions not as a primary means to destroy the enemy but for other purposes, such as denying them critical infrastructure, or to neutralise/prevent/ compel/convince. Integrating those actions with the right influence activities could complement an end state focused on undermining the enemy's will to fight and compelling them to surrender or withdraw. The doctrine note doesn't place enough emphasis on exploiting the psychological implications of the subterranean to gain tactical advantage.

INDIRECT APPROACHES - UNDERMINING WILL AND COHESION

The experience at Corsham demonstrated that once soldiers are committed to fighting underground, their ability to manoeuvre back to the surface is constrained. Entry and exit points may be limited. This offers a psychological advantage to whomever seizes it. Forces, enemy or friendly, who enter an underground network have effectively isolated themselves. Whomever can control the entry/exit points may have the vital ground. Both offensive and defensive subterranean doctrine needs to emphasise the importance of this. A Manoeuvrist Approach might see a force only seeking to control the entry/exit points to an underground network from the surface level and by doing so effectively trapping whatever-sized enemy element is below ground. This offers an option where a smaller force could dominate a larger force by judicious use of applying strengths to weaknesses. The potential to simultaneously undermine

8 The Royal Gibraltar Regiment are an excellent source of TTPs based on their experiences using the Gibraltar tunnel network.

⁹ https://www.upi.com/Defense-News/2001/11/16/Tactics-exist-to-counter-Afghan-tunnels/96491005937534/?ur3=1



Troops from B Company 2 Para Battlegroup training to fight in underground tunnels during Exercise WESSEX STORM, in an underground tunnel complex in the South West of England. The exercise tested the skills and readiness of the 2 PARA Battlegroup, which is built around the airborne infantry of 2 PARA supported by signallers, engineers, artillery, medics and logistics specialists from 16 Air Assault Brigade, to be ready to deploy at short notice on operations around the world. Photo: Corporal Rob Kane, Crown Copyright

an adversary's cohesion also starts to emerge but is dependent on having the ISTAR capability to identify entry/exit points.

Cohesion and how it is generated is a well-debated subject. Anthony King's research identified the importance of communication when contact with the enemy is made, 'communication will be essential to sustain collective action.'10 Communications underground are fraught with challenges. In Corsham PRR and VHF worked well within the Company group but only over very short ranges (25-50m or where line of sight could be achieved). Field telephones were useful but vulnerable to hastily laid cable being damaged. As the Company Group moved away from the point of entry, we lacked the manpower to sustain the relay system to the surface and the persistent link to the Command Post above ground was broken (a sacrifice we tolerated to enable manoeuvrability below ground). The solution was use of runners with written SITREPs which worked for that scenario but might not be acceptable for all scenarios.

We learnt there are at least two potential methods of denying an adversary's communications; denying access to above ground command posts and denying communication between units underground. Above ground could be achieved in a plethora of manners exploiting the range of technological EW systems NATO has. Below ground it could be achieved by physically cutting lines of communication and this in-itself might be a set mission.

Our experience at Corsham demonstrated that once enemy forces were bypassed (noting the tactic we adopted of focusing on a single route to the objective), their communications were cut, and they ceased to operate as a cohesive team. One grouping of OPFOR was unable to receive orders and remained within the Area of Operations (AO) their commander had given them and thus did not engage us at any stage. By fortune, we bypassed the enemy command post, the enemy commander, finding he was isolated from his troops then chose to surrender. The rest of the mission proceeded with the enemy operating as non-mutually supporting groups lacking updated command direction.

MISSION COMMAND

The previous vignette demonstrates the importance of applying Mission Command within the subterranean environment. The reasons for its importance are not made explicit within the doctrine note which risks its importance not being understood. The subterranean environment is one where communications with commanders are likely to be broken for protracted periods and when the tactical situation has deviated significantly from the intended plan. An understanding of the differences between orders tactics (*Befehlstaktik*) and mission tactics (*Auftragstaktik*) is key and helps foster understanding of different command approaches and the relevance of Mission Command.¹¹

Prior to conducting subterranean operations, emphasis should be placed on analysing the adversaries' command philosophy. It might significantly influence the nature of operations conducted below ground with a focus on denying communications in order to break their cohesion. Equally we must also emphasise the criticality of Mission Command to our own forces, ensuring clear intent and main efforts are given so subordinate commanders can adapt to the changing situation they will inevitably experience. Training in the subterranean environment will force commanders to become comfortable with extremely constrained communications and highlight the importance of issuing clear intent and trusting subordinates. A mindset that can be taken to the surface environment for times when strict radio silence is necessary.

RECOMMENDATIONS

The prospect of training in Corsham Mines appeared novel and raised questions of relevance, particularly

whether the time spent would be detrimental to preparing for more likely environments. Our experience has shown the opportunity should be seized and will help develop the fundamental skills required for most environments. Despite environmental differences, the tactics for success share many similarities with those associated with other environments. It is likely adaptions made to TTPs to use the underground environment will support development of TTPs for above ground, particularly those related to operating with degraded communications, at night, and in environments where options for manoeuvre are constrained.

The subterranean environment is ideal to promote tactical innovation. Whilst the doctrine note identifies a range of capabilities that would offer technological advantage to soldiers underground e.g. robots with thermal imaging sights, and mesh network communication systems¹² given the current pace of technological proliferation and development, we should prepare for conflict where we do not have these advantages. Collective training¹³ is ideally suited to encourage experimentation with capabilities we currently have, e.g. is there a role for the Javelin Command Launch Unit underground, could the GPMG(SF) be given a battlefield modification to enable it to be sighted down tunnels and fired without exposing the firer? The novelty and current lack of experience of the subterranean environment make it ideal for developing this creative mindset within our people. However, it needs supporting with a risk management culture and processes that enable these opportunities otherwise training as either an engine for change or to support prototype warfare will be constrained by a risk averse safety culture.

Finally, the doctrine note should place greater emphasis on the importance of exploiting the psychological factors for tactical advantage and the linkages with the Manoeuvrist Approach and Mission Command. Tactical psychology (as identified by Wapentakes¹⁴ and detailed in *Bullets and Brains*¹⁵) is a great start, focusing on lessons applicable (and understandable) at section to company level, and junior commanders (of all ranks) should be encouraged to read and discuss them. Critically the doctrine should leave commanders with a mind state where they seek to focus on the adversaries' will to fight and their cohesion, exploiting our soldiers training and relentless determination to win despite environmental or technological challenges.

Training in a subterranean environment is psychologically demanding, novel, and complex. In the absence of hostile operations this makes it ideal for promoting a learning culture. The increased psychological demands created by the nature of the subterranean environment also make it suitable for developing commanders' understanding of our Mission Command philosophy and Manoeuvrist Approach doctrine. These reasons alone are sufficient to justify training in the subterranean. However, the most critical reason is that if we do not train in and demonstrate we are preparing for subterranean environments then it is our adversaries will exploit that weakness.

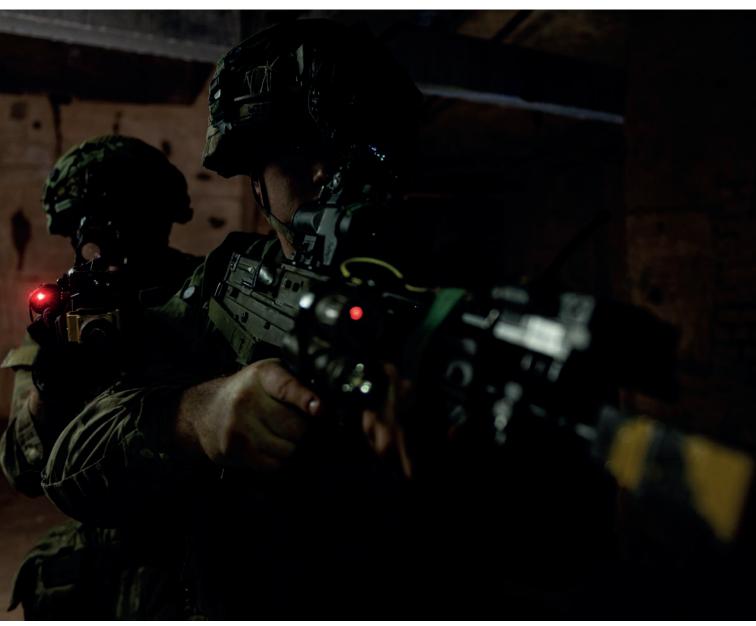
¹¹ Spencer Fitzgibbons' analysis of the two approaches within his book 'Not Mentioned In Despatches' is highly recommended for platoon and sub-unit commanders.

¹² Further ideas for future capabilities can be found in the following article: https://mwi.usma.edu/underground-warfare-wish-list/

¹³ Specifically, the optimisation phase of Mission 0 during validation exercises

^{14 2016} Wapentakes 'Tactical Psychology – fear and common sense in combat' (https://www.wapentakes.com/tactical-psychology). Wapentakes describes Tactical Psychology as 'The art and science of exploiting human weakness – encouraging the enemy to run, hide or surrender.'

^{15 2013} Leo Murray 'Bullets and Brains



Pictured are members of 2 Para Battlegroup, during Exercise WESSEX STORM, training for subterranean warfare in an underground tunnel system in the South West of England. The exercise hones the skills they need to be able to deploy at short notice on operations around the world. Photo: Corporal Rob Kane, Crown Copyright

Light Forces: Manoeuvring in the 21st Century

Captain Jim Tracey 1 R ANGLIAN asks what Light Forces can learn from Contemporary Urban Operations?



Pictured in the former soviet town of Skrunda 1, Latvia are members of 59 Commando Squadron, Royal Engineers conducting explosive method entry training at Latvia during BALTIC PROTECTOR, which is a multinational task group of nine nations and is part of the Joint Expeditionary Force (JEF). Photo: PO(Phot) Si Ethell, Crown Copyright

he Joint Expeditionary Force (JEF) Light Brigade offers a discrete capability to Defence. It is attuned to complex environments, able to operate alongside partner nations as well as in support of full-spectrum warfighting operations.¹ This utility, the continued urbanisation of warfare and constrained and uncertain environments to which the Light Brigade could be deployed compel us to learn from recent operations.² This article uses case studies of urban operations from this century to derive lessons pertinent to the JEF Light Brigade. The central themes look at the isolation of the Dense Urban Environment (DUE), the conduct of urban operations, the role of information and how our training should be tailored to the realities of modern urban warfare. Modern militaries must learn the lessons of these operations and be prepared to adapt in order to best prepare for future conflict in the urban environment.

LESSON 1: COMMANDERS SHOULD NOT EXPECT TO EFFECTIVELY ISOLATE A LARGE URBAN AREA

A large, modern city cannot be effectively isolated in the 21st century.³ The assertion that 'when the enemy is isolated [in the urban environment], then success follows' is anachronistic.⁴ As evidenced by the war in Syria, a modern urban battlefield can comprise conventional units, private military contractors, friendly Special Operations Forces, irregular forces and terrorist actors.⁵ This presents a convergence of threat and complexity that must be acknowledged by the British Army for it makes isolating the adversary even more challenging. Furthermore, isolation is precluded by the scale of urban centres, limited mobility (especially pertinent to light

forces) and the ubiquitous cyber domain - the latter preventing effective psychological isolation. 6

During the Battle of Mosul, 100,000 Iragi Security Forces encircled a city defended by roughly 5,000 Daesh fighters. Despite this, Daesh maintained its lines of communication to Tal Afar for the first four months of the campaign.⁷ The inability to isolate the urban environment is the rule, not the exception. During the Second Battle of Grozny, Chechen personnel, casualties and logistics could be moved in and out of the city at several locations.⁸ Commanders must have realistic expectations about encircling the adversary in the Dense Urban Environment (DUE). Attempting to do so will likely be unsuccessful, generating Information Operations (IO) opportunities for the adversary, and will result in greater mass of the defending force in the centre. This will result in increased intensity, heightened collateral damage and heavier friendly casualties.⁹ In a departure from doctrinal instruction about flank protection, light forces must become comfortable operating with degraded capabilities and without secured flanks as both are likely to characterise future operations in cluttered and contested environments.¹⁰

LESSON 2: THE URBAN ENVIRONMENT DISSIPATES TECHNOLOGICAL ADVANTAGE

The conduct of urban operations has advanced considerably this century. In addition to technological advances, there have also been advances in global policies governing the protection of civilians in conflict.¹¹ Urban areas present unique challenges for the implementation of international humanitarian law for

¹ See generally, Director Capability, 'Light Brigade Force Output Concept' (v2.6, 2 Jun 20)

^{2 &#}x27;The resurgence of warfare in cities stems from the global trend towards urbanisation, increasingly volatile domestic conditions in developing countries and changes in the character of armed conflict' – M. Konaev, 'The Era of Urban Warfare is Already Here' (Foreign Policy Research Institute: National Security Program, 21 Mar 18) Last accessed: 20 Nov 20.

³ Arnold, T.D., Fiore, N., 'Five Operational Lessons from the Battle for Mosul' (Military Review, January – February 2019) p58

⁴ DiMarco, Louis, 'Concrete Hell: Urban Warfare from Stalingrad to Iraq' (Oxford: Osprey Group, 2012) p7. The author correctly observed that the Wehrmacht's inability to isolate Soviet forces at the Volga was ultimately decisive and set the conditions for Op Uranus.

⁵ Adamsky, D., 'Russian Lessons from the Syrian Operation and the Culture of Military Innovation' (George C. Marshall European Center for Security Studies, Number 047, 2020)

⁶ Advanced communications technology and media coverage make psychological isolation unattainable for an attacking force. While a modern military could theoretically jam all communications in an urban area, the stifling of information flow would be unacceptable to the public in a liberal democracy and a strategic own goal.

⁷ Arnold, T.D., Fiore, N., ibid p59

⁸ Oliker, O., 'Russia's Chechen Wars 1994-2000: Lessons from Urban Combat' (Santa Monica: RAND Corporation, 2001) p66

⁹ Sun Tzu advised against besieging cities to avoid risking one's own army. Such operations result in high casualties, eroding operational reach and readiness. See R. T. Ames, 'Sun-Tzu: The Art of Warfare' (New York: Ballantine Books, 1993) p111.

¹⁰ Orsini, R., 'Surrounded, Yet Unaware: Achieving Isolation in Future Urban Terrain' (Small Wars Journal, 30 May 18). Last accessed: 19 Nov 20

¹¹ These have been manifest, most auspiciously, in the establishment of the International Criminal Court and the deployment of UN, NATO and AU peace enforcement missions.



Image shows soldiers from 3rd Battalion, The Parachute Regiment in their Jackal armoured fighting vehicle during rehearsals for the Joint Expeditionary Force Demonstration as part of Exercise JOINT WARRIOR in Copehill Down, Salisbury Plain Training Area. Photo: Corporal Mark Larner, Crown Copyright

Western forces. These constraints, while morally justified, change the dynamics of the urban battlefield in ways distinct from previous conflicts where the legal framework was less complex. Indeed, 21st century urban warfare illustrates how a shrewd adversary can adapt rapidly and exploit the DUE to their advantage. This includes exploiting restrictive friendly Rules of Engagement (RoE) and reluctance to cause collateral damage. Savvy employment of indigenous forces and appropriate RoE can mitigate these constraints to a large extent.

Light forces must be prepared to accept the limitation of precision firepower, especially in the DUE, given the lack of precision fires in the Light Brigade Order of Battle. Despite intense bombardment during the first week of the Op Protective Edge,¹² the Israeli Defense Force (IDF) could not achieve tactical success against Hamas because air power alone could not neutralise rocket fire from Gaza or destroy enemy tunnels.¹³ Future adversaries will seek to thwart overhead-sensing and precision strike advantages by hiding in the city and among large populations. This tactic was manifest in both Gaza and Mosul and will almost certainly feature in future conflicts. This should be considered when task organising intelligence and collection resources at Brigade and Battlegroup level and the effects they can deliver. As the IDF discovered during the Israeli-Hezbollah War, a well-trained opponent presents few lucrative targets for air attack, exploiting knowledge of local pattern of life to import personnel and weapons under the stare of friendly intelligence and surveillance assets.¹⁴ These factors must be taken into consideration when making assessments about the effects which supporting assets can have on the adversary.

