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MOBILISATION

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The British Army Review, Robertson House, Royal Military Academy Sandhurst, Camberley GU15 4NP

Email: editorBAR@chacr.org.uk

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**DOCTRINE**

Newly released publications
This first edition of 2023 marks the launch of the re-modelled British Army Review, the journal of British military thought. I was pleased to be asked to write the foreword and I encourage you all to read, digest, consider and engage with the articles in this edition, and, indeed, in the subsequent editions.

The CHACR, the Centre for Historical Analysis and Conflict Research, as part of their remit to help the British Army with the development of the conceptual component of fighting power, have the task of compiling, editing and publishing The British Army Review. I urge you to continue to engage with them not just through the journal, but through the full range of what they offer the Army, be it online or in person. It is only through exercising our minds that we can generate the intellectual edge that will ensure the British Army can out-think, as well as out-fight, our adversaries.

The events of 2022 have provided us, if we needed it, with a stark reminder about our responsibilities. This context demands a combat-credible force; fully integrated across Defence and other instruments of national power, and interoperable with allies and partners. The Army must be fit for the most acute threats and adapt at pace as those threats evolve. The Russian invasion of Ukraine on the 24th February 2022 reinforced the imperative to enhance the Army’s readiness, resilience and competitiveness and the acceleration of planned modernisation to prevent the spread of war in Europe. It necessitated a whole-Army effort to ensure the Army’s ability to fight and win wars.

I instigated Op Mobilise to address, directly, the purpose of the Army: to be ready to fight and win wars on land. This is my main effort, against a background of an Army as busy and committed as it has ever been. We will only be able to fulfil our obligation to NATO and to our government and people, if we are ready so to do. We must be trained and equipped, with a full-strength workforce that is ready and able, at the shortest of notice, to meet the nation’s challenges and commitments head on. This requires not just the right resources, but the right mindset.

The Assistant Chief of the General Staff opens this new edition of The British Army Review by arguing that, “the supposed dichotomy between mobilise and modernise is false”. He is right to do so. While the Army must mobilise to meet the immediate threat, we must do so concurrent to the modernisation required to meet the challenges of the future.

I’m therefore delighted that the section on mobilisation in this journal includes not just academic and military-practitioner articles, but also a representation from UK industry. They are an integral part of both modernisation and mobilisation. Drawing on lessons from Ukraine, we seek to accelerate and prioritise the procurement of ground-based air defence, long range fires, electronic warfare and signals intelligence, and unmanned aircraft, as well as replenish our strategic stocks and improve our operational logistics, and continue to develop our training and wargaming options in partnership with defence industry. By mobilising and modernising we will both support industry partners and further UK prosperity by creating opportunities for Defence exports around the world. If we are to be a genuinely mobilised and flexible Army, then our industry partners must be just that: partners.

“...Mobilise building momentum but ‘more to be done’ “

At the heart of mobilisation is a culture of individual responsibility for readiness, resilience, and adaptability. This re-launched British Army Review, the journal of British military thought, provides not only a focus on mobilisation but a variety of excellent articles for the professionally curious. I encourage all ranks in the Army to read it, thoroughly, as part of your fitness programme for your conceptual component. – General Sir Patrick Sanders, Chief of the General Staff
FROM THE EDITOR

At the risk of causing irreparable damage to my professional standing during the embryonic stages of my tenure as editor of The British Army Review, I will confess to temporarily reminiscing about Sesame Street as I digitally crossed the i’s and dotted the t’s on the pages that follow.

Not, I hasten to add, as a consequence of the content curated being in any way infantile – far from it, in fact, as you will shortly discover for yourselves – but because as a logophile I couldn’t help but notice that of the 26 letters in the alphabet, one in particular was doing a lot of the heavy-lifting when it came to articulating what it means and takes to successfully mobilise an army. Despite the diversity of their expertise and experiences, our contributors consistently called upon a common character while analysing and exploring the trends, challenges and opportunities associated with mobilisation. Reposition, realign, re-boot, reassess and resilience, to name just a few, all feature repeatedly in this journal’s articles. So, please forgive me for taking a televisual trip down memory lane and mixing my order of battle with Oscar the Grouch, but this edition was very much ‘brought to you by the letter R’.