LESSON 3: THE GEOGRAPHIC FRAMEWORK IS NOT SUITED TO THE URBAN ENVIRONMENT

Pertinent to light forces engaged in High Intensity Combat (HIC), the First Battle of Fallujah demonstrated the vulnerability of dismounted infantry in the urban environment. Even though the 2nd Marine Division was armoured, infantry tasked with attritional house-to-house

^{12 8} Jul – 26 Aug 14, also referred to as the 2014 Israel-Gaza conflict

¹³ Cohen, R.S., Johnson, D.E., et al, 'Lessons from Israel's Wars in Gaza' (Santa Monica: RAND Corporation, 2017) p5

¹⁴ Asymmetric Warfare Group, 'Modern Urban Operations: Lessons Learned from Urban Operations from 1980 to the Present' (Modern War Institute, 2016) p11. Last accessed: 24 Nov 20

operations often lacked armoured support.¹⁵ Combined arms warfare is essential in HIC with armour supporting infantry and artillery and air assets supporting both.¹⁶ Light forces' low levels of protection, vulnerable casualty evacuation and logistic resupply chains and limited ability to match the speed and tempo of a peer adversary make them an attractive target. While assisting an armoured division to achieve its mission, light forces should be supported by air and aviation as well as OS to mitigate these risks.

Due to the constricted size of the operating environment in the DUE, the deep, close and rear operational framework is no longer clear cut. As seen in Mosul, future urban operations will likely require advances on multiple axes and mutually supporting defensive positions will result in a 360-degree fight.¹⁷ This is compounded by the fact that the DUE offers countless opportunities for defence in-depth. Continuous, interconnected fighting positions demonstrated the 'terrain inside of terrain' challenge posed uniquely by the DUE. Russian forces encountered an adroit defence at Donetsk Airport due to the 'serpentine grid of tunnels, bunkers, and underground communication systems'.¹⁸ Similar defences were observed by Russian troops fourteen years earlier during the Second Battle of Grozny. Chechen rebels made extensive use of the city's sewer network, routinely emerging in the Russian rear to mount attacks on resupply and C2 nodes.¹⁹ During Op Defensive Shield, the IDF attempted to bypass Hamas' defensive positions in Nablus. The IDF viewed roads and doors as obstacles rather than thoroughfares and tried to 'walk through walls' to avoid interlocking defences and booby traps.²⁰ While extensive destruction of civilian property may not be politically acceptable, commanders should take stock of the tactical options available to mitigate the risk posed by interconnected defensive positions.

LESSON 4: DOMINATING 'THE NARRATIVE' IS CRITICAL FOR MISSION SUCCESS AND TRAINING IN STRATEGIC COMMUNICATIONS SHOULD BE INTEGRATED IN BOTH ROUTINE AND PRE-DEPLOYMENT TRAINING

The advent of social media and the immediacy of information flow must be considered in all operations, especially in urban areas. In the Second Chechen War, the Russian Federation legislated to enforce tight media controls to manage information flow. During the First Chechen War, the Russian military concluded that the resistance had been successful in morally disarming public opinion in Russia, one of the factors which catalysed the strategic failure and ultimate withdrawal.²¹

Krulak's reference to the 'court of public opinion' was equally pertinent in the West's Global War on Terror. The fictitious Corporal Hernandez could positively contribute to US strategy by utilising his training, military education and Marine Corps ethos when making decisions.

Indeed, junior commanders in the Light Brigade should be empowered to make decisions, cognisant of the inevitable scrutiny of those decisions, rather than interpreting the 'three-block war' as a threat to mission command.²² Culturally attuned commanders whose appreciation of the specific DUE to which they have been deployed are more likely to make good decisions, benefiting UK strategic communications and reducing hostile social media coverage. While there is also a moral injunction against maltreatment of civilians, the British Army learned in Iraq that the proliferation of negative media endangers troops at the tactical level and causes irreparable reputational damage.²³ This marked a clear departure from previous conflicts where incidents of abuse tended to emerge years later. Consider also the fact that during the First Battle of Fallujah, US forces ultimately withdrew under pressure from Iragi authorities after images of civilian casualties were broadcast around the world.²⁴

- 17 Mosul Study Group, 'What the Battle for Mosul teaches the Force' (No. 17-24U, Sep 17) p29. Last accessed: 20 Nov 20
- 18 Carroll, O., 'Inside the Bloody Battle for Ukraine's Donetsk Airport' (Newsweek: 3 Feb 15) Last accessed: 21 Nov 20.
- 19 Oliker, O., 'Russia's Chechen Wars 1994-2000: Lessons from Urban Combat' (Santa Monica: RAND Corporation, 2001) p66
- 20 Betz, D. and Stanford-Tuck, H., 'The City is Neutral: On Urban Warfare in the 21st Century' (Texas National Security Review: Vol 2, Issue 4, Aug 19). The authors were quoting E. Weizman 'Hollow Land: Israel's Architecture of Occupation' (New York: Verso, 2012) p198. Avoiding roads and doors is not unique to 21st century urban combat. During the Battle of Ortona (1943), Canadian forces relied on 'mouse holing' to bypass extensive interlocking defences emplaced by the Fallschirmjäger.
- 21 Thomas, T.L., 'Grozny 2000: Urban Combat Lessons Learned' (Military Review, July-August 2000) p4
- 22 For a succinct and engaging summary of the evolution of Krulak's thesis, see F. Annis, 'Krulak Revisited: The Three-Block War, Strategic Corporals, and the Future Battlefield' (Modern War Institute, 2 Mar 20. Last accessed: 20 Nov 20)
- 23 The Aitken Report: 'An Investigation into Cases of Deliberate Abuse and Unlawful Killing in Iraq in 2003 and 2004' p5. The report details the major acts of abuse committed by British troops in the first two years of the Iraq War, with focus on abuse at Camp Breadbasket and the murder of Baha Mousa.
- 24 Spencer, J., 'The City is Not Neutral: Why Urban Warfare is so Hard' (Modern War Institute, 4 Mar 20) Last accessed: 21 Nov 20

¹⁵ Matthews, M.M., 'Operation Al Fajr: A Study in Army and Marine Joint Operations' (Fort Leavenworth: Combat Studies Institute Press, 2012) p77

¹⁶ Asymmetric Warfare Group, 'Modern Urban Operations: Lessons Learned from Urban Operations from 1980 to the Present', p2

It is imperative that a Brigade or Battlegroup deploys with an operation-specific strategic communications plan to ensure that all activity, especially kinetic activity, is fully integrated at the operational level.²⁵ Our competitors, both peer and irregular, show proficiency and intent in achieving psychological control over urban populations by manipulating information. During the 2014 annexation of Crimea, Russian ground manoeuvre was synchronised with an aggressive cyber campaign of disinformation and economic manipulation.²⁶ The Light Brigade, therefore, will be required to compete against adversaries adept at disinformation, likely backed by state actors with advanced disinformation resources and in a contested Cyber and Electromagnetic Activity (CEMA) environment. Tuition from Army Media and Communications (AMC), a larger body of trained personnel and conceptual development focussed on information will better equip the Light Brigade to compete in the information space. Furthermore, Information Activities and Outreach must be integrated into the Brigade Intelligence Surveillance and Reconnaissance group, replicated at Battlegroup level to ensure integration and synchronisation of effect.



A member of 5 RIFLES armed with a Sharpshooter Rifle, deployed to Estonia on Op CABRIT conducting training in Lithuania as part of the major multination Ex IRON WOLF. This force-on-force exercise saw troops from across NATO training alongside, and against, one another. Photo: Corporal Anil Gurung, Crown Copyright

LESSON 5: URBAN TRAINING SHOULD INCLUDE SUBTERRANEAN WARFARE AND MORE REALISTIC COB SHOOTS. DEFENCE ESTATE SHOULD BE ADAPTED TO ACCOMMODATE THESE REQUIREMENTS

In urban settings, multiple forms of violence can coexist. These range from conventional military warfare, insurgency, crime, terror and civil protests. JEF Light Brigade forces should undertake similarly diverse training regimes to accommodate this variety.

Excellence in Close Quarter Battle (CQB) is a force multiplier which soldiers need to master. One observer believes it to be the pivotal variable as 'whoever is better at CQB is more likely to win an urban warfare engagement'.27 After failing to successfully dominate Hamas through air power, the IDF relied on robust and well-rehearsed CQB drills to dislodge insurgents from their defensive positions. The importance of skill in small unit tactics is amplified in the 'micro-environments' unique to urban areas, including narrow streets, alleyways and stairwells.²⁸ Furthermore, the proximity of dismounted troops to their adversary in the DUE requires training in hand-to-hand combat. While physically taxing, these skills will bolster the confidence of a soldier operating in a DUE and improve his odds in the event of a hand-to-hand encounter with an adversary. Unit Physical Training Instructors should integrate unarmed combat into unit PT programmes and such activities should be undertaken in fighting order.

Urban operations this century inform us that tunnel warfare must become a staple of infantry training, rather than merely the preserve of UKSF and other specialist units. Sites such as Corsham Mines and Gibraltar Buffadero training areas should be exploited and adaptations to existing training estate, such as laying ground pipes to simulate tunnels, will enhance soldiers' readiness for urban warfare. Tunnels and other subterranean structures neutralise friendly intelligence and kinetic strike capabilities and are manpower-intensive to clear. Intricate subterranean networks encountered during Op Protective Edge took the IDF by surprise and such operations should inform the revision of our doctrine, training and education.²⁹ In addition to being adept at conducting operations underground, our Intelligence Preparation of the Battlefield (IPB) must accommodate the subterranean environment. Open source material, access

- 25 Specific to the Light Brigade, see generally Director Capability, 'Light Brigade Force Output Concept' (2 Jun 20) p22
- 26 Berzins, J., 'Russia's New Generation Warfare in Ukraine' (National Defense Academy of Latvia: Center for Strategic Research, Apr 14)
- 27 Niksch, C.A., 'The Strategic Challenges of Urban Warfare' (University of Denver: Electronic Theses and Dissertations, 1285) p94. Last accessed: 20 Nov 20
- 28 Konaev, M., 'The Future of Urban Warfare in the Age of Megacities' (Paris: Focus Stratégique, No 88, Ifri, Mar 19) p32. The author was quoting M. Evans, 'City Without Joy: Urban Military Operations Into the 21st Century' (Australian Defence College Occasional Paper, No 2, 2007)
- 29 Cohen, R.S., et al, 'Lessons from Israel's Wars in Gaza' (Santa Monica: RAND Corporation, 2017) p11



Pictured is a GPMG gunner manning the perimeter as British troops secure the drop zone during Exercise FALCON AMARANTE that tested the Airborne Combined Joint Expeditionary Force (A-CJEF) – a partnership between 16 Air Assault Brigade and 11e Brigade Parachutiste. The two brigades provide the airborne rapid reaction forces for their respective armies, and the A-CJEF has been trained to deploy on shortnotice operations ranging from war fighting to disaster relief. Photo: Corporal Jamie Hart, Crown Copyright

to town plans and network analysis can accommodate this in conventional urban operations. $^{\mathbf{30}}$

In a COIN scenario, Key Leader Engagement and reassurance patrols should extract local knowledge of underground routes such as sewers or railway lines which might not be portrayed on rudimentary mapping. IEDs and ambush positions, all with overhead protection, must be factored into planning.³¹ The clearance of tunnels, even in ostensibly benign subterranean environments, should be conducted cautiously assuming that the adversary has IEDs, flamethrowers and belt-fed weapons. Furthermore, our ISTAR capabilities are presently optimised for the surface dimension. The deploying Light Brigade must aim to bolster its Geospatial Support Cell with specialist personnel such as civil engineers and geologists to enhance the collective understanding of the geological and hydrological environment.³²

CONCLUSION

While there are some immutable characteristics of urban warfare, so too, developments in technology and demographic trends have profoundly altered the urban landscape. Rising intrastate conflict and resurgent state actors compel western militaries to maintain currency in the business of warfighting.³³ The JEF Light Brigade has a vital role to play across the operational spectrum in delivering political intent and it must, therefore, be attuned to some of the lessons identified in this article. Urban areas cannot be effectively isolated and attempting to do so will incur a manpower requirement the Light Brigade does not possess. The conduct of warfare will have to be tailored to the DUE; the role of supporting arms, the vulnerability of Light Forces against a peer adversary, and the application of force within an intricate legal framework must all be considered. Scrutiny has never been as immediate or as malign and the Brigade must be adept at communications. The analysis of various case studies illustrates the requirement to adapt our training to include the nuances of the urban environment: expertise in CQB and subterranean warfare is essential preparation for future conflicts. Finally, we must continue to invest in our conceptual component. Insightful, informed and confident commanders, culturally astute and attuned to the complexity of the urban operating environment, will make the Light Brigade a force which can fight and win in the 21st century.

³⁰ For a comprehensive critique of the role played by civilian agencies of government, see D. J. Kilcullen, 'The City as a System: Future Conflict and Urban Resilience' (Medford: Fletcher Forum of World Affairs, 2012) p35-36

³¹ British Army Review, 'BAR Special Report – Urban Operations' (Vol 1, 2018) p35

³² Doctrine Note 20/05 'Subterranean Operations in the Urban Environment' (HQ LWC: Sep 20)

³³ For a comprehensive yet accessible analysis of global strategic trends, see 'Global Trends 2030: Alternative Worlds' (Washington DC: National Intelligence Council, 2012)

Bringing the Regular Reserve Back into the Whole Force

Lieutenant Colonel Vincent Connelly argues that the Regular Reserve were the strategic reserve for the British Army and that it is time to re-invigorate them rather than let them fade away.



Reservists soldiers from 6 Regiment Army Air Corps are working side-by-side with their regular counterparts in 3 Regiment Army Air Corps to maintain, refuel and rearm the Army's Apache Attack Helicopter during Exercise TALON HYDRA held at the Stanford Training Area (STANTA). Photo: Corporal Danny Houghton, Crown Copyright

The reduced resilience caused by a lack of mass can best be mitigated by the legislation-enabled, clearly directed, planned, resourced and well-practiced employment of Reserve forces.

Integrated Operating Concept 25

The UK has had legislation in place to constitute an ex-Regular Reserve from around 1870. Since 1908, the British Army has primarily been constituted from three distinct categories (notwithstanding conscription as a fourth), the regular soldier, the ex-regular reservist and the volunteer reservist. The Regular Reserve was a distinct capability focussed on providing individuals as backfill and reinforcement while the Army Reserve more typically provided collective capability reinforcement and regeneration. The post-Cold War demise of the Regular Reserve means the Army Reserve is now relied upon to provide both individual and collective reinforcement. For day-to-day business and 'wars of choice' this need not change but does mean the Army ignores a potentially large chunk of personnel that can be drawn upon in a crisis. The current approach to the Regular Reserve implies either they are not wanted, or we hope they will turn up if we ever have to ask. Recent operations have highlighted the potential value of having practiced access to a strategic reserve to fill unexpected short notice requirements rather than relying on hope alone.

The mobilisation of Regular Reservists was a reliable source of backfilling individual gaps and reinforcing workforce mass for most of the 20th Century. Since 1991 the Regular Reserve has declined and currently there is no clear demand for mobilisation of Regular Reserves in any numbers in a crisis - notwithstanding recent interest in planning for such.¹ This is despite the Regular Army being under recruited, including against a number of difficult to retain trades, and some of these gaps not being able to be plugged easily with the Army Reserve due to the time required to gain specialist qualifications.² Defence reviews still see the British Army deploying at the Divisional level in a worst case scenario for full scale war. Yet, to be a credible deterrent against war, reserve forces need to be integrated into the order of battle and the army needs to be seen to be prepared to use their reserves. The Regular Reserve were the strategic reserve for just these purposes. Can we re-invigorate them? Why have we let them fade away?

THE REGULAR RESERVE

Permission for a regular service person to leave the regular army before the completion of their engagement is done on the basis that they can be legally called back if required. Thus, the Regular Reserve consists of mostly ex-regular personnel that can be compulsorily called-out for permanent service under the Reserve Forces Act 1996. In addition, those in the Regular Reserve can volunteer to transfer to the Army Reserve, undertake Full time Reserve Service³ or work part-time.⁴ The strength of the Regular Reserve in October 2020 was 28,815⁵ with 7904 officers and 18721 soldiers and most will be in their first 4 years of liability meaning many of them are still well up to date with current equipment and ways of working. These are considerable numbers, on paper at least, and legislative provision of training grants, pay for attendance and other rewards are all still extant.⁶

PREVIOUS UTILITY

One of the most successful periods for Regular Reserve utility was in 1914. On the call for mobilisation in 1914, 98% of Regular Reservists reported for duty, with all battalions having enough to bring them up to war establishment, and many forming complete reserve Second Line battalions.⁷ Why was it so successful? Generally, those leaving the Regular Army received a retainer for their Regular Reserve liability and in return were expected to turn up for a few days of training a year. Retainers were paid in arrears quarterly on turning up at their Regimental depot with uniform and equipment.