The reformatory language used to manifest Operation Mobilise chimes, coincidentally, with the evolution of this publication, which – I hope it has not gone unnoticed – returns to the fray with a refreshed appearance and renewed commitment from the CHACR to help the Army to develop and nurture the conceptual component of fighting power. The transformation challenge facing the Army is, of course, far greater than the redesign and compilation of a journal but The British Army Review serves to assist the Service as it considers the readjustments needed to meet tomorrow’s threats. To that end, I invite all those seeking to promote professional debate on any aspect of current or past military experience that has contemporary relevance to contribute to future editions. As expressed far more eloquently elsewhere in this new-look Review by Major General (Retired) Dr Andrew Sharpe, those in the Army can ill-afford to be Sesame Street-style puppets and rely on others to pull the necessary strings of change, so email your articles and ideas to editorBAR@chacr.org.uk

As the Chief of the General Staff suggests in his foreword, an Army that puts as much emphasis on its conceptual fitness programme as it does on its physical fitness programme is likely to get a head-start on its less thoughtful and thinking opponents. This edition of The British Army Review, with, we hope, new life and energy breathed into this venerable and respected publication, should act as a support to General Sanders’ main effort, and as a source of interesting and apposite articles to stimulate wider thought and cerebral engagement. We hope that you find it both interesting and professionally useful. – Andrew Simms
WAR in Ukraine highlights the need for land forces and brings into sharp focus the current shortcomings of the British Army. The decades-long focus on counter-terrorism and counter-insurgency came at the expense of training and equipping ourselves for competing in high intensity combat. The character of the war in Ukraine has exposed where the British Army is deficient: in its air defence; in long-range fires; in uncrewed aerial systems; and in electronic warfare.

The rates of fire necessary to prosecute a war against a near-peer enemy reveal the shortcomings in our stockpiles, based on outdated assumptions. In this sense, we have succumbed to our own ‘long lee of Trafalgar’ by maintaining the assumption of warfighting excellence while not exercising that military muscle, and allowing the land industrial base that sustains warfighting to wither. We have been effective while ‘operating’ around the world, training at best effort within resources, and serving the requirements of the government of the day, but we have not slaved ourselves to a core purpose. CGS’s mobilisation of the Army with his RUSI speech in June 2022 makes this correction to our course, along with the affirmation of our core purpose: to protect the United Kingdom by being ready to fight and win wars on land. Mobilising the Army is no small endeavour in the context of the ongoing modernisation of the Army under Future Soldier, supporting Ukraine through training (Operation Interflex) and equipment provision, and the prevailing financial climate. Our challenge in the British Army is to seek opportunity amidst challenge and thereby to accelerate our modernisation;

“From now the Army will have a singular focus – to mobilise to meet today’s threat and thereby prevent war in Europe.”
– General Sir Patrick Sanders, Chief of the General Staff, RUSI Land Warfare Conference, 28th June 2022
we must respond to lessons from the war in Ukraine by developing the land power required to serve the United Kingdom’s national interests.

**MOBILISING**

Future Soldier, launched as part of the 2020 Integrated Review of Security, Defence, Development and Foreign Policy, remains the Army’s plan. It is notable that we are only three years into the ten years of delivery and have only delivered 40 per cent of the orders for organisational changes that Future Soldier promised: a long path stretches ahead. In mobilising the Army, CGS seeks five lines of effort. First, we need to build a combat credible force. This force will be trained and ready for high intensity combat, from sub-units more lethal than their predecessors, able to find and kill at enhanced ranges, to multi-domain 2* headquarters fit for data-enabled and -enhanced warfare. Second, we are supporting Ukraine. Under Op Interflex, the Army has already trained more than 10,000 Ukrainian soldiers and continues to enhance the training that it offers to individual soldiers and command headquarters. Additionally, the UK will continue to enable the Ukrainian

war effort directly by identifying potential equipment requirements and granting from the British Army’s own stocks. Third, the British Army must meet the requirements of NATO’s New Force Model in 2024. The British Army’s part of which will exploit our strengths as a modernised, expeditionary force able to bring a network of multi-domain assets to bear. Fourth, the Army must address its productivity, delivering value from how we train, deploy and furnish capability. Finally, we must reinforce our leadership in NATO by demonstrating thought leadership in how 21st century warfare is best conducted.