¹ See 'Warfighting at scale: Regenerating and reconstituting mass' Ares & Athena, Centre for Historical Analysis and Conflict Research, Nov 2016.

² See National Audit Office (2018). Ensuring sufficient skilled military personnel https://www.nao.org.uk/report/ensuring-sufficient-skilledmilitary-personnel/

³ Over 1500 currently serve in Full Time Reserve Service. Quarterly Service Personnel Statistics 1 October 2020. https://www.gov.uk/ government/statistics/quarterly-service-personnel-statistics-2020

⁴ Or the reverse, Members of the Army Reserve can voluntarily transfer into the Regular Reserve for up to 4 years.

⁵ Quarterly Service Personnel Statistics 1 October 2020. https://www.gov.uk/government/statistics/quarterly-service-personnel-statistics-2020

⁶ Also the Recall Reserve are those former members of the Regular Army who have served their time commitment and have no call out liability but under the Reserve Forces Act 1996 can be recalled in times of a national emergency. Many have completed full careers so may have considerable knowledge, skills and experience. Recall Reserves can re-engage in the Regular Reserve for up to 4 years. There are many thousands more personnel available in the Recall Reserve than the Regular Reserve.

⁷ See Connelly (2018) A History of the Army Reserve. Historical supplement to 'The Army Reserve: A Commanders Guide.'



The ranges in Hohne, Northern Germany resounded to the sound of the 105mm Light Gun during Exercise LEOPARD STAR. For the 100 soldiers from 103 Regiment Royal Artillery, the Reservist Gunners from the north west of England, the training was proving to be 'challenging but fun'. As their new role within the changing British Army, Army 2020 and Future Reserves 2020, takes shape the Regiment is training hard to ensure that the soldiers are fit and militarily competent to take their place on contingency operations. Photo: Staff Sergeant Mark Nesbit RLC (Phot), Crown Copyright

A Regular Reserve liability was a well-known feature for those in full time service and the army educated, communicated and incentivised personnel for it.⁸

The basics of the scheme did not change for most of the 20th Century. The Regular Reserve was planned to bring Regular Army units up to 'War Establishment' throughout the Cold War and large-scale exercises often included Regular Reserve practice mobilisation and inclusion. Training compulsion and paid retainers ceased post-Cold War and while the War Establishment continued to reflect the planned use of the Regular Reserve until 2010, any annual training requirements had long ceased. The last compulsory call out of reasonable numbers of Regular Reservists was for Op Telic in 2003. The call out to *accepted into service ratio* was about 1 in 5 and the much better Army Reserve compulsory mobilisation ratio of 1 to 1.25 saw the Army Reserve become the reserve of first choice at this point.⁹

BARRIERS TO INCREASING UTILITY

Despite the extensive reliance on reserves by our allies, there is a prevailing internal narrative that states that the army cannot rely on reserves for scale and pace operations. Evidence from historical analysis, experience and current planning suggest that 'notice to effect' timelines are overly optimistic and constrain thinking in respect of reserves mobilisation and utility. It is notable that there have been recurring aspirations to reinvigorate the Regular Reserves but these appear to have faltered for three inter-related reasons;

- A workplace culture that does not value the potential contribution that the Regular Reserve could make and does not wish to engage with liability for recall after full time service;
- There remains no specified demand held against the Regular Reserve workforce despite gaps in critical pinch points and doubts over our ability to provide mass for warfighting;¹⁰
- Leading to a lack of funding for effective workforce management or integration of the Regular Reserve into the Whole Force Approach.

A WORKPLACE CULTURE OF SILENCE?

It has been argued that modern armies are 'postmodern' having moved away from mass forces to a small, professionalised core of full-time personnel with a somewhat marginalised periphery of reservists to fill gaps and provide mass. The Army profession is understood as vocational, requiring high commitment and full-time dedication. Those who do leave the full-

⁸ The retainer was a useful incentive, provided a financial boost to veterans and an indirect means of identifying those veterans struggling.

⁹ Compulsory mobilisation saw Army Reserve personnel accepted into service at a much higher rate than the rule of 1 to 3 for voluntary mobilisations. For the Regular Reserve a 20% success rate in return for the cost of an annual reporting letter is perhaps a higher return on investment than might have been expected.

¹⁰ Warfighting at scale: Regenerating and reconstituting mass' Ares & Athena, Centre for Historical Analysis and Conflict Research, November 2016.



Army Reservists from the 7th Battalion, the Royal Regiment of Scotland (7 SCOTS) deployed to South West Scotland to learn one of the most difficult roles in infantry combat, that of fighting in an urban area. The tough but rewarding course provides the Reservists with the skills needed to survive in such a complex environment. Photo: Mark Owen, Crown Copyright

time profession can be looked upon negatively and reservists are seen as civilians first. Furthermore, being compulsorily forced back into the profession may not be seen as respectable or desirable. Perhaps it is not surprising there is very little education during Regular Army service on the Regular Reserve legal liability. Almost half of regular leavers recently sampled claimed no knowledge at all¹¹ and there is a lack of contact with the Regular Reserve through a regular career.

The termination process for those leaving the Regular Army can be a difficult time in which to raise reminders about a legally liable enduring commitment.¹² A majority of regular army personnel surveyed during transition considered that the obligation to be recalled was unfair - despite personally entering into a legally binding time commitment on entering regular service. This may not be surprising when there has been little mention of the liability during their service and where about 70% of regular leavers¹³ thought it unlikely they would ever be called out for any operations once left. It may be difficult for serving regulars to press legal liability on other regulars when they implicitly think it unlikely to be necessary and may not wish such liability to be imposed on them when they themselves leave the Regular Army.

A PERCEPTION OF DEFICIT NOT UTILITY?

The workplace culture of the regular soldier demands they maintain currency and demonstrate full time commitment. As such, Regular Reserves are often first perceived as deficient by serving regulars, leading to an emphasis on 'skill fade' and the status of the unreliable, less committed civilian reservist. There is a focus on the perceived risk of them not meeting theatre entry standards and seeing them as risk-inducing rather than gap-filling or capability-enhancing.¹⁴ This detracts from an honest debate about utility. Utility does not always mean equivalence but does often mean recognition of difference, difficult to achieve in the more homogenous smaller, more professionalised regular army of today. A number of studies have demonstrated that individuals, of course, do suffer from skill fade once out of the army, but previously well-trained individuals can be rapidly brought back to a useful standard.¹⁵ Furthermore, discussions about Regular Reserves are primarily around those reserves going back to their previous trades/roles and rarely consider how any postdischarge civilian skills could be leveraged instead.¹⁶

It has been commented upon that the Armed Forces can have difficulty recognising the value of knowledge,

- 11 20170605 Regular Reserve and Notice to Terminate Surveys conducted March 17.
- 12 APC comment that they are unsurprised by a lack of willingness to accept liability and responsibilities. Recent changes in the termination process are not conducive to engagement and changes would be required to improve the current situation.
- 13 National Audit Office Report Ministry of Defence: Reserve Forces (2006)
- 14 This is broadly similar to the ways that the Army Reserve has also been seen as deficient. See Connelly, V. (2020). Understanding and Explaining the Marginalization of Part-Time British Army Reservists. Armed Forces & Society, 0095327X20948591.
- 15 See http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/defence-committee/sdsr-2015-and-the-army/ written/40139.html Q3 response. Wider work in industry does demonstrate that starting from a faded, but experienced base, can see individuals recover to a useful skill level rather more quickly than expected.
- 16 Wider work in industry does demonstrate that starting from a faded, but experienced base, can

skills and experience from civil life.¹⁷ Combined with previous military experience, civil skills can be potentially hugely useful.

DEMONSTRATING UTILITY

Traditional tasks for Regular Reserves include providing mass through individual backfill to war fighting establishments, closing workforce trade and specialist gaps in Regular Army and Army Reserve units, as well as augmentation for gapped staff roles and key enablers. The Regular Reserves could be earmarked to augment specialist roles with currency requirements too long to train¹⁸ or where there is an identified shortage in the Army Reserve. They could also perform general duties for tasks requiring disciplined uniformed personnel (management of mustering personnel; force protection) for UK-based or low threat tasks.¹⁹ Access to the skills and the networks developed in industry could reap benefits for Defence and could be delivered through the Regular Reserve.

Even if only one in five Regular Reserves are accepted into service on callout with minimal levels of engagement, this still represents thousands of potential personnel. There will always be some Regular Reserves who will not willingly answer any return to service and with the current internal culture, no proper workforce management and little reward this is not surprising. Any demand signal needs to take into account a realistic callout ratio. However, targeted mobilisation ratios can be very much higher. For Op RESCRIPT, suitable specialist trade ex-regular AGC personnel to support the mobilisation of the Army Reserve were identified from records, contact was made, and the required numbers were mobilised and accepted into service in a couple of days.²⁰ This success has been further confirmed in mobilisation exercises.²¹

WILLINGNESS TO ENGAGE WITH THE ARMY

There is a belief held by many serving regulars that most Regular Reservists will not want anything to do with the Army on leaving.²² Data, however, demonstrates there is a willingness from many Regular Reserves to engage more.²³ About a quarter do return their Annual Reporting Letter and those in touch with the Army are more willing to consider training and other opportunities. Surveys have consistently reported that more than half of Regular Reserves would consider positively more engagement from the Army, with many preferring modern communication (email or an e-journal or Defence Connect).²⁴ Data also suggests that between one half and two thirds of Regular Reserves state they would respond to a short notice call out for a large-scale national emergency.²⁵ Just over a third would be open to further offers of more voluntary mobilisation and between one third and one half were willing to consider some training commitment during a year. A recent Regular Reserve voluntary activation exercise saw over 1700 Regular Reservists attend a one-day briefing event. A strong determinant when stating a preference to train was a local Regular or Army Reserve location.²⁶

It is thought that many Regular Reservists do not tell their employers of their recall liability²⁷, but survey data

- 17 See King, A (2011). The Transformation of Europe's Armed Forces: from the Rhine to Afghanistan, Cambridge University Press. Cambidge, UK. Also See Op Herrick Campaign Report 2015 and Connelly, V. (2020). Understanding and Explaining the Marginalization of Part-Time British Army Reservists. Armed Forces & Society, 0095327X20948591
- 18 For instance, the equivalent to the Regular Reserve in the US Armed Forces, the Individual Ready Reserve, saw linguists and aviation maintenance specialists mobilised for operations in Iraq between 2001 and 2010.
- 19 Regular Reserve formed sub-units in PROTECT roles were the forerunner to the formation of the TA based Home Service Force in the mid 1980's.
- 20 These individuals were key enablers for force generation used to process Army Reservist mobilisations due to their specialist AGC knowledge. Example from discussion with APC CM Ops personnel and see 20200618 Future Army Reserves Working Group (FARWG): Making the Regular Reserve work
- 21 Project Haldane and the LWC have overseen some recent mobilisation exercises. See also 20171031 Army Regular Reserve Voluntary Activation Exercise PXR
- 22 20060821 What will motivate individuals who have left the Services within the last three years to maintain contact? Interim Report. Haldane Spearman.
- 23 See 20171031 Army Regular Reserve Voluntary Activation Exercise PXR and 20170605 Regular Reserve and Notice to Terminate Surveys conducted March 17.
- 24 20171031 Army Regular Reserve Voluntary Activation Exercise PXR. 20170605 Regular Reserve and Notice to Terminate Surveys conducted March 17. National Audit Office (2006). Report – Ministry of Defence: Reserve Forces. London, HMSO. Robinson, D., Lucy, D. Gordon-Dseagu (2007). What will motivate individuals who have left the Services within the last three years to maintain contact? Technical Report. QinetiQ Ltd
- 25 20171031 Army Regular Reserve Voluntary Activation Exercise PXR. 20170605 Regular Reserve and Notice to Terminate Surveys conducted March 17.
- 26 20171031 Army Regular Reserve Voluntary Activation Exercise PXR.
- 27 Robinson, D., Lucy, D. Gordon-Dseagu (2007). What will motivate individuals who have left the Services within the last three years to maintain contact? Technical Report. QinetiQ Ltd



A Recovery Mechanic from the Royal Electrical and Mechanical Engineers (REME) lifting the rear end of a Jackal in preparation to recover the vehicle. Army Reserves from 103 Battalion REME training in the UK before deploying to Poland as part the UK's commitment to NATO enhanced Forward Presence (eFP) in Eastern Europe. Photo: Corporal Simon Lucas, Crown Copyright

indicated employer support for Regular Reserve recall would be greater in times of national emergency.²⁸ Furthermore, even large-scale mobilisation of the Regular Reserve today would be a small proportion of the national workforce capacity and recent experience in COVID-19 demonstrates many key industries can continue to function well even with high levels of absence.²⁹

CONDITIONS FOR SUCCESS

Historical analysis and recent mobilisation exercises³⁰ have demonstrated that the Regular Reserves, with some modest investment, could be made more effective. An alternative devolved method of commanding and managing the Regular Reserve in peacetime should be considered. First and foremost, the Regular Reserve is a reserve force and like any reserve force³¹, the Regular Reserve needs to be integrated into the Whole Force Approach with above all, a clear demand signal, to provide a justification for resources to achieve the conditions listed below.

• Commanded: The Army Personnel Centre currently manage the Regular Reserve as a pool and maintain contact through the Annual Return Letter. They do an excellent job with very limited resources. However, commanders lead people, drive innovation and provide accountability for military capability. A relatively cheap, small scale, part time, Army Reserve command and staff team³² could drive a programme of engagement and persistent communication, deliver workforce management, force sensing when required and work with units and commands to provide a flexible and dynamic set of mobilisation plans for a range of commitments from the small to large scale. Reservists understand other Reservists best of all.

²⁸ National Audit Office (2006). Report - Ministry of Defence: Reserve Forces. London, HMSO.

²⁹ To note there are between 150-200k maternity leaves accommodated in the UK each year as routine.

³⁰ See Project Haldane reports and 20171031 Army Regular Reserve Voluntary Activation Exercise PXR.

³¹ These historical conditions for success are not that different to those for the success of the Army Reserve.

³² Integrated or closely linked with the current team at APC.

- Integrated and Informed: A clear and integrated structure alongside other Reserve components into a 'Whole Reserve' for a 'Whole Force' underpinned by a clear demand will provide credibility and encourage more Army Reserve transfers and regular re-joiners. Early education and a consistent narrative throughout regular service of the Regular Reserve liability is required and not just as part of resettlement. Use of the term 'discharge' may be confusing and it should be made clearer that most individuals will become members of the Regular Reserve.³³
- Devolved: Prior to the Army Personnel Centre opening in 1996, Regular Reserves were administered by devolved capbadge divisions. Historically, a locally devolved organisation to foster long term contact and engagement worked best for the Regular Reservist with either a capbadge/regimental focus³⁴ or with a local geographic focus (local Army Reserve unit).³⁵ While it would still make sense for APC to centrally administer it may be productive for Regular Reservists to develop links with actual units.
- Data driven: The Army lacks the ability to track the current status of those in the Regular Reserve. Keeping track and staying in communication with Regular Reservists through an annual letter is difficult based on an address at the point of discharge and potentially undermines the credibility of using the RegularReserve in an emergency. However, a memorandum of understanding is now in place for the MOD to facilitate access to HMRC data for the sole purpose of maintaining contact³⁶ and this will substantially improve tracking accurate contact details. However, the termination process is also as much a source of initial error for collating accurate information. Data held is not live and archived military records from the time of discharge do not record skills and qualifications gained post discharge.³⁷ An investment in the technology, resources and processes required to accurately record, collate and easily access the civilian skills and wider talent in the Regular Reserves (as well as the Army Reserve) would improve utility.



Reserve soldiers from 101 Regiment Royal Artillery, based in Newcastle-upon-Tyne, fired the Guided Multiple Launch Rocket System (GMLRS) at Kirkcudbright Ranges on the Solway coast, in Dumfries and Galloway. This is the first time in the last 15 years, that the GMLRS has been fired in Scotland. The reservists, who only get to fire live MLRS very rarely, were doing so as part of their Annual Deployment Exercise, which sees them practice all of their basic soldier and specialist Artillery skills for two weeks. Photo: Corporal Nathan Tanuku, Crown Copyright

- 33 The US Armed Forces stopped using the term "discharge" in the early 2000's and now inform individuals about their "transfer" to the Individual Ready reserve instead.
- 34 20180504 Historical Branch (Army) Paper 02/18 Reservists in the British Army 1945-2018.
- 35 See 20200618 Future Army Reserves Working Group (FARWG): Making the Regular Reserve work and 20171031 Army Regular Reserve Voluntary Activation Exercise PXR
- 36 D Reserves (2020). The Regular Reserve Information Note (V2). 20200324-RegularReserve. The 2020 MoU allows 45,000 ex-Regular Reservists' addresses to be confirmed initially and 10,000 annually thereafter. MOD may submit greater numbers if required.
- 37 D Reserves (2020). The Regular Reserve Information Note (V2). 20200324-RegularReserve



A Reserve Soldier of 4 YORKS, an Army Reserve infantry unit based across Yorkshire, fires an SA80 Weapon System on the live fire range at Battle Hill Ranges, County Durham during Ex YORKSHIRE STRIKE February 2021. This training package included cross-country driving, rifle ranges, and tactical skills as part of a Potential Junior Non-Commissioned Officer (PJNCO) course. Photo: Corporal Danielle Dawson, Crown Copyright

- **Reward & Belonging:** Communication, incentives³⁸ and processes that encourage engagement with the Army as part of the Regular Reserve, fostered by a resettlement process that discourages permanent separation will promote a continued sense of belonging. Accessible briefing opportunities online and the opportunity to maintain skill levels at weekends or evenings with units.
- **Demand-led and practiced:** A reserve can only provide deterrence and utility if seen to be practiced. A clear demand signal with details of the positions/roles to be filled (including the requisite equipment tables) is required in conjunction with well-practiced mobilisation procedures where individual Regular Reservists can be assessed against roles or rejected.

CONCLUSION

A modest investment in the Regular Reserves could increase the utility of this potential workforce and deliver a strategic reserve for crises and a wider workforce pool for routine gap-filling. This is not to deny there is risk in relying more on the Regular Reserve to fill gaps or deliver mass, but reserves are fundamentally about matching risk and affordability. The Regular Reserve represent a large investment in individual training and experience that the army has chosen to not draw upon. To transform the Regular Reserve into a strategic reserve means challenging our internal culture to unlock the demand signal and investment required to deliver a 'Whole Reserve' for the 'Whole Force Approach'.

³⁸ To note that there are agreed payment levels in place for an annual reporting grant, a training grant, and a call-out gratuity and a number of these payments are linked to Armed Forces Pay Review Body increases.

AI Augmented ISTAR

Captain David Maggs analyses what an AI (Artificial Intelligence)augmented ISTAR screen might look like, how could it be incorporated into the functionality of a Battle Group(BG) HQ, and what effect would that have on the speed, accuracy and effectiveness of planning cycles?



Watchkeeper Unmanned Arial Vehcicle on the runway, seen here at Lydd Airport in Kent. A divisional level intelligence, surveillance, target acquisition and reconnaissance (ISTAR) asset, Watchkeeper can collect, process and disseminate high quality imagery intelligence to support the needs of the commander on the ground. Watchkeeper is an autonomous system that always requires a 'human in the loop' to authorise all aspect of its operations. Photo: Corporal Anul Gurung, Crown Copyright

he Chief of Staff bellowed across the Ops Room, • Orders have dropped; planning staff close in for the read in and stand by for the brief'. As we read through the co-ordinating instructions a sinking feeling permeated throughout the HO as the timings became clear. The Battle Group Logistics Officer (BGLO) looked irritated and confused as he checked and then double-checked his watch whilst the Artillery Cell looked at each other with incredulity. I, the Intelligence Officer, began brushing off my mental maths to work out how long I would have to do my initial analysis of the enemy's plans: I had fifteen minutes. This was barely long enough to clean my desk from the previous planning cycle! The scrum of captains that comprised the Battle Group HQ staff flew into a frenzy of activity, radioing in to ground C/S's to collect information, calculating figures off planning tables.

As the Intelligence Officer tries to understand the situation in front of him and attempts to predict what the enemy may actually do, he becomes acutely aware of several of his all too human shortcomings that hamper his ability to forecast and advise his commander: the ISTAR assets are struggling to report accurate information, the amount of information coming in is overwhelming his ability to process it, and his ability to use that to predict the enemy's actions is woefully limited. However, it is in these areas that technological developments currently revolutionising military affairs at the operational and strategic levels could be implemented to significant benefit at the tactical.

Michael Horowitz set out three military applications of Artificial Intelligence (AI) that have relevance to a tactical battle group.¹ First, there is the development of machines that can identify objects and act kinetically without human supervision; second, hardware and software developed to process and interpret vast data sets will be exponentially faster than the human mind; and third, enhancing the analysis, speed and presentation of decision-making processes at the command and control level. These applications highlight why, as an Intelligence Officer, I consistently found myself behind the curve. To explain this, let us consider where technology is leading us and what it might look like on the conventional battlefield of tomorrow.

THE TACTICAL MACHINE

Using Horowitz's first application, AI can substantially aid in the accuracy, timeliness and clarity of information reporting from any reconnaissance assets that are usually limited by human factors. Notwithstanding the inability of the human body to get close enough without detection to make accurate observations, it is the fatigue, cold, and hunger of the soldiers on the ground which often leads to confused reporting. With the development of software and drones² that can identify different variants of aircraft to 98% accuracy, it doesn't require a large leap in the imagination to consider a light infantry recce platoon operating a technology to overcome these issues. A small drone such as the Black Hornet³ is an example of this, which has been combined with the kind of software that is able to identify such a specificity of detail that it can accurately identify human faces.⁴ Confused reporting of these subtle differences due to the fallibility of the brain is a constant source of frustration and can sometimes slow the intelligence cycle down to a crawl.

INTELLIGENCE ANALYSIS

Further, Horowitz mentions the processing and interpretation of data. Imagine how a multitude of small drones, operated by the various platoons of the ISTAR Company, could autonomously and securely transmit live feeds directly into a HQ. This would provide the BG HQ with a lot of valuable data, yes, but certainly too much to be dealt with by the 4 or 5-person team evaluating, analysing and corroborating them. A traditional infantry tactical intelligence cell is used to dealing with perhaps up to 20 ISTAR tracks at a time, but it would not be able to keep up with the information AI-driven machines within the outer levels of the ISTAR screen could provide. Consider initiatives such as Earth-I⁵ and the Project Maven.⁶ These are rapidly driving modern technological weapons towards what might be termed 'algorithmic warfare' by applying machine learning to the processes of identifying tactical physical objects. This involves

¹ https://tnsr.org/2018/05/artificial-intelligence-international-competition-and-the-balance-of-power/

² https://earthi.space/industries/defence-security-and-intelligence/

 ³ The Black Hornet was trialled by 1 R IRISH D Coy on Ex WESSEX STORM to good effect. Although it mitigated the inability to observe caused by lack of human elevation, it offers only images, which still lead to misidentification by the human interpreter who receives that information.
 4 Just consider every time you get off your Ryanair flight and go through passport control....

⁵ https://earthi.space/industries/defence-security-and-intelligence/

⁶ https://www.wired.com/story/inside-the-pentagons-plan-to-win-over-silicon-valleys-ai-experts/



Pictured is an RAF Sentinel R1 (part of 5 Army Co-Operation Squadron) aircraft from 5 Squadron, RAF Waddington, landing at RAF Akrotiri, where the ISTAR aircraft was part of Operation SHADER. The Sentinel crew use the aircraft's powerful radar to identify and track numerous targets over great distances, passing the information in near real time to friendly forces. **Photo: Corporal Tim Laurence, RAF, Crown Copyright**

being fed data and doing all those things that are traditionally done by a human brain; evaluating, comparing, analysing and corroborating to come out with an accurate understanding of what it is that you see in front of you. So, to maintain effective planning speeds, the intelligence aspect of ISTAR would also need AI augmentation if it has been given to surveillance & target acquisition.

Consider this huge amount of footage from our ISTAR screen collected on the ground, to maintain momentum, it would need to be autonomously (in doing so with a far higher degree of accuracy) evaluated, analysed and corroborated by software in a matter of seconds. This would effectively reduce the intelligence cycle by huge margins, allowing the 'observe > orientate > understand' cycle to shrink rapidly. The end result would be a rapid collection and transmission of data into the HQ. The automation and digitisation of this process would be done in a matter of seconds rather than several hours and would be followed by a rapid output and presentation telling us what it is we actually see on the battlefield.

DECISION-MAKING

As those troubled by the burden of command know, decision-making is where you earn your money and make your name, but also potentially risk everything. This is where AI augmentation adds the greatest benefit which, ironically, is still very much humanfocussed. A good HQ is driven by the Chief of Staff who presents credible Courses of Actions (COAs) with good articulation, enabling the commander to adequately orientate and understand the problem in front of them. This is vital for good decision-making that will best bring about the commander's desired outcome. However, as with the ISTAR Company soldiers, all HQs suffer from fatigue, hunger, and cognitive overload (not to mention the natural and often fallible heuristics present in every human mind). We have probably witnessed their consequences: anchored thought patterns, unconscious bias, frayed tempers, a difficulty to compute the magnitude of the task at hand and eventually poor appraisal of the full spectrum of possible COAs.

Once again, not only are current applications of AI to military means trying to solve the issue of analysing COAs, they are also attempting to do so at a much faster rate. Ever since DeepBlue beat Kasparov at chess⁷, and more recently Google's DeepMind winning at Go (using the AlphaGO software)⁸, developers are constantly striving to produce more advanced AIs. Techniques used to develop these programs have broadly been called Machine Learning, which involves introducing the program to a set of rules, feeding it different scenarios and giving it an end state to achieve. We have even seen IBM working on an AI that can articulate complex intellectual discussions.⁹ Could we see this replace the need for a COS in the future?

The military application of this involves combining the analysis of the previous two sections with elements of Game Theory and computation to take emerging data and transform it into potential enemy COAs, effectively using AI to predict what the enemy will do next. Projects such as the US Defense Advanced Research Project Agency's (DARPA) Real-time Adversarial Intelligence and Decision-Making (RAID) have sought to automate and streamline the analysis of enemy action.¹⁰ At the beginning I mentioned my panic at being faced with a 15-minute analysis of the enemy's plans. Current AI developments aim to achieve this level of analysis within a couple of minutes. But it cannot be achieved in isolation; once you have augmented reconnaissance assets with AI, the inflow requires AI throughout the entire planning process until the commander has made their final decision. Failing to augment AI into the process currently will result in any headquarters being overwhelmed at the tactical level.

I hope is that this conversation is brought to the minds of young officers who are being trained today. In 5 - 15 years (or even sooner) this is the environment they will face, and they will need to start preparing their mindset.¹¹ I hope this article inspires some to consider the evolution of AI, drone warfare, and other technological paradigm shifts and the effect it will inevitably have on our planning processes and doctrine. The first place to start is with what you already know.



Ajax is the British Army's new multi-role, fully-digitised armoured fighting vehicle delivering a step-change in versatility and agility, being delivered by DE&S through the biggest single order of armoured vehicles in a generation. Here it undergoes a series of trials in a representative environment, with the inclusion of mobility aspects, ISTAR and firing trials. Photo: Jack Eckersley, Crown Copyright

- 9 https://www.research.ibm.com/artificial-intelligence/project-debater/
- 10 https://arxiv.org/abs/1607.06759

⁷ https://www.scientificamerican.com/article/20-years-after-deep-blue-how-ai-has-advanced-since-conquering-chess/. Deepblue was a software programme designed to play and beat the best chess masters.

⁸ https://deepmind.com/research/case-studies/alphago-the-story-so-far. DeepMind is a similarly designed software programme, but in the game Go, a more complicated and nuanced strategy game than chess.

¹¹ Of course, I completely neglected the moral dimensions of these issues. These will have to be explored another time.

Countering the Illegal Wildlife Trade

Major Stephen Vinall 3MI and Lance Corporal Richard Milburn, PHD, 3MI analyse British Army low-intensity COIN operations and the significant impact they can have on the Illegal Wildlife Trade (IWT)



British Army troops and Malawian Park Rangers address elephant bones in Liwonde National Park, Malawi. Photo: Abbie Dawson, Crown Copyright

The British Army is currently involved in Countering the Illegal Wildlife Trade (CIWT) through Op CORDED in Zambia, having previously engaged in CIWT operations in Malawi, Sierra Leone and Gabon. While many in the military see Op CORDED as little more than a public relations exercise, this article argues that the Army's involvement in CIWT operations provides an opportunity to have a significant impact both on reducing the IWT and enhancing our own COIN capability in an operation with widespread domestic support.

IWT is increasingly viewed alongside other illicit trades such as narcotics and human trafficking.¹ According to TRAFFIC², the illegal wildlife trade is worth something in the region of US\$7-23 billion per year, which makes it the third to fifth largest illicit trade in the world, after narcotics, human trafficking and arms trafficking.³ Organised Criminal Gangs (OCG) are taking a growing role in IWT; the same groups that are engaged in drug and human trafficking have also been found to be engaged in the illegal wildlife trade, often using the same routes and networks to smuggle wildlife and wildlife products.⁴ There have been reports that terrorist organisations have been involved in IWT, however the extent of this involvement is limited and reports by RUSI and others have countered many of those claims.⁵ The trade is largely seen as a low-risk but high-reward activity,⁶ since law enforcement to counter IWT is lacking, with a much greater focus placed on other illicit trades and punishment is generally less severe.⁷ So, while the illegal wildlife trade is often a lucrative activity, the penalties and risk of getting caught are both lower.8

THE SIMILARITIES BETWEEN COIN AND CIWT

CIWT operations can most effectively be understood by Army personnel as operating in low intensity COIN environments. Poachers are often driven by similar underlying resentments as insurgents, and OCGs play a similar function as insurgent organisations in identifying and preying upon vulnerable populations to provide a foundation for their operations. One of the key differences is that poaching is primarily an economic activity as opposed to a religious or politically motivated insurgency, although resentment towards wildlife authorities is often a contributing factor. CIWT operations must therefore understand and engage with the social and economic drivers of poaching. Wildlife authorities and contributing conservation organisations should seek to provide benefit to communities in order to help turn them against poaching and separate them from the OCGs. As with COIN, so with CIWT, understanding the human terrain and developing methods to win 'hearts and minds' is vital to deliver long term, sustainable, success.

In framing CIWT operations as low intensity COIN it should be recognised that kinetic activity needs to be minimised and conducted in such a way as to focus on capture and prosecution in order to effectively deter the poacher, whilst ensuring resentment amongst the local community is not increased. However, one significant hinderance to this is often ineffective or corrupt criminal justice systems.

Another reason for maintaining a minimal kinetic response is simply that the resources available to wildlife rangers are often very limited and the geographic areas, that these relatively small teams are responsible for, are vast. An escalation in kinetic activity is likely to result in ranger forces becoming out gunned and therefore rapidly vulnerable and ineffective. Rangers will continue to work in small teams carrying out patrols with little to no back-up, limited medical support and little, if any, aerial support. Ensuring these teams are highly capable and effectively targeted is therefore essential.

A key COIN lesson to apply to CIWT operations is to understand the human terrain and to focus on winning the support of the local population so that they come to view rangers and conservationists as allies rather than enemies. In addition, CIWT operations should be intelligence-led in order to ensure that limited ranger

1 South and Wyatt, 'Comparing Illicit Trades in Wildlife and Drugs.'

² See https://www.traffic.org/about-us/illegal-wildlife-trade/

³ World Bank, Going, Going, Gone: The Illegal Trade in Wildlife in East and Southeast Asia, (Washington, D.C., 2005).

⁴ For example: World Bank, Going, Going, Gone, Warchol, 'The Transnational Illegal Wildlife Trade'; and South and Wyatt, 'Comparing Illicit Trades in Wildlife and Drugs.'