Mobilising the Army is more than a list of objectives. It is an acknowledgment that the return of visceral, high-intensity land warfare to Europe has thrown the Army’s core purpose – to protect the United Kingdom by being ready to fight and win wars on land – into sharp relief. The requirement for boots on the ground has been vindicated. And where it is necessary, the Army must be equipped to fight.

**DETERRENCE & LESSONS**

“Our does not shy away from our status as a permanent member of the UN Security Council, a nuclear power with global responsibilities...”

Chief of the Defence Staff,
RUSI speech, 14th December 2022

Conflict in Europe demonstrates the requirement for a well-equipped and trained force. The imperative to prevent the spread of war in Europe relies on credible deterrence, of which land forces are an essential part. Deterrence is not simply a nuclear weapon; it relies on the ability to scale forces and responses, and credible nuclear deterrence cannot exist without accompanying land forces. In CGS’s words, “it takes an army to hold and regain territory and to defend the people who live there. It takes an army to deter”. Just as the purpose of our Army has been brought back into focus, so has the character of the Army that the United Kingdom needs. A generation ago, we had a British Army of the Rhine that was 25,000 strong. Those commanding this force in 1994 would have been raised on tales of mass mobilisation and conscription during the Second World War. Yet as an island nation, we instinctively favour the expeditionary posture, and eye-watering endurance despite mass losses. And for those still in doubt of Russian intent and the persistent threat, they might refer to the Finns, Balts and those around the Black Sea.

The ongoing NATO work on the New Force Model provides an impetus and deadline to build and resource a credible force for 2024. In addition to accelerating elements of Future Soldier to adapt to lessons from the conflict in Ukraine, we will become even more aligned to NATO as an Army. Building on our officers deployed in NATO and our enhanced forward presence in Estonia, we can expect to orient the majority of what we do to NATO and its purpose of collective defence. At the same time, we can expect to continue to build our strong relationship with the Nordic countries under the Joint Expeditionary Force banner. This grouping will give us focus on training, engagement and, above all, readiness.

**Mobilising the British Army**

“Mobilising the Army is more than a list of objectives. It is an acknowledgment that the return of visceral, high-intensity land warfare to Europe has thrown the Army’s core purpose – to protect the United Kingdom by being ready to fight and win wars on land – into sharp relief. The requirement for boots on the ground has been vindicated.”

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**MOBILISING THE BRITISH ARMY**

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force with the ability to project force away from our shores rather than the large standing force preferred by continental powers. Now numbering 73,000, our army is once again expeditionary, relatively small but lethal enough to complement the nuclear umbrella within which it operates. The cliché – reaching for a sporting metaphor beloved of 20th century commanders – is that the British Army ‘fights above its weight’ through the indirect, manoeuvrist approach and by the leverage of brains against brawn. While once we assumed that others would fill the gaps in our order of battle, we must now have the strategic humility to prepare to complement another nation’s force, thus making the most of our strengths as part of a larger construct. A British Army division or corps headquarters would provide multi-domain expertise and leadership to enable a partner to orchestrate integrated action. Electronic warfare specialists would support a host nation’s industrial age artillery. Another challenge is improving our support to the other domains, from common missile and radar systems to genuinely integrated operational art. This practice could then be applied to supporting allies, for example by keeping their trade routes open by positioning land based hypersonic anti-ship missiles to protect shipping lanes and defend maritime choke points. Woven throughout all would be the British Army’s ability to integrate capabilities, its technological expertise, its hard-won reputation for leadership, and a philosophy of fighting from the land, not just on the land.

For deterrence to be credible it must be backed up by raw combat power. Ukraine has crystallised what machinery, technology and munitions for war fought in the 21st century look like – the use of unmanned aerial systems has created a transparent battlefield where there is no sanctuary. Second, electronic warfare is the great leveller: by depriving forces of connectivity, it drives armies back to the 20th century. Third, domains can be easily fragmented, and ground-based air defence can dislocate land from air, and anti-ship cruise missiles dislocate land from the maritime. Fourth, there is a need for massed fires, not just a small amount of precision fires. Linked to the latter and underpinning all is the need to reappraise our levels of stockpiles and logistic enablers. Influenced by years of counter-insurgency and counter-terrorism, we have been resting on the assumption that we would not be required to fight at scale. This assumption has been challenged by rates of fire seen in Ukraine and the British Army’s rate of granting munitions, both of which would be unsustainable at our current rates of production. Our sovereign industrial capacity to provide depth to our hard power needs galvanising. While the tactic of granting equipment and munitions to Ukraine could be seen as a threat to the British Army’s capability, it generates a clear opportunity: the subsequent need to replenish our stocks is a chance to reshape our equipment programme and our national and allies’ defence industries. Forecasts of the character of future war abound. Whether the conflict in Ukraine marks the last war of the 20th century, fought by industrial era heavy artillery and visceral close combat, or whether it heralds the beginning of war in the information era, measured in satellite links and smartphone signatures, we can expect the underlying nature of war to persist. Combat credibility that keeps pace with – and where appropriate, anticipates – the character and nature of war will generate deterrence, thus protecting the United Kingdom. The exponential pace of transformation in the information age requires us to modernise not in fits and bursts but gradually and constantly. Future Soldier provides the plan for the British Army to do so.

MOBILISING WHILE MODERNISING

The imperative to modernise is evident. However, we ought not fall into the trap of iconoclasm and remove all that came before. The challenge is to change by evolution rather than revolution, maintain what remains effective from the industrial age and harnessing the best of new technology for military effect. However, history does not move in chapters, and we must continue to deal with the present while preparing for the future. The supposed dichotomy between mobilise and modernise is false: the British Army must do both, and simultaneously. In the face of these combined challenges, there will be compromises to make, and we would do well to remember the adage about not making the perfect the enemy of the good. The British Army is already demonstrating how it will manage both.

First, Future Soldier highlighted a reinvigorated Land Industrial Strategy that must ensure that we form strategic alliances with other nations in buying and developing equipment, giving us as much sovereign resilience as possible and assisting production lines to continue and develop rather than rot once the initial order is made. Second, there is opportunity to develop alongside emerging technologies such as those included in the

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task forces’, able to analyse hundreds of division headquarters become ‘multi-domain lethal as possible. As an example, corps and well as make our tactical force elements as with data and communications technology as we need to improve our decision-making driven the need for urgent change. In addition, Ukraine has accelerated requirement and part of the Future Soldier plan, conflict in and ammunition stockpiles. While all formed aerial systems, electronic warfare, air defence is crystallised in the ‘4+1’: fires, unmanned ready to fight. The requirement for acceleration in order to continue to protect, deter and be modernisation and where it must accelerate in order to continue to protect, deter and be ready to fight. The requirement for acceleration is crystallised in the ‘4+1’: fires, unmanned aerial systems, electronic warfare, air defence and ammunition stockpiles. While all formed part of the Future Soldier plan, conflict in Ukraine has accelerated requirement and driven the need for urgent change. In addition, we need to improve our decision-making with data and communications technology as well as make our tactical force elements as lethal as possible. As an example, corps and division headquarters become ‘multi-domain task forces’, able to analyse hundreds of targets a day as well as integrate feeds from.

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AUKUS partnership: quantum technologies, artificial intelligence and autonomy, advanced cyber, hypersonics and electronic warfare. The Futures Directorate’s Human-Machine Teaming programme is addressing some of this and we need to double down on persistent external placements with technology companies in order that each may learn from the other. Third, we are working with the other services to share equipment programmes such as in precision strike missiles and radar. If credibility is the priority then we need to replace a culture of the ‘best’ for that which will be the most efficient. So, we might go for a lesser platform if it meets the needs of allies, and we can therefore ensure delivery of more of them due to sustainment of industrial capacity. Similarly, it is better to have a missile that meets say 80 per cent of our needs if it can be shared with the Royal Navy and therefore afford Defence economies of scale and more of a stockpile.