⁵ Maguire and Haenlein, An Illusion of Complicity; and Rosaleen Duffy, 'War, by Conservation,' Geoforum 69 (2015): 238-248, http://dx.doi. org/10.1016/j.geoforum.2015.09.014

⁶ Wyatt, 'Exploring the Organization of Russia Far East's Illegal Wildlife Trade,' 145-6.

⁷ WWF, Fighting Illicit Wildlife Trafficking, 13.

⁸ Wyatt, 'Exploring the Organization of Russia Far East's Illegal Wildlife Trade,' 145-6.

resources are targeted at monitoring and dominating the most at-risk areas. British Army involvement in CIWT operations has the potential to not only deliver significant benefits for conservation, but also provides a very relevant operational environment for soldiers to gain an understanding of applying COIN principles in a low-intensity scenario. Being able to focus on honing essential small team infantry tactics combined with an understanding of the human terrain and broader intelligence picture, whilst working in partnership with indigenous forces, is an excellent training opportunity.

HOW TO EFFECTIVELY COUNTER THE IWT

Whilst the majority of the British Army's CIWT operations will be focussed at the tactical level, in order to effectively counter the IWT action, it must also be taken at the strategic and operational levels. This will involve work in coordination with other UK government departments, national security forces, police and criminal justice systems of the host nation, as well as NGOs and the private sector. Therefore, whilst operating at the tactical level it is important to understand how strategic and operational activity should be coordinated for the development of a comprehensive CIWT strategy.

THE STRATEGIC AND OPERATIONAL LEVEL

Organised poaching takes place because of the asymmetry of the economic equation in the IWT. Poaching is cheap to carry out and poachers need only be in the right place at the right time to get wildlife products that can be monetised quickly to satisfy a ready demand for high value IWT products. In contrast, conservation is expensive, and rangers are under-resourced because the conservation sector struggles to generate enough revenue. This economic asymmetry, where poaching is cheap, and lucrative, and conservation is expensive and generates



UK troops in Malawi are helping to train African Parks' rangers across two sites, Nkhotakota and Majete Wildlife Reserves, both are managed by African Parks in partnership with Malawi's Department of National Parks and Wildlife (DNPW). The troops' long-term goal will ensure the rangers are better skilled and able to respond appropriately to the threat of poaching. Poaching and the illegal wildlife trade are responsible for the loss of countless species and are driving the decline of many African animals including elephants, rhinos and lions. Photo: Lieutenant Colonel Tim How, Crown Copyright

little income, is the fundamental driver of IWT. The key at the strategic and operational levels is therefore to solve this economic equation.

A large focus of efforts to date has been on demand reduction campaigns around the world, but primarily focused on Asian markets. However, historically many of these campaigns have achieved limited success, often being poorly designed and executed, leading to a greater shift in recent years to utilise more behavioural insights to better direct and inform campaigns.⁹ Whilst the British Army is unlikely to carry out much work on demand reduction, there is, for example, a potential opportunity for Info Ops teams in 77 Brigade to help develop more effective and targeted demand-reduction campaigns, and learn about executing them, in the Asian context.

The Army's tactical focus can help to make poaching a higher-risk activity, thereby discouraging OCG involvement and reducing poaching, by enhancing the capability of wildlife authorities so that even with limited resources they become more effective and more cost-efficient. Civil military co-operation (CIMIC) concepts can also be applied at the operational and tactical levels, focussed on the coordination of development and economic solutions to CIWT. Finding new ways to monetise wildlife conservation creates greater incentives to keep wildlife alive, provides jobs to local people so they gain from conservation, and provides the revenue needed for more effective conservation approaches.

At the strategic and operational level, therefore, CIWT operations can be seen to share many similarities with stabilisation operations, where the Army works alongside national security authorities as well as civilian agencies to create security and development opportunities that simultaneously break insurgent networks and provide alternatives to local populations. In a counter-insurgency environment this equates to making peace more attractive than conflict and giving nation states the capability to maintain that peace in the long-term. The Army's experience with these stabilisation processes in multiple theatres over the past decades is highly relevant to CIWT, making poaching less attractive and incentivising local populations to support conservation.



A lone Antelope at full stretch to get the juiciest leaves at the Buffalo Springs Game reserve, near the Archers Post training area. This picture was taken during Exercise SHARP SHOOTER. Photo: Mike Weston, Soldier Magazine, Crown Copyright

THE TACTICAL LEVEL

The similarities between COIN and CIWT operations are even stronger at the tactical level. As we saw above, the economic equation was key at the strategic and operational level. At the tactical level the poacher's equation is most important. The poacher's equation (shown below) shares many similarities with the insurgent's equation of whether an individual will choose to fight. It provides a simple framework to assess the risk that an individual and/or community will engage in poaching, and points towards the interventions needed to reduce it.

Risk of poaching = (Gain form poaching -Potential loss if caught) [perceived] Risk of getting caught ¹⁰

It is important to note that the above equation is not purely economic, as many social factors are also included; for example, where a farmer's crops or livestock have been eaten by wildlife, the desire for revenge can be a large motivator to poach. Also, where the wildlife authority is unpopular with local communities, the desire to poach often increases; the Army has plenty of experience of this from its COIN operations and so it should already be well understood.

⁹ See, for example: TRAFFIC, Reducing Demand for Illegal Wildlife Products, https://www.traffic.org/site/assets/files/11081/demand_reduction_ research_report.pdf

¹⁰ The poacher's equation was developed out of research conducted at the Marjan Centre for the Study of Conflict and Conservation, Department of War Studies, King's College London.

The equation points to three key areas of intervention at the tactical level:

1) Reduce the gain from poaching: This is often difficult to achieve for high-value resources such as rhino horn, and efforts to do so will be at a strategic level, however, it is important to have an awareness of this part of the equation. Where resentment towards wildlife authorities is strong, improving the relationship with local communities can be an effective way to address this part of the equation. The conservation operation as a whole, and the authorities involved in it, must be viewed positively by local people.

2) Increase the potential loss: There are two components to this part of the equation. The first involves making sure that communities living around wildlife benefit from conservation through job creation, revenue sharing arrangements and the provision of essential services such as health and education. Understanding the human terrain is therefore vital to success. To identify communities' needs and wants and to address them in a timely and effective manner is crucial. It is important to note that meeting people's wants is often more effective than meeting their needs, since it provides immediate gains, rather than longer-term and less obvious gains derived from needs, such as improved roads, schools and hospitals. A combined provision of needs and wants will create communities that benefit from conservation and are likely to become a valuable partner in CIWT operations, as they can identify movements of poachers and feed that information to the CIWT operation to direct ranger interventions. In contrast, if they do not gain from conservation not only is that support lost to the CIWT operation, it may instead be given to poachers.

The second component is increasing the punishment from poaching, be that fines or custodial sentences as well as potential loss of life. Communities and individuals need to understand that engaging in poaching will lead to the loss of the benefits set out above. The gain from poaching then decreases significantly, especially for individuals with families they need to support, since a steady income related to conservation is vastly preferable to a high risk (albeit high-reward) income from poaching.

Combining these two components provides a significant disincentive to poach as the fear of losing a good status quo is high. Humans also experience 'loss aversion', whereby we value what we have around twice as much as what we could gain.¹¹ An increase in the potential loss

leads to a doubling of the potential gain needed to entice poaching, making it much more expensive for OCGs and thereby making it harder for them to justify. In contrast, where the potential loss is zero or close to zero (potential poachers having 'nothing to lose'), no CIWT operation will be able to stop poaching.

3) Increase the risk of getting caught: It is important to note that increasing the punishment for poaching will be ineffective unless the probability of getting caught is high; even stringent punishments will have limited effect if people don't think they will get caught and/or prosecuted.

This is where the British Army's Op CORDED activity training, and partner patrolling, with rangers to enhance their individual and collective capability combined with intelligence-led counter-poaching operations has the potential to make a significant impact. If people know they are highly likely to get caught and punished, the appeal of poaching declines. The British Army's ranger training has been effective in this part of the equation, and it is now going further with the integration of data analysis training, drawing on military Operational Intelligence (OPINT) principles. It is also important to note that the perceived risk is as important as the real risk. Some people have a higher risk perception than others, and rumours play a big role, so ensuring people think they will get caught if they poach is almost as important as making sure they will get caught. Information operations have a role to play here.

This part of the equation also ties into the operational level, to ensure national policing and judicial processes are effective, leading to prosecution followed by significant punishment for those involved in poaching and the wider IWT. Particularly for wealthier and more powerful individuals involved in trading IWT products, effective law enforcement to arrest and successfully prosecute such individuals is key, cutting the head off the snake of poaching operations.

4) *Solving the Poacher's Equation:* The British Army's main focus should be on parts 2 and 3; increasing the loss from getting caught and increasing the risk of getting caught. The most cost-effective mechanism is to increase the potential loss, since often this involves fairly simple and low-cost interventions that provide major benefits to win the support of communities. Part 3 remains key, however, particularly where OCGs are involved in IWT, since without an effective counterpoaching response the IWT is likely to continue.

11 See, for example, https://www.behavioraleconomics.com/resources/mini-encyclopedia-of-be/loss-aversion/



Pictured is a British trainer on patrol with parks rangers in Malawi's National Parks. The long-term goal of the British Troops will ensure the rangers are better skilled and able to respond appropriately to the threat of poaching. Photo: Lieutenant Colonel Tim How, Crown Copyright

However, a focus solely on part 3 of the equation is a fundamental mistake; counter-poaching operations are expensive to run and conservation projects are short of resources. Understanding, and winning, the human terrain through part 2 is therefore vital. That same lesson is derived from the Army's COIN operations, where the importance of the human terrain is fully recognised. If most poachers or insurgents are only fighting because they have no other employment options, addressing the economic dimensions of poaching or insurgency is the only way to solve the problem and avoid a continuous cycle of simply countering a symptom that will never be cured.

AN OVERARCHING CIWT STRATEGY

The previous section has demonstrated what is needed for CIWT operations to succeed at the strategic, operational and tactical levels. For significant and sustained success to combat the IWT, these elements need to be drawn together into a single, unified strategy. As with larger COIN operations, the Army will only fulfil part of the strategy, but it is vital that all CIWT activity is fully joined-up, and each component is delivered simultaneously and coherently to achieve maximum impact. The diagram (opposite) designed by the authors, sets out what that strategy should be.

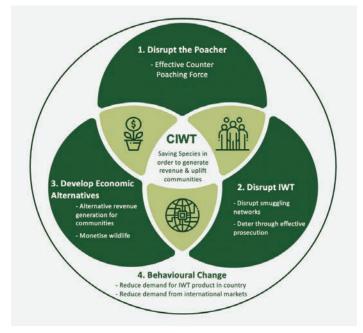
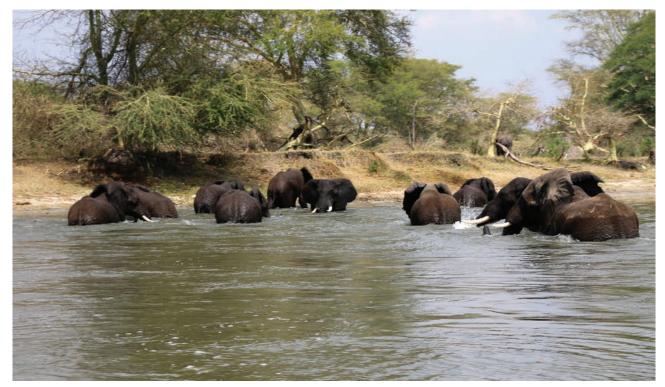


Diagram: The CIWT Circle. Image: Vinall and Milburn



Pictured are Elephants swimming in Shine River, Liwonde National Park, Malawi. Photo: Abbie Dawson, Crown Copyright

All four components need to be delivered to achieve an impact; focusing solely on one area, as much CIWT activity has to-date, reduces the effectiveness of interventions. As we have seen earlier, a focus solely on counter-poaching operations without concurrent economic support is counter-productive. Equally, a focus on trying to disrupt networks without addressing the causes of poaching is likely to use up significant resources without solving the problem. A joined-up, cross-government approach which also brings in conservation NGOs, law enforcement and the private sector in a unified approach, as set out above, offers the opportunity to effectively tackle and help bring an end to the global IWT, but it will only be effective if all four components are delivered. From the British Army perspective, such a strategic approach offers the opportunity to maintain and enhance the skills and relationships with other organisations and other government departments, thereby demonstrating that CIWT operations are a microcosm for larger and more complex COIN operations.

CHEAP AND SIMPLE - THE REALITIES OF COUNTER-POACHING

Poaching is not an enjoyable activity for most people. Heading out into the wilderness with the threat to life not only from rangers but also from wildlife (be that lions, hippos, elephants, snakes or mosquitoes) is not an attractive proposition for most people. However, as we saw from the poacher's equation, if people have nothing to lose, poaching is often seen as an attractive way to generate income.

It is also important to realise that many poachers are seen as heroes in their communities, not villains; indeed, it is often the wildlife authorities who are viewed as villains. Where people have no jobs and are struggling to eke out a subsistence living, conservation can be seen as the enemy by denying them access to resources and keeping wildlife protected for tourists, while the local people live in poverty. Poachers may be providing benefits to communities by sharing the revenues they receive with their communities.¹² As with COIN, so with CIWT, where the local or national authorities have failed to support communities and resentment has built up as a result of that failure, insurgents, criminals or poachers that do provide benefits can rapidly gain widespread support.

The reality for rangers is often poor as well. Conservation is short of funding, so operations are often carried out on limited budgets. Many rangers may have chosen their career because of an interest in wildlife and conservation,

12 Julian Rademeyer, 'Killing for Profit', (Cape Town, Zebra Press, 2014).

as opposed to security, so may be poorly trained and prepared for counter-poaching operations. Even where rangers have knowledge and experience of police and military tactics and techniques, morale is often low; rangers are often provided with old rifles, a few rounds of ammunition and poor equipment, maybe not even being given boots, raincoats or malaria nets, yet being expected to conduct multi-day patrols over tens of kilometres. Their salaries are not high, and may often be delayed or simply not paid, and if they are killed in the line of duty there is rarely support to look after their families.¹³ The commitment and dedication they show to the cause is therefore to be admired, but at the same time many may not be motivated to carry out their roles to the best of their capabilities and are also at risk of being corrupted by OCG organisations.

Given these constraints on both finance and resources, those involved with CIWT operations need to be prepared to operate in environments they may not be used to, with the bare minimum of infrastructure and support, where many traditional capabilities cannot be used. For example, electricity is often scarce or non-existent, as is mobile phone coverage, so any technological solutions adopted may be difficult to make work. There is often little more than a few 4x4 vehicles available for transport making movement slow and onerous, and there is little chance of reinforcement when a contact takes place. Focussing on enhancing the most basic military skills is key, and approaches to CIWT therefore need to be focused on simple-to-use, low-tech, cost-effective and 'bush-friendly' solutions if they are to be successful.

WINNING THE MILITARISATION DEBATE

The 'militarisation' debate around conservation has grown in the past few years, with increased criticisms levelled from some quarters at counter-poaching operations. An increase in the use of private military companies to provide counter-poaching support and training has been criticised by some academics and commentators.¹⁴ Abuses of local communities by conservation organisations have been publicised to reinforce the argument.¹⁵

It should be accepted that some of the criticism has been valid, as counter-poaching operations have led to violence against local communities either directly by



Pictured is a British trainer mentoring a park ranger in one of Malawi's National Parks. The goal is to train the rangers to deal with poaching and the illegal wildlife trade that is responsible for the loss of countless species and is driving the decline of many African animals. Photo: Lieutenant Colonel Tim How, Crown Copyright

rangers or indirectly as an escalation in violence between poachers and rangers which has led to a decrease in security for local populations.¹⁶

However, in many cases the criticisms are invalid and there are instances where rangers provide security for local populations and are highly valued, such as in Garamba National Park.¹⁷ Furthermore, the criticism ignores the damage to local populations caused by IWT, both in terms of the violence it brings and also the lost income from resources that are stolen and for which communities receive only a tiny percentage of the profits involved.