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all the domains, including open source and space. This capability already exists in rarefied corners of Defence, and we must replicate it across the Army, enabled by data, hypersonics and all-source intelligence, surveillance and reconnaissance such that command and control becomes a capability in its own right. As for our brigades, units and sub-units, they will become more independent due to the need for dispersal and greater autonomy. By 2030, the first contact with the adversary should be by a robot, necessarily buying out mass and heightening our own survivability. Sub-units’ reach, from seeing to killing, will be lifted from 200 to 2,000 metres with long range munitions and unmanned aerial systems. More lethal, more dispersed and more autonomous. Granting in kind will act as an accelerator, not only in getting rid of old equipment but in replacing it by using rapid procurement processes put in place by Defence on the back of support to Ukraine. The challenge is how quickly we can now adapt Future Soldier across organisation, equipment and training to the world that lies beyond Ukraine.

THE PATH
We have a series of headmarks between now and 2030. In the short term, our New Force Model offer is about to be formally presented into NATO. This is a substantial offer in that it can be resourced now and be built on as Future Soldier and its next steps rolls out. Once confirmed, this will give us an agreed, detailed warfighting order of battle. The Field Army is also developing its how we fight 2026 concept which aims for those multi-domain task force headquarters and lethal ‘porcupine’ tactical formations, with a heavy emphasis on the ‘4+1’. Concurrently, the Futures Directorate is planning the 2030 Army under Project Wavell. This project will build on the Field Army’s 2026 vision and incorporate equipment that we can expect to be online for 2030 as well as having to make assumptions about how we will fight and how enabling technology will have advanced. Underpinning this, though, is how we recruit, train, upskill and look after our soldiers. Our approach has changed little over the last few decades, and the challenge for Home Command is to design and deliver the pipeline for soldiers ready to fight and win in 21st century wars. Future editions of The British Army Review will address these areas of 2026, 2030 and our strategic industrial foundation. We all recognised the imperative to change following the wars of insurgency and, just as important, in light of changes wrought by the information age. Ukraine has exacerbated this need and demanded a re-emphasis on Europe, NATO and deterrence as well as restoring as quickly as possible a combat credible, expeditionary British Army fit for conflict in the 21st century.
THE recent events in Eastern Europe have shaken up and woken up militaries and defence communities. For the first time since the end of the Cold War, large-scale conventional operations in Europe have moved into the focus of political and military masters and planners alike. It is easy to say that the writing had been on the wall, but hindsight is a wonderful thing. So, a frantic and hectic re-positioning has taken place within NATO and other states, which has ripped apart cherished wisdoms, national strategies and white books.

Since the end of the Cold War, many states had cashed in on the ‘peace dividend’ and neglected and under-financed defence. “The old concepts of fighting big tank battles on European land mass are over,” expressed the British Prime Minister in November 2021.

This is, however, not a problem unique to the UK, but one that needs to be faced by many countries. The consequences of neglecting the ‘old concepts’ were perhaps best summed up by the German chief of the general staff, Lieutenant General Alffons Mais, in a rather blunt statement on his LinkedIn account in February 2022. He stated that the German Army was “more or less naked”. On 25th January 2023, Mais made the public statement that the Bundeswehr was “even more naked than before”, because it has had to give weapons to the Ukraine.  

The key word that sits in the centre of the new realities is mobilisation. This term must be seen in the widest context. It is not sufficient to solely concentrate on reconstitution, i.e., the numerical enlargement of the Army. Other, wider, factors have to be taken into consideration if a large-scale mobilisation is likely to be successful. These range from doctrinal adjustments, to finance, and to the question of gathering support from wider society, which might potentially also include some form of national service or conscription. Where can armies and nations turn to if they want to prepare themselves for the inevitable complexities and challenges that mobilisation will bring? There is only one answer, and this is history. Naturally, it is difficult, or perhaps even impossible, to create direct links from the past to today, but history can provide a useful handrail. In fact, it is the only handrail that we have, and every conflict research that neglects the historical analysis is, at best, superficial, and, at worst, likely to be wrong.