The key to addressing the militarisation criticism is to ensure the human terrain is fully understood and local communities are supported as part of a CIWT operation. Where the British Army's deployment is primarily focussed on training rangers leading to poor local

¹³ Rachel Love Nuwer, Poached: inside the dark world of wildlife trafficking, and see https://thingreenline.org.uk

¹⁴ See, for example, some of the outputs of BIOSEC at Sheffield University: https://biosecproject.org/2019/11/25/comment-the-ethics-of-violentconservation/

¹⁵ See, for example, https://www.theguardian.com/global-development/2020/feb/07/armed-ecoguards-funded-by-wwf-beat-up-congo-tribespeople

¹⁶ See, for example, https://e360.yale.edu/features/green-violence-eco-guards-are-abusing-indigenous-groups-in-africa

¹⁷ Richard Milburn, 'The Forgotten Pillar of Postwar Recovery', PhD Thesis.



Members of the Welsh Guards' Battlegroup, training for future operations in Kenya, have been waging a real war on poaching in the country. The training task force objective is to help the anti-poaching team in the north of the country deal with the growing threats posed by big game poachers. The anti-poaching teams were taught map reading skills and how to give a grid reference of where the poachers are so reinforcements can be called in quickly. **Photo: Sergeant Rupert Free RLC, Crow**



people subsequently being arrested or killed, there is an enduring risk of criticism. However, if the Army applies its well-honed COIN doctrine and experience alongside its well-known affinity for winning hearts and minds in its theatres of operations, those criticisms are less likely to hold.

CONCLUSION

With a more comprehensive approach, the British Army will, quite rightly, be able to show that on Op CORDED they are training rangers to help keep them safe and supporting them to arrest criminals who are stealing the resources of local communities and engendering violence and corruption. Effective application of COIN principles, particularly focused on understanding the human terrain and winning 'hearts and minds', will not only avert the risk of the British Army being criticised for militarising conservation, but will showcase the value of the British Army's involvement and create a blueprint for others to follow. At the same time, the British Army's capability in COIN environments will improve, and CIWT operations offer a real-life space for innovation in the British Army's approach to low-intensity COIN operations.

Being able to demonstrate that the British Army is also supporting community involvement and improved economic conditions for local people who start to benefit from conservation through better incomes as well as health and education support not only starts to tell a very positive story, but will contribute significantly to a reduction in the IWT. Furthermore, stressing the legal training provided by the British Army to ensure arrests are made legally, and rangers conduct themselves within the law, is an opportunity to showcase how the British Army's involvement can help prevent current abuses fuelling the militarisation debate. Information operations including positive media coverage in combination with this approach will ensure that the message of the British Army's beneficial involvement has the potential to become a significant, and high profile, story that could significantly enhance HMGs profile, particularly across sub-Saharan Africa and the Commonwealth.

The Fall of Singapore Part 1

In Part 1 of his two-part article **Lieutenant Colonel Mike Tickner** provides a study of the fall of Singapore to the Japanese in 1942.



A View of Singapore after a Japanese air attack in early 1942. Photo: British official photograph no. FLM. 903. United States. Office of War Information, Released, Wikimedia.

ARTICLES

n February 1937 Major General Dobbie, GOC Malaya Command, conducted an estimate to consider how an enemy might invade Malaya and Singapore. Although his planning assumptions did not specify the enemy, Japan was recognised as the most likely aggressor. Dobbie concluded that an attack would most likely be against the east coast of the Malayan peninsular during the monsoon season (October to March). Amphibious landings would be made at Singora and Patani in Siam and Kota Bharu in north-east Malaya. The enemy would quickly seize forward airfields then rapidly advance south before attacking Singapore across the Straits of Johore. The accuracy of Dobbie's deductions would be proved correct in December 1941 when southern Malaya and Singapore would be captured by Japan in a 70-day campaign.

THE ROAD TO WAR

A party of British officers carrying a white flag to surrender to the Japanese in Singapore in February 1942 remains one of the most iconic images of the Second World War. The cause of this defeat continues to provoke debate but it is a combination of factors linked to the conclusion of the Great War. Many Western democracies were war-sick, bankrupt, often mired by political instability and believed that future wars must be avoided. When finally forced to fight in the Far East, British plans were flawed, under-resourced and squandered the lives of her soldiers. Conversely, the resource poor Japanese saw the inter-war years as a struggle for national survival where war was necessary to preserve her national interests.

Japanese industrialisation began in the 1860s and was constrained by her limited access to natural resources. This shaped Japanese foreign policy for the next 80 years as she expanded across East Asia and the Pacific, which ultimately lead to war. Japan reversed her pro-German position in 1914 hoping for favourable post-war trade arrangements which did not result from the 1919 settlement. The Japanese population was growing rapidly and her need for food and for raw materials remained for her limited industrial base. Japan saw the wealth of the British and Dutch colonies: Burmese rice, oil, hardwoods and rubber; Malayan rubber, tin and bauxite¹ and the Netherlands East Indies who were Japan's second largest oil provider. The USA forced punitive trade deals and embargos on Japan to constrain her commercial and military influence in the Pacific. Korea had been annexed in 1905 and now Japan expanded into Manchuria in 1931-32 before pushing further into China in 1937 in a bid to secure natural resources.

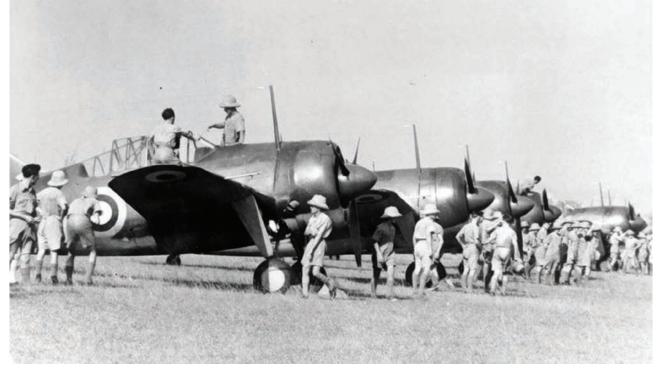
International opinion following the Great War sought to avoid another major conflict, ratifying a series of treaties to limit the size of armed forces and the quantity and size of key equipment. British foreign and defence policy reflected the international mood but she also needed to to protect her colonies which were essential to economic recovery. Changing interwar UK Governments had conflicting defence policies causing changes in investment and under-resourced and hollowed-out military structures. A new £60m² Royal Navy dockyard was planned on Singapore's northern shore but was cancelled by the short-lived 1924 Labour Government. Work was restarted by the subsequent Conservative Government who also agreed to construct coastal batteries on Singapore's southern coast. The 1929 Labour Government again reduced defence spending, citing the Committee of Imperial Defence's 1928 conclusion that Britain was unlikely to fight a major war within the next 10 years. The risk to Britain's Far East colonies was considered as negligible and a small under-manned and under-resourced garrison appeared sufficient. The dockyard was finally completed in 1938 and later proved incapable of re-fitting ships damaged off Greece and Crete in 1941. Britain's inconsistent defence policy and spending and under-resourced garrison was correctly interpreted by the Japanese as an inability and an unwillingness to oppose their territorial ambitions.

TOO LITTLE, TOO LATE

Japan's territorial ambitions and resurgent militarism had become increasingly aggressive by the mid-1930s. The League of Nations' condemned Japanese war crimes in China in 1933 but to no effect. Japan then aligned herself with Nazi Germany and Fascist Italy, signed a neutrality pact with the Soviets and increased war production and her oil reserves for a short but, hopefully, decisive campaign against the West. Whitehall still ignored the threat and the Foreign Office informed Malaya Command in September 1939 that Japan would not dare take on the

2 Equivalent to £3bn in 2020.

¹ A mineral used in aluminium production and the chemical, cement, steel and petroleum industry.



Pictured are Brewster Buffaloes for the re-equipment of Nos. 21and 453 Squadrons RAAF, being inspected by RAF personnel at Sembawang, Singapore. © IWM CF 1263

British Empire³ Events in Summer 1940 further focused the Government's attention on the immediate demands of the European theatre rather than her Far Eastern colonies.

Twenty years of inconsistent defence policy and funding was now exacerbated by independently produced and often conflicting single-service plans to defend Malaya and Singapore. The Royal Navy planned to assemble a fleet which could arrive within 70 days. In September 1939, this was extended to 180 days because of the need to defend Britain, destroy German battleships⁴ at large and to protect the essential Atlantic convoys. This placed an even greater burden on the Army and the RAF to withstand a siege.⁵ It was finally agreed in August 1941 to establish Z Force comprising one the Navy's most modern battleships, *HMS Prince of Wales*, a Great War battle cruiser, *HMS Repulse*, and four destroyers of similar vintage.

The RAF planned a network of airfields across Malaya and Singapore and one critic said that locations were influenced more by the local social scene rather than the strategic importance. The Air and Land plans were developed independently and consequently airfield defence would later unhinge the Army's plans. The RAF required 336 aircraft which she struggled to secure and she still relied on predominantly outdated variants. The estimate increased to 582 aircraft in October 1940 just as the Battle of Britain was concluding, but aircraft production was prioritised for other theatres. Without an immediate threat, the Air Command Far East was informed that even the earlier figure was unachievable until the end of 1941.⁶

Malaya Command was no longer an operational backwater and was now commanded by Lieutenant General Percival who had assisted with Dobbie's 1937 estimate. Percival initially considered that his six infantry brigades were sufficient to defend Malaya and Singapore. However, these brigades comprised either Regular battalions that were heavily *'milked'* of their best manpower or were newly formed battalions whose soldiers often had only four or five month's service.⁷ They also lacked their full complement of artillery and engineers and were trained to fight in the North African desert. Jungle training was not conducted because the jungle was considered a health risk and field defences were not constructed as Percival believed that *'defences are bad for morale'.*⁸

³ Farndale, Sir Martin, General History of the Royal Regiment of Artillery: The Far East Theatre 1941 – 46, (London: Brassey's, 2000), p.5.

⁴ Eq the Prinz Eugen, Tirpitz, Bismark and the Graf Spee.

⁵ Woodburn Kirby, S., Major General, History of the Second World War The War Against Japan Vol 1 The Loss of Singapore, (London: HMSO, 1968), pp.28 - 35.

⁶ Woodburn Kirkby, pp.49 -54.

⁷ Wigmore, Lionel, Australia in the War 1939 – 1945, Series One Army, Vol IV The Japanese Thrust, (Canberra: Australian War Memorial, 1957), p.290.

⁸ Wynne, Stephen, The Surrender of Singapore: Three Years of Hell 1942 – 45, (Barnsley: Pen and Sword Books Ltd, 2017), p.77.



Pictured is Lieutenant-General A E Percival, General Officer Commanding Malaya at the time of the Japanese attack © IWM K 1261A

Japanese spies moved freely in Malaya and Singapore's multi-cultural society and observed the preparations, monitored troop movements and surveyed defences. After the war, US Military Intelligence captured these plans, and commended the accuracy of this work but also noted mis-spellings such as Forts Labrador and Connaught were spelt '*Labladore'* and '*Kanaut'*.⁹ In addition, there was an active anti-British expat Indian community, some of whom aided the Japanese, such as Captain Patrick Heenan, an Indian Army officer working in intelligence with pro-Japanese sympathies who passed information to them. A 1994 book¹⁰ revealed how Heenan was caught and then executed for treason two days before Singapore's surrender.

OPERATION MATADOR

Operation MATADOR was a British pre-emptive move into Siam and Malaya to secure those landing sites identified by Dobbie in 1937 and to establish a defensive line inland from the beach-heads. The British Government was opposed to entering neutral Siam without permission and there was a protracted correspondence between Whitehall and Malaya Command. The plan was finally approved in December 1941 but with caveats and Percival could not launch without permission nor prepare defensive positions.

Under the cover of monsoon storms, Lieutenant General Yamashita's 25th Army's invasion fleet was spotted by RAF aircraft on 6 December 1941 but was then lost in poor weather. Desperate signals were sent from Malava Command to London but while III (Indian) Corps'11 notice to move was reduced, permission was not granted to deploy. On 8 December, Z Force deployed but was spotted by Japanese aircraft within hours and then spotted by a Japanese submarine two days later. Japan had occupied French Indo-China in July 194112 and Singapore was now in bombing range. On 10 December, the Japanese 22nd Air Flotilla in Saigon was preparing to bomb Singapore but the target was changed to Z Force and bombloads replaced with torpedoes. Without air support, HMS Repulse and Prince of Wales were sunk and the remaining four destroyers withdrew. The Royal Navy was now unable to challenge the Japanese Navy during the invasion of Malaya and Singapore.¹³

Also on 8 December, Singapore received its first air raid and Japanese troops landed in heavy swell at Singora and Patani in Siam, receiving only token opposition from Siamese troops. Percival finally received the permission to launch Operation MATADOR, having signalled London four days previously, however, it was no longer the planned pre-emptive strike.

Two battalions and a mountain battery from 11th (Indian) Division moved to Siam to stop the Japanese by destroying 'The Ledge' which was a vital section of mountain road. Known as KROHCOL, Indian troops found the border gates locked and so smashed the padlock. The first soldiers across were shot by Siamese policemen who continued to oppose the Indian troops while in Siam. KROHCOL failed to destroy The Ledge but successfully withdrew to Malaya and re-joined its Division.

The majority of 11th (Indian) Division had moved to Kota Bahru on the north-eastern Malayan coast. Unable to defend a wide frontage and under heavy shelling, the Division was easily by-passed by the advancing Japanese and RAF Kota Bahru was prematurely abandoned the following day. The Air campaign was rapidly failing

13 Wynne, pp.7 - 9.

⁹ After The Battle No 31, Singapore (London: Battle of Britain Prints International Ltd, 1981) p.5.

¹⁰ Elphick, Peter and Smith, Michael, Odd Man Out: The Story of the Singapore Traitor, (London: Trafalgar Square, 1994).

¹¹ Pronounced 'Third' (Indian) Corps.

¹² Under the surrender agreement in 1940, French colonies were governed by the Vichy government. German and Japanese forces were able to occupying these territories unopposed.



One of Singapore's 15-inch coast defence guns firing, 14 November 1941 © IWM K 755

and now began a pattern of abandoning virtually intact airfields, leaving fuel for the Japanese and vital spares. The RAF was outmatched both in quantity and quality of aircraft, with inexperienced pilots and limited antiaircraft batteries to protect their airfields. Hurricanes did not arrive in Singapore until mid-January 1942 but were still out-matched by the more experienced and skilled Japanese pilots. Dispersal sites were considered to protect the remaining aircraft but they withdrew to Sumatra instead, which limited their time over Malaya and Singapore. By the 10 December, the Army was withdrawing to a new defensive line, Z Force was defeated and the RAF had only ten operational aircraft remaining in north Malaya.¹⁴ The Japanese now had Maritime and Air superiority.

THE RETREAT BEGINS

Now began a pattern of withdrawal and hasty defence before further withdrawals. III (Indian) Corps was thinly spread across the Malayan peninsular and unable to concentrate force when required. Roads and railways followed Malaya's coastlines and jungle and the central highlands further hindered the movement of reinforcements or generate any tempo. A flawed and under-resourced plan was further skewed by the increasing demands of airfield defence detracted from the overall Land plan for Malaya.

The 11th (Indian) Division withdrew to hastily prepared positions at Jitra and to defend RAF Alor Star. Having lost much of its artillery and without air support, Percival later considered that the battle was lost before it started.¹⁵ The Division engaged the Japanese's main axis of advance in torrential rain on 11 December and positions were rapidly over-run and casualties taken. Permission to withdraw was requested but Percival considered that this would be bad for morale¹⁶, unaware that morale was deteriorating and that some captured Indian troops had

- 14 Stiles, Mark, Malaya and Singapore 1941 42: The Fall of Britain's Empire in the East, (Oxford: Osprey Publishing, 2016), p.77.
- 15 Percival, Lieutenant General, Arthur, Operations of Malaya Command from 8th December 1941 to 15 February 1942, (London: The War Office, 1948), Para 173.
- 16 Woodburn Kirkby, p.211.

offered to fight with the Japanese Army.¹⁷ The Division fought on, unaware that RAF Alor Star had also been abandoned. When the order was finally given on 12 December, troops withdrew in small groups along a single road in torrential rain having lost or abandoned all transport, artillery and anti-tank guns. Cohesion and morale were crumbling but the majority of III (Indian) Corps continued to fight doggedly, often with great gallantry.