When mobilisation is mentioned within a historical context, it does not take long for attention to be drawn to the German Army in the inter-war period.  

The expansion of the Army between 1933 and 1939 is often seen as one of the most striking and successful examples of mobilisation. And yet, the Germans faced massive problems in the years of rearmament and the general mobilisation of society. By their own assessment, the German Army was not ready for war in 1939. It might, therefore, be of interest to shed some light on the tension between the perceived ‘perfection’ of German mobilisation and the reality.

On 3rd February 1933, only four days after having been appointed chancellor of Germany, Adolf Hitler revealed his political programme to some selected members of the military. In his monologue, he made clear that war was unavoidable in the long run, because he aimed at ‘the conquest of living space in the east and its ruthless germanisation’.

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As a first step towards full rearmament, the decision was taken in December 1933 to enlarge the peace-time army to 300,00 men organised in 21 divisions. In the case of war, the enlarged army would be able to mobilise 33 field and 30 reserve divisions. On 16th March 1936, conscription was introduced and the strength of the peace-time army was increased to 36 divisions. With the extension of the duration of military service to two years, the Wehrmacht was able to increase its strength to 520,000 men by the end of 1936.

A conflict now became apparent in the military leadership. Ludwig Beck, the chief of the general staff, argued for a gradual enlargement of the army. Only if enough personnel and material for new formations was available should these be formed; a cadreisation of formations was to be avoided. This would mean a gradual growth and one which would not reduce the overall quality of the army. The problem was that this approach needed time, one thing that Hitler did not grant the military. So, Hitler, and some members of the general staff, argued for cadre units that would be filled with active personnel whenever possible. On paper, this would produce a strong army more quickly. The result was a delta between the overall nominal and real strength of the formations. Despite these issues, Hitler demanded in 1936 that the rearmament be accelerated. In the new plans, the wartime army now stood at 102 divisions with 4.6 million men of which 2,421,000 would serve in the field army. When the Second World War broke out on 1st September 1939, these ambitious aims had been reached and surpassed. The field army now stood at 2,758,000 men. However, in what might look familiar to a modern reader, the army was really a one-shot weapon without structural depth or reserves. The personnel strength of the German Army was, to put it mildly, misleading. Of the mobilised men in 1939 only 1.31 million were on active duty, and a further 647,000 men were in the so-called ‘Reserve I’ that could be seen as fully trained. The rest were untrained recruits, or people whose military experience had ended at the close of the First World War.

The rapid enlargement carried with it a clear loss of quality. The peace-time training of the Reichswehr had been thorough, and

### Endnotes

2. Bundesarchiv–Militärarchiv (BA-MA), MSG1/1688.
4. For these figures, see Karl-Heinz Frieser, The Blitzkrieg Legend. The 1940 Campaign in the West, Annapolis 2005, p. 22.
5. The Reichswehr was the name of the German armed forces between 1919 and 1935 when the name was changed to Wehrmacht.
everybody was trained at least one level up. This gave the enlarging Wehrmacht a certain professional base, but this was not enough to ensure that the quality of the large Wehrmacht was as high as that of the small Reichswehr. The army high command was aware that the enlargement would create a deficit of 72,600 officers.1 Between October 1933 and October 1935, the officer corps had already increased from 3,800 to 6,533, an increase of 72 per cent. Even this increase, which was modest compared to the 1936 plans, had only been achievable by tapping into new personnel pools rather than growing the officers within the army. Thus, all the officers of local defence units, which were of questionable military value, had been incorporated into the army on active duty as members of the so-called supplementary officer corps. This group of 3,073 officers consisted mainly of older age groups and those no longer fit for active field service. In the summer of 1935, 1,200 police officers were also transferred to active military service. Many of these had served in the army until the end of the First World War and had found employment in the police after 1919 as a consequence of the army’s reduction by the Versailles Treaty. In December 1933, Ludwig Beck had considered seven per cent of the total personnel strength as the final quota for officers. In 1936, the figure stood at a meagre 1.3 per cent and internal calculations concluded that the shortfall would only be eliminated in 1950.2 These difficulties did not go unnoticed by foreign authorities. On 30th November 1938, the British military attache in Berlin, Colonel Mason MacFarlane, reported that the Wehrmacht was facing severe difficulties. The main problem, as he saw it, was the rapid expansion of the German army, which did not leave enough time to train officers and non-commissioned officers sufficiently. As MacFarlane stated, “the Army had continually been asked to run before it could walk.”