During the next seven weeks, III (Indian) Corps attempted to stop the Japanese 25th Army. Using bicycles without tyres, the clatter on the road heralded the advancing Japanese¹⁸ whose tempo and fighting spirit out-matched her inexperienced opponent every time. Hindered by poor planning, successive withdrawals continued as the Corps progressively retreated south towards Singapore. On 4 January 1942, the exhausted 11th (Indian) Division arrived at the Slim River and was ordered to defend an airfield and to stop the Japanese advance to Kuala Lumpur and Port Swettenham. For once, troops had two days to prepare with 1,400 anti-tank mines and a Royal Artillery anti-tank regiment.¹⁹ However, poor use of ground, poorly sited positions, an absence of artillery and too much reliance on reserve demolitions would again fail to halt the Japanese advance. The Division initially enjoyed success until their linear defences were outflanked and, without any fall-back positions, 30 Japanese tanks rampaged

among the Indian troops for six hours. By now, 3,000 prisoners had been taken, the 6th and 15th (Indian) Brigades merged due to losses and the battalions in the 12th and 28th (Indian) Brigades were each reduced to company strength.²⁰

WEST FORCE

The newly arrived 8th (Australian) Division joined the 9th (Indian) Division and elements of the newly arrived 18th (British) Division to form WEST FORCE. Commanded by the Australian Divisional commander, Major General Gordon Bennett, they deployed to north Johore and along the western coast of Malaya. The Japanese advance was now reinforced with troops who had landed in Siam and had finally caught up with the main advance. Bennett ignored Percival's direction and sited his troops too far back and too widely spread. Between 14 to 24 January, WEST FORCE prevented the retreating Indian Division from being cut off and managed to slow but did not stop the Japanese advance before retreating herself. Air support was negligible as the RAF withdrew to defend Singapore and the War Diary of 2/16 Battalion Australian Imperial Force (AIF) recorded:

'Only on two occasions during 13 days of active operations were British or Allied planes sighted ... [Japanese] aircraft worked in close cooperation with [her] forward troops.'²¹



Pictured are Australian Anti-Tank gunners overlooking the Johore Causeway between Singapore and Malaya. The men man a 2-Pounder Anti-Tank gun. Photo: Collection Database of the Australian War Memorial, Released, Wikimedia.

17 Tickner, Mike, Jai Hind! Chalo Delhi: The Indian National Army 1942 – 1945, British Army Review 169, Spring/Summer 2017.

- 19 Woodburn Kirkby, p.281.
- 20 Ibid, p.281.

¹⁸ ITV World at War series. Episode 14 'It's a Lovely Day Tomorrow'. First shown 6 February1974.

²¹ Wigmore, p.278.



Royal Engineers prepare to blow up a bridge in Malaya during the British retreat to Singapore. In the background Chinese rickshaws loaded with rice from abandoned government stocks are crossing the bridge. The Allied forces under General Arthur Percival surrendered to General Yamashita in Singapore on 15 February 1942 after a Japanese campaign in Malaya lasting nearly 70 days. **Copyright IWM 470045**

ACROSS THE CAUSEWAY

Winston Churchill and General Wavell, Commander ABDACOM²², ordered Percival to hold firm, until finally realising that Malaya could not be held without air support and that Singapore still needed to be defended. Preparation now began for a siege and reinforcements, including much needed anti-aircraft regiments, arrived, their ships often redirected on route to the Middle East.²³ On 19 January, Percival received new direction from Wavell:

"... think out the problem of how to withdraw from the mainland should withdrawal become necessary and how to prolong resistance on the island ... The battle is to be fought out in Johore til reinforcements arrive."²⁴

Planning began for the evacuation of troops from southern Malaya to Singapore and was the best organised and most successful operation of the campaign. However, it was only possible by a seven day delay operation where British, Indian and Australian troops sustained further heavy losses. Much of the panic of the preceding weeks was contained and the Army withdrew through the 22nd (Australian) Brigade's outer cordon and 2nd Battalion Argyll and Sutherland Highlanders' inner cordon, both protected with anti-aircraft batteries. Despite air supremacy, the Japanese failed to destroy the retreating force who withdrew in good order with its remaining armour, vehicles and stores, with many troops moving on military vehicles and civilian buses. Units debussed at Johore Bharu on the southern tip of the Malayan peninsular and then marched along the 1,000 yard road and rail Causeway, which joined Singapore to the mainland. The Argylls were the last battalion across the Causeway with their pipes playing 'A Hundred Pipers' and 'Hielan Laddie'. The Causeway was blown at 0830 hours on 31 January creating a 70' gap. After 55 days of fighting, Singapore was now besieged and awaiting the forthcoming battle. The only hope was that the garrison could hold out until relieved.

22 ABDACOM: American British Dutch Australian Command.

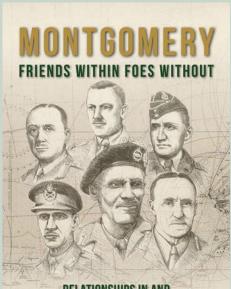
23 18th (British) Division's troop ships were redirected while sailing to the Middle East.

24 Wigmore, pp.253 – 254.

MONTGOMERY: FRIENDS WITHIN FOES WITHOUT, RELATIONSHIPS IN AND AROUND 21ST ARMY GROUP

Malcolm Pill

Review by Chris Buckham



RELATIONSHIPS IN AND AROUND 21ST ARMY GROUP MALCOLM PILL

Publisher: Unicorn Publishing, 2019, Hdbk, pp 303, photos 30, £17.50, ISBN: 978-1-912690-53-4 Montgomery has proven to be, along with Patton for the Americans, perhaps the most controversial of the British senior commanders of the Second World War. That he was a brilliant commander (with an ego to match) has been analyzed in multiple biographies and studies; Pill however, has approached his study of Montgomery strictly from the perspective of his personal and command relationships with his immediate staff and, externally, with those leaders of the British, Canadian and American forces germane to his command relationships. Pill's is a story of personality, style and expectations as opposed to operational or tactical scrutiny.

Pill's multifaceted approach reveals a great deal about the inner thoughts of Montgomery: what he saw as important, how he viewed the execution of the war, what were the events and experiences that shaped both his and those with whom he interacted, perspectives and what influenced his decision-making. While he has drawn upon a multitude of sources, it is the personal diaries and letters (he was a prodigious chronicler) of Montgomery and his confreres where Pill is able to shed light on the inner thoughts of the man.

The author has divided his narrative into a series of subsections that fall broadly into Montgomery's dealings with subordinates within 21st Army Gp, allies (and external commands) and operations within which he was involved. Pill's engaging account casts a critical light not upon Montgomery's capabilities as a tactician and operational planner, but upon his confidence and competence as a leader and commander. Much of the controversy, Pill conclusively proves, that Montgomery was involved with, was of his own making and not the result of external circumstance. Montgomery's experience as commander of the 8th Army in North Africa and his subsequent endearment to the British nation as the 'victor over Rommel', ultimately led him to fall victim to that all too common occurrence of 'believing his own press'. As Pill observes, this loss of humility resulted in an inflated sense of self that was toxic to relations with those not under his direct command. Montgomery's inability to acknowledge the competencies and effectiveness of others outside of his immediate control was his Achilles heel and undermined much of the cooperation and support that he might otherwise have enjoyed.

This is a unique and fascinating account of the man and the commander that was Montgomery. The reader is left with the impression that, once the war ended, he struggled to find his place. Certainly his relations with a majority of his subordinate commanders remained good in the years following the war but the fact that he had burned so many bridges within the British command community and on the international stage precluded his being considered for many positions that he would otherwise have been eminently qualified for. Pill has done his research and his book serves as an excellent example and warning for those leaders who come after.

'THE LIGHT THAT FAILED: A RECKONING' Ivan Krastev and Stephen Holmes, 2019

Review by Lieutenant John Fuller

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'A brilliant, original book on the crisis of modern liberalism ... a must-read to understand our present discontents' LIONEL BARBER, FINANCIAL TIMES

Published by Penguin, April 2020, Pbk, £9.00, pp 256, ISBN-13 : 978-0141988108 **1** 989 was a vintage year in history. For some, the collapse of the USSR heralded not just the end of the Cold War but the end of History itself.¹ During the following three decades, the year 1989 rightly became seen as a page marker in the human story but its long-term consequences have since undergone a vigorous reassessment amid the salient rise of populism.

Thirty years is a healthy altitude from which to look down upon an important event but the focus of this book by Ivan Krastev and Stephen Holmes, is fixed just as much upon present horizons as past ones. Coauthorship sometimes breaks the flow of a book but this one's trajectory remains on point throughout. The central question stamped throughout its 264 pages is as follows: 'Why did the liberal utopia promised in 1989 not materialise in the way its proponents assumed it would do?' In short, the answer presented is that the *emulation* of liberal capitalism could never have been truly replicated in its Western guise, and that there was no alternative system for the people of the 'New East' to choose from.

Most citizens across Eastern Europe needed time to adjust to their new surroundings but others were quicker off the mark. The flash-to-bang of market economics left a few extremely wealthy and the rest just as poor as they'd been under the old regime. Freedom of movement, which was held up as one of the great triumphs of 1989, resulted in a mass exodus of young people from east to west creating trauma for those communities left behind. Confusion turned to humiliation, and then anger. With no other option permitted on the table, argue Krastev and Holmes, many across Eastern Europe were drawn to populism as the only voice offering an alternative noise.

Whilst some countries sought to emulate the economic models of the West, others looked to merely simulate them. The entire book could have focused on Putin's Russia but instead its lens is widened to encompass the rest of Eastern Europe and China as well. Broadening the scope might make for a more varied read but there's

1 Fukuyama, F 'The End of History and The Last Man', Free Press, 1992

only so far an argument can be stretched before its cracks begin to show. China is not an easy shoehorn for such a Euro-centric position and by bringing in the likes of Poland and Hungary to the fold, one is forced to acknowledge the 'success' stories of Estonia, Latvia and Czech Republic as well. At times, the authors risk biting off more than their arguments can chew.

Yet this book arrives at a vital time. Populists like Hungary's Viktor Orban and Poland's Jaroslaw Kaczynski have now fully turned their backs on the liberal values they once supported² whilst their voters feel a sense of betrayal at the promises that never came true. Although the political is the mainstay of this book, the psychological hovers permanently in the margins. The liberal order, its critics maintain, has become too cosmopolitan and narrowly focused on trumpeting the rights of the minority over the majority, whilst Western institutions were blind to the realities of post-communist Europe. *Coca Cola* is the same whether its drunk in Texas or Tiraspol, but political ideas taste differently depending on the palate of the individual.

Whilst a global health pandemic could never have been foreseen by the authors, their arguments are ominously attested by the reactions of New Europe's strongmen to Covid-19. We shall have to wait to find out what the long-term effects of the inevitable recession will be, but if the arguments of *The Light that Failed* are to be believed, future criticism of globalisation will be even more fervent.

The book concludes with a look at China's economic success which is viewed as the ultimate winner of the West's imitation games. Whilst others sought to copy the liberal democratic order *verbatim*, Beijing chose to borrow only the aspects it felt most suited its strategic ambitions - a case of following the means not the ends - and instead developed a system that worked on its own terms.

What lesson, then, can we take from this book? Whilst its focus is primarily fixed on the experience of Eastern Europe and China, perhaps a similar analysis can be laid across other attempts to convert parts of the world to the 'Western' way of doing business. Encouraging others to adopt liberal values and institutions will always seem attractive at first - especially when lured by the promise of economic growth. But when the anticipated benefits are slow to materialise and no alternative system is offered, disillusion is sure to follow. 'Humans need choice' claim the authors, 'even just the illusion of it'.³

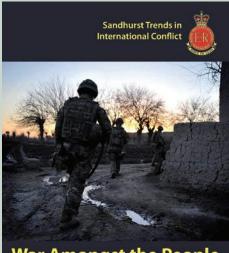
Upon finishing his second term in office, President Obama was said to have remarked 'What if we were wrong?'. His question was offered rhetorically during a moment of reflection and wasn't suggesting a rearrangement of the international order. Yet perhaps it can be posed in a different way; 'What if we weren't completely right?'

² Krastev, I & Holmes, S. 'The Light that Failed: A Reckoning', Penguin Publishers, 2019, p.65

³ Krastev, I & Holmes, S. 'The Light that Failed: A Reckoning', Penguin Publishers, 2019, p.5

WAR AMONGST THE PEOPLE Edited by David Brown, Donette Murray, Malte Riemann, Norma Rossi, Martin A Smith

Review by Dr Aaron Edwards



War Amongst the People Critical Assessments Edited by David Brown, Donette Murray, Malte Riemann, Norma Rossi and Martin A. Smith

ord by General Sir Rupert Smith KCB DSO OBE QGM

Sandhurst Trends In International Conflict Series Published by Howgate Publishing Limited; Illustrated edition (13 May 2019), Pbk, 288 pp, £29.99, ISBN-13: 978-1912440023 If you know the enemy and know yourself, you need not fear the result of a hundred battles. If you know yourself but not the enemy, for every victory gained you will also suffer a defeat.'

This quote is perhaps one of Sun Tzu's most famous aphorisms. It has a timeless quality to it. It reminds practitioners of warfare that there is a danger in spending too much time navel gazing and not enough time working out what your adversaries are up to. Sun Tzu's The Art of War has long been prescribed as a key text in Professional Military Education (PME). It serves as a useful reminder that even though we may not know exactly what character future war might take, we can usefully consult 2,500 years of strategic history to help us to, at the very least, expect the unexpected. The conceptual component of fighting power has long been privileged by the British Army as a strategic enabler by which to aid understanding of military principles and practice. An education in such matters is seldom wasted and, indeed, can and does lead to innovation and, perhaps more importantly, success in the heat of battle.

Understanding the complex security problems in the world is part of the remit of the Faculty for the Study of Leadership, Security and Warfare at the Royal Military Academy Sandhurst. *War Amongst The People* has been curated by leading academics in LSW's Defence and International Affairs department and goes some way to helping us to critically analyse the kind of wicked problems facing Army officers in the world today.

War Amongst the People is organised around the concept advanced by General Sir Rupert Smith in his 2005 book The Utility of Force: The Art of War in the Modern World. An influential book, which was based on years of a senior practitioner's own operational experience that privileged lateral thinking as a key component of command and leadership, Smith's ideas around the changing character of war remain relevant today. Moreover, his views on the flexible strategic deployment and employment of armed force in 'wars amongst the people' remains a paradigm-shifter in PME.

The Utility of Force was one of the first books I read when I began teaching in the military education environment and, soon after its publication, it was common to run into General Smith at universities, think tanks and military colleges where he undertook important work to engage both military practitioners and academics working on defence and security issues. I found General Smith's personal commitment to developing the conceptual component of fighting power hugely impressive. And the more I engaged with Army officers at home and overseas on the ideas contained in his book, the more I appreciated how my military colleagues saw the myriad of security challenges facing the UK and its allies. It was, therefore, doubly rewarding to engage with my colleagues who organised the Sandhurst Trends in International Conflict (STIC) series, which led to War Amongst the People and a follow up volume, Violent Non-State Actors in Modern *Conflict*. Both events brought together academics and practitioners to discuss important matters in international security.

War Amongst the People is divided into four parts, with a total of 10 chapters, each dealing with conceptual debates, practical challenges, legal controversies, and the UK domestic context. Some of the chapters are farreaching in their analysis. Professor Beatrice Heuser explores war itself, arguing that we need to 'abandon dualist and excessively reductionist categorisations of war' (p. 33) and to think about teaching military officers about war according to its differing contexts. Asking the right questions about armed conflict is an essential task of military practitioners. Heuser is undoubtedly right. In another insightful chapter, Jyri Raitasalo suggests, more critically, that war amongst the people is only 'one perspective on warfare amongst many others' (p. 37). 'Hyped concepts within the defence realm usually have a short lifecycle' (p. 49) and we shouldn't think of *War Amongst the People* as a paradigm for all seasons. One of the most impressive chapters in this volume is written by Alex Waterman, a rigorous and deep dive into the literature on counter-insurgency. Waterman makes the pertinent observation that the overarching conceptualisation of 'the people' is problematic. I agree. Treating 'the people' as if they are a unified entity does not make much sense in the world we now inhabit. As Waterman observes, it 'oversimplifies societies and

the complex relations, cleavages, conflicts, coalitions and actors that make up political order' (p. 56). Smith's acknowledgement that 'the people' are not in practice a monolithic block but united by political leadership also overlooks the complexity of power distribution and the bargaining that states must undertake with Violent Non State Actors (VNSAs) in modern conflict, a point developed by several authors in the volume of the same name (reviewed in this edition).

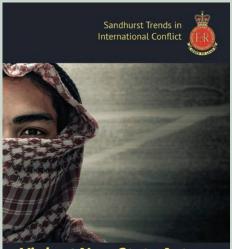
Elsewhere in *War Amongst the People*, Vladimir Rauta undertakes a useful assessment of the use of proxy forces in regular and irregular war, concentrating his gaze on Afghanistan. One of the intriguing by-products of using this as a framework can lead to fragmentation amongst belligerents in conflict. I read the chapter against the backdrop of continuing Taliban battlefield successes in 2021, a depressing yet anticipated development, in light of Waterman's observation about Syria, another complex conflict where the regime has had to carefully manage relationships, even with former enemies, or risk its own survival (p. 71). Shifting to a new paradigm of disaggregation where we see 'wars amongst the peoples', rather than 'the people', as Waterman suggests, may lead us to develop more finely tuned indicators for success.

Identifying who constitutes 'the enemy' in such complex security environments is the focus of Andree-Anne Melancon's chapter on redefining the status of combatant, regarding Direct Participation in Hostilities. This is another important addition in this volume. Identifying who is participating in combatant has been one of the most profoundly difficult of tasks in post-Cold War battlefields. Melancon advocates using a twofold approach to distinction involving individual and situational discrimination, which helps identify legitimate targets in terms of the context in which they appear. Other chapters look at poll data and military doctrine in helping us understand the paradigm shift Smith helped trigger by his profound analysis. As Rossi and Riemann observe in their conclusion, 'wars amongst the people' should be seen 'less as a fixed and established phenomenon and more like a conceptual prism through which contemporary intra-state conflicts can be read and questioned' (p. 249). The idea of asking pertinent, well-informed guestions lies at the heart of this excellent volume.

VIOLENT NON-STATE ACTORS IN MODERN CONFLICT

Edited by David Brown, Donette Murray, Malte Riemann, Norma Rossi, Martin A Smith

Reviewed by Dr Aaron Edwards



Violent Non-State Actors in Modern Conflict

Edited by David Brown, Donette Murray, Malte Riemann, Norma Rossi and Martin A. Smith

Foreword by Major General Duncan Capps CBE

Sandhurst Trends In International Conflict Series Published by Howgate Publishing Limited; Illustrated edition (13 May 2019), Pbk, 288 pp, £35.00, ISBN-13: 978-1912440207

t would be convenient to take the easy route out by decrying how VNSAs are completely novel phenomena and we must see them through a lens that tries to convince us that everything in the security environment has changed utterly. The reality is that while the character of war changes, its nature remains constant. This is not immediately obvious when we are faced with the strategic illiteracy of those who think and speak to the contrary. It was the late journalist and liberal commentator Christopher Hitchens who observed how the presence of a 'Maginot Line of the mind' was responsible for the Pentagon mobilising the largest conventional land force in the history of mankind against a small number of VNSAs in the wake of 9/11. Hitchens' recognised how VNSAs were almost certainly responsible for the attacks but that they were enabled by state actors. This interactive network and increasing symbiosis between states and VNSAs has not been fully understood and so it was a relief to see it explored in some detail by several of the authors in this second volume.

Importantly, the state-VNSA relationship is explored by Helle Malmvig who turns to the Syrian case study to challenge the faulty thinking amongst those who deny the blurring of lines between state and non-state actors. Her conclusion is that Syria is a 'fragmented political order of overlapping and entangled authorities' (p. 80) and that this has profound consequences for how policymakers in Western states who remain tethered to an oldfashioned Weberian understanding of centralised state bureaucracies enjoying unbridled monopolies over the legitimate use of force. Among the other seven chapters in this volume are evaluations of warlords, militias, terrorists, and mercenaries. There is also a useful chapter on the view of the changing character of war from practitioners involved in UK Government efforts to make sense of the world in a policy and strategic sense. Another intriguing chapter by Abigail Watson strikes a cautionary note about state strategies for delivering effect by way of local proxies, which can often 'exacerbate political divides and prolong conflict' (p. 153).

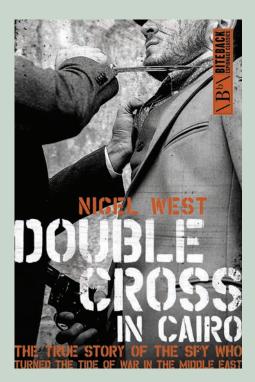
In a concluding chapter, Rossi and Riemann argue that 'political decisions concerning approaches of dealing with VSNAs in situations of armed conflict cannot afford to be unidimensional, considering only strategic advantages, normative commitments or economic concerns' (p. 223). They concur with Donette Murray's introductory remarks, encouraging analysts to adopt broader political and military responses to the challenge exerted by VNSAs (p. 12). Worthy of mention here is Murray's strategic view of how states might more profitably engage these actors by finding their pressure points and exerting leverage upon them as the broader context enabling their violent strategies shifts. This is certainly worth pondering by those Army Officers who find themselves in strategic staff appointments where they can engage civil servants and politicians on the basis of painting a more realistic picture of the complexity of the international security environment. To return to Sun Tzu, we are reminded how the 'art of war is of vital importance to the State,' a 'matter of life and death,' and 'a road either to safety or to ruin.' Reading and engaging with this, and the previous volume, War *Amongst The People*, will certainly leave us heading in the direction of greater security.

Overall, both volumes under review offer readers the most up-to-date, conceptually rigorous, and informative analysis on the complexity of the contemporary security environment. Army Officers will find much here that is innovative and intellectually rewarding.

DOUBLE CROSS IN CAIRO: THE TRUE STORY OF THE SPY WHO TURNED THE TIDE OF WAR IN THE MIDDLE EAST

Nigel West

Review by John Peaty



Published by Biteback Publishing (10 Oct. 2019), Ppbk, 352 pp, £9.00, ISBN-13: 978-1785905186 As part of the legendary Double Cross (XX) operation, Jewish double agent Renato Levi (codenamed CHEESE) proved to be one of the Allies' most effective weapons in the Mediterranean theatre in the Second World War. In 1941, with the help of MI6, Levi built an extensive spy ring in North Africa and the Middle East. But, most remarkably, it was entirely fictitious.

This network of imagined informants peddled dangerously false information to Levi's unwitting Axis handlers. His efforts would distort their estimates of Allied capabilities and intentions for the remainder of the war. Like all the best deceptions, his communications contained just enough truth to be palatable, and just enough imagination to make them irresistible. In a vacuum of seemingly trustworthy sources, the Axis not only believed in the CHEESE network, but they came to depend upon it. And, by the war's conclusion, he could boast of having helped the Allies thwart Rommel in North Africa, as well as diverting forces from elsewhere. Until now, Levi's devilish deceptions and feats of derring-do have remained a matter for speculation and rumour (apart from a few passages in Howards Official History of Strategic Deception). Using the now declassified files, for the first time this book details the heroic exploits of Levi and spells out one of the Second World War's most closely guarded secrets.

'Nigel West' (AKA Rupert Allason, sometime MP) made his name as a historian of intelligence and security in the 80s. Long before the declassification and release of the records, his works were highly regarded at the time for their precise information and excellent sources. West has continued to produce fascinating books on the subject but now based on research among the surviving records, such as this book, his 36th. While GARBO has (deservedly) received much attention for his exploits regarding D-Day (including from West), it was high time that the no less remarkable CHEESE received attention.

Despite its sexy title, the book is a sober, documentary study. It is the story of that part of the MI6 concerned with the Middle East: Security Intelligence Middle East [SIME]. The book tells the story of the double agents who worked for SIME and in particular CHEESE. Until MI6's wartime files were declassified in 2011, references to CHEESE and his achievements were rare. CHEESE's main claim to fame was his pioneering work in the field of strategic deception. Intelligence and war plans obtained by the Axis were accepted as true when in fact they were false: fake intelligence and phony plans made up by ingenious and diligent intelligence officers. Thus false ORBBATs were stolen by enemy agents. At one point Rommel thought Montgomery had several more formations to throw against him than he really had. For some reason, the Axis were far more gullible than anyone had anticipated. Perhaps the Anglo-Saxons had a gift for deception. If so, they put it to good use and it helped win the war. The D-Day deception (with which GARBO is forever associated) learnt from and built on CHEESE's earlier work.

Some readers may find that, despite the multiple and colourful characters who peopled this shady world, the writing gets bogged down in the officialise of the bureaucratic record, the style reminiscent of government memos, and the author makes no attempt at bringing the stilted prose to life. Other readers, however, will welcome this sober and unsexed-up account of an incredible but true story. Not one for lovers of James Bond then, but perhaps the basis of a future spy novel and film.

BOOTS ON THE GROUND -BRITAIN AND HER ARMY SINCE 1945 Richard Dannatt

Reviewed by Colonel (Retired) David Benest OBE

BOOTS ON THE GROUND BRITAIN AND HER ARMY SINCE 1945 RICHARD DANNATT

Profile Books, 2016, Hdbk, pp 421, ISBN 978-1781253809, £25 This is an interesting account of why and how the British Army has evolved since 1945. Most students of military history will be familiar with the telling: of the occupation of Germany; Malaya; Korea; Suez, Kenya; Cyprus; Borneo; Aden; Dhofar; the Falklands; Northern Ireland; the Balkans; Iraq; and Afghanistan. The summaries are succinct and more or less unambiguous, recognising failures as much as success. My focus can only be on but three of these: the Dhofar war (not there but researched in some detail); Northern Ireland (5 years on operations plus 6 years as technical sponsor in MOD); and the Falklands war (Signals Officer 2 PARA and Battalion historian).

As regards Dhofar, there are anomalies, such as the claim that Sultan Qaboos 'overthrew' his father. This was in fact a very British coup in 1970. In so doing, Brigadier John Graham deserves all credit for having 'turned' this war. Regrettably the myth that the Mirbat battle of July 1972 was the critical point is maintained in this account - in which case, why did it continue until 1976? There are some very basic errors of geography - Yemen is on western border of Oman, not its eastern border as stated (p 143).

Though I agree that for most part, an SAS squadron was in assistance to the war effort, the reality was that it took around 10,000 troops to bring about victory, not least with the assistance of the RAF Wessex helicopters, Royal Engineers (Operation TENABLE) and the medical support, long overdue, at RAF Salalah, itself defended by the RAF Regiment. Mention also should have been made of the interim commanders, Major General Tim Creasey and Brigadier Jack Fletcher, who between them set the conditions that permitted Major General Ken Perkins and Brigadier John Akehurst to achieve ultimate success. In the chapter regarding the Falklands War there is no mention at all of the very obvious connection between the experience of battlefield command in Dhofar and subsequent operations in the Falklands.

Quite how the 2 PARA padre, David Cooper, had any insight as to the decisions made over Darwin and Goose Green isn't clear given that H Jones never communicated his intentions to anyone else. Jones was ordered to 'raid' Darwin and Goose Green yet somehow this became an order to 'capture' the settlements, yet without the military capacity to do so. Even taking David Cooper's evidence as truth the Argentines further to the east did not 'collapse' as a consequence of the CMFU that was the actuality of Darwin and Goose Green, the bacon saved, so to speak, by the professionalism of each company commander and their subordinates.

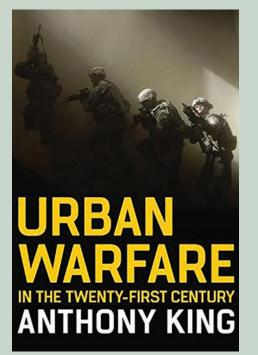
The Special Projects Group (SPG) in MOD tipped off the media with the highest of intentions, thus convincing the Argentine command that the advance on Port Stanley was on the southern flank, when it was actually in the north – and it worked. Jones reported that he was 'on schedule' to have taken the settlements by dawn on 28 May. In fact, the battle continued until the following day. There were no Pucara 'helicopters' - these were fixed wing aircraft in the ground attack role - and very nasty if, as I was, you happen to be in their line of fire.

The chapter on Northern Ireland in 1997 is not much better. The impression is that the 'watchtowers in South Armagh were an impediment to the Good Friday Agreement', when so clearly, they were a factor in its effect. Stephen Restorick paid for this with his life on 12 February 1997, under my command. Dannatt might not have known how Ulster Television was simply lied to by the RUC, claiming that Restorick had accidentally killed himself. The root cause, so to speak, was an evergreen tree, that permitted the SAMA sniper team the cover from R13 on Camlough Mountain, which otherwise, would have spotted the sniper vehicle, if not visually, then by heat signature. There is no mention at all of the climax of this war, the arrest of the entire SAMA sniper team with weapons and its vehicle, which did bring about the collapse of PIRA and the Good Friday Agreement.

As for the deployment to Afghanistan in 2006, Dannatt was by then CGS (until 2009) and thus must have been involved in the decisions so fatally made at the time.

URBAN WARFARE IN THE TWENTY-FIRST CENTURY Professor Anthony King

Reviewed by Colonel (Ret'd) Alistair McCluskey



Published by Polity 1st Edition, July 2021 Pbk, 288 pp, £17.30 ISBN-13: 978-1509543663 n July 2018 the bitter fight for Mosul was concluded with the final defeat of ISIS forces by the Americanbacked Iraqi Security Forces. In nine months, a city with some 200,000 buildings, 3000km of roads and defended by some 12,000 ISIS fighters was virtually levelled. Indeed, as one of the American advisors subsequently reflected, 'You can't replicate how stressful it was: how bad the slaughter was at Mosul'.

This vignette opens Professor Anthony King's new study on modern urban warfare. His core argument is that the anatomy of urban warfare has changed since the twentieth-century in two key aspects. First, the urban environment now has pre-eminence over the non-urban in modern warfare. Notwithstanding the epochal city fights such as Stalingrad and Berlin, or the prolonged counter-insurgencies in places like Belfast, in King's view the open field was the dominant combat space in the twentieth-century. Second, in moving into the urban space, combat has evolved into a succession of 'innerurban micro-sieges' inside the cities themselves. These developments are due to three primary inter-related factors. King argues that modern cities have become too big and socially important in the modern world for combatants to ignore; that improved weapon lethality has made warfare in open terrain untenable for less technologically advanced actors: and that the military forces involved have become much smaller for those states with access to cutting edge technology.

Professor King is a frequent contributor to military debates and much of the book's content will be familiar to many. Indeed, the introduction reads like a veritable 'who's who' of those recently assigned to LWC and Army HQ Cap FFD. He takes the reader through a thematic tour of recent examples of urban combat such as Marawi, Grozny, Belfast and Mosul, comparing them to historic urban battles such as Stalingrad and Berlin. There are many valuable insights in this journey including the description of the sociological networks that our cityscapes now represent, both at a global, regional and local level. He describes these networks as 'the city as a system' that future urban combatants need to understand if they are to prevail. He notes the importance of the vertical dimension, both above and below ground; the proliferation of walls; the increasing importance of airpower and the continuing relevance of the need to win the firefight; and the increasing importance of information warfare in battles that are fought in and around an omnipresent civilian audience.

Some of his conclusions are more contentious than others, particularly his view that manoeuvre in the city 'has become an illusion'. His argument that it resembles the 'bite and hold' tactics of the First World War is overstated and fails to acknowledge the highly sophisticated tactical manoeuvre techniques that most of the armies could use to break the deadlock by 1918. Similarly, his use of historical examples would be strengthened if he addressed contradictory examples, such as the experiences of the citizens of Leningrad between 1941 and 1944, or those Germans living in cities under naval blockade and heavy air attack between 1942 and 1945. I suspect both would argue that urban battles characterised as prolonged sieges are not a modern phenomenon.

However, this is a small critique. The book is very well written and risks noted above do allow Professor King's argument to be very accessible for those uninitiated in the minutiae of the urban warfare debate. For those that are familiar with these dialogues, there is still much to glean from this book. Even if you disagree with some of the arguments, the book still forces the reader to reflect on why this is so. For that reason alone, it is well worth the attention of those who will need to fight and operate in the future cities around the globe.

BRITISH ARMY REVIEW

The Review is intended to provide a forum for the discussion of all matters of professional interest to the soldier. Articles and letters are invited from all ranks and from others having a special knowledge of military affairs. Controversy is the lifeblood of any professional journal designed to promote thought and discussion and is therefore welcomed. Descriptions of recent or current operations and imaginative ideas on doctrine, tactics, training or equipment are of particular interest.

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