A larger army needs more equipment, and this obvious point caused the German planners some headache. For instance, it was anticipated that the armed forces on the whole would be lacking 40,000 lorries. Initially, it was suggested that these could be requisitioned from the civilian world, but it soon became apparent that this would bring economic life in Germany to a standstill. In early 1940, only 120,000 trucks were available for the German Army, compared to about 300,000 in the French Army alone.3

German industry would not be able to fill the void – the monthly production of trucks stood at a mere 1,000. This was less than one per cent of the inventory, compared to a normal wear and tear of two per cent.4

Thus, in fact, the German army of early 1940 was becoming ever more de-motorsed, and it is therefore not astonishing that during the Second World War it used 2.7 million horses.

When it came to that embodiment of the German Army of the Second World War, the Panzer, things did not look much better. In 1935, the army high command anticipated that only the Mark I and II tanks would be available in sufficient numbers by the end of the decade.5 For the better armed and armoured Mark III and IV the army high command expected deficits of 35 and 80 per cent, respectively. The problems were aggravated by the fact that the army now stood in competition with the navy and the newly established air force. For instance, the navy increased its manpower from 15,000 of all ranks in 1933 to 78,892 at the outbreak of the war in September 1939, a fivefold increase in barely seven years. Ship-building, in particular, consumed great amounts of raw materials, and the three services were constantly fighting over the allocation of these resources. The annual expenditure in ship construction rose from 49.6 million Reichsmark in 1932 to 603.1 million in 1937.6 A fierce struggle for raw material was the result, which saw restrictions to the building programmes of all three services.

In addition, such programmes and the enlargement of armed forces did not come cheap. Between 1925 and 1932, the German government spent between one and 1.5 per cent on defence. In the following years, this number increased, steadily first, then exponentially: 3.2 per cent in 1933, 5.5 per cent in 1935, 7.6 per cent in 1936, 9.6 per cent in 1937 and then an impressive 18.1 per cent in 1938.7 To give the reader an idea of what this means, the 1938 percentage would have been equivalent to a British defence budget of £398 billion in 2021.8 Although rearmament was a contributing factor to the eradication of unemployment

“The problems [in relation to the limited availability of Panzer tanks] were aggravated by the fact that the army now stood in competition with the navy and the newly established air force. A fierce struggle for raw material was the result, which saw restrictions to the building programmes of all three services.”

1For a discussion of the manpower deficit, see Ströhl, Defence, pp. 221-223.
3TNA CAB 21/949, folio 157-160.
4Frieser, p. 29.
5Ibid.
7Deist, p. 457.
9For the UK GDP, see statsista.com/statistics/281744/ gpdp-of-the-united-kingdom (accessed 20/0/2023).
in Germany within only a few years, it also meant that Germany was practically bankrupt by 1938, and it was not inconceivable that Germany would be insolvent by November of that year. In their desperate attempts to find more money, the National Socialists followed their usual instincts: on 12th November 1938 Hermann Göring signed a regulation which stipulated that the German Jews had to pay an ‘atonement contribution’ of one billion Reichsmark for the “hostile attitude of the Jews towards the German people”, a consequence of the assassination of the German diplomat vom Rath by Herschel Grynszpan in Paris. This money was equivalent to six per cent of the German federal budget.

This tax imposed on the Jews was also an expression of the caution that the National Socialist regime exercised with regards to putting pressure onto the German population, from which the Jews had been excluded. Fears of a revolution similar to 1918 ran deep in German society and governments, including in Hitler’s regime from 1933 onwards. When war broke out, the mood in Germany was sombre and gloomy; a far cry from the reaction that the leaders had hoped for. The Germans went to war, but not as enthusiastically as is often believed. As a consequence, the government tried to disguise the negative impacts of re-armament, wider mobilisation, and, finally, war. During the early years of the war, Germany pursued a policy of ‘guns and butter’, which impacted negatively on armaments production compared to other nations – one of the contributing factors to the final defeat, and one to keep in mind when we think about the possible mobilisation of the leaders had hoped for. The military?

This ‘guns and butter’ approach only really changed after 1943, in particular as a consequence of Joseph Goebbels’ famous ‘Total War Speech’, delivered in Berlin on 18th February 1943. But it took until 23rd July 1944 to put the entire economy onto a full war footing. On that day, Goebbels was appointed Reich Plenipotentiary for Total War, responsible for maximising the manpower for the Wehrmacht and the armaments industry at the expense of sectors of the economy that were not regarded as essential to the war effort. It is no coincidence that German industry reached its highest output of war material in 1944, despite an ever increasing Allied bombing campaign.

When war broke out on 1st September 1939, the successful campaign against Poland overshadowed the problems that the Germans were facing. In fact, they would not have been able to continue the fight much longer. After about 14 more days of fighting, the Luftwaffe would have used up all their bombs and could then ‘go play cards’, as Generaloberst Milch, the Luftwaffe inspector general, warned Hitler.1

Although conventional war in Europe has become a reality again, 2023 is not 1939. And yet, there are important lessons that can be drawn from history. While this short article had to concentrate on one country, there are many more enlightening case studies from other nations. These include pure military matters, but they stretch much further, and we should not forget that the political context, embodying the will of the people, is the framework for all mobilisation efforts. Tank and troop numbers are important, but they are not everything. We could do worse than widen our thinking if we want to prepare the mobilisation of not only a small army, but of a whole nation. Otherwise, when the balloon goes up, not only might our armies be ‘more or less naked’; but our nations will be.

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1 Quoted in Fricke, p. 29.
2 Ibid.
3 See, for instance, the different chapters in Matthias Strohn’s How Armies Grow.
On 21st September 2022, President Vladimir Putin announced a ‘partial’ mobilisation, calling up some 300,000 Russians for military service and instructing the government to organise and finance related activities. Senior Russian defence officials, including Defence Minister Sergei Shoigu and Vladimir Tsymlyanski of the Ministry of Defence’s Department for Organisation and Mobilisation, sought to clarify that the move was ‘routine’, and that only those with army service and combat experience would be called up, particularly tankers, artillerymen and drivers, in three periods through until 10th November.

In fact, by 28th October, Shoigu had briefed Putin that the target for the draft had been reached. He stated that 218,000 were in combat training, and a further 82,000 deployed to the area of what Moscow formally continues to call its ‘Special Military Operation’, of whom 41,000 had joined units. No more draft notices were being sent out, he said, and military commissariat offices would subsequently only accept volunteers and those planning to serve under contract.

Many Western officials and observers have been emphatic that this mobilisation simply reveals the problems the Russian leadership faces in the prosecution of the war. For Sir Tony Radakin, the UK’s Chief of Defence Staff, it...

Author

Dr Andrew Monaghan is a Senior Associate Fellow at the Royal United Services Institute in London, and a Global Fellow of the Wilson Center’s Kennan Institute in Washington, D.C. He is the author of Power in Modern Russia: Strategy and Mobilisation (2017) and Dealing with the Russians (2019). His latest book is Russian Grand Strategy in an Era of Global Power Competition (2022).

1Ukaz “ob obyavlenii chastichnoi mobilizatsii v Rossiiskoi Federatsii”, Website of the Presidential Administration, 21 September, kremlin.ru/events/president/news/69391


3“Vstrecha s Ministrom oborony Sergei Shoigu”, Website of the Presidential Administration, 28 October 2022, kremlin.ru/events/president/news/69703
“exposed the mounting pressure the Kremlin is under” as the Russian military shows signs of “increased weakness and frailty”. And for Dutch Prime Minister Mark Rutte it is a sign of “panic”. Some have even suggested that it is another indication of the unravelling of Putin’s leadership. And to be sure, Russia’s ordering of mobilisation underlines the fact that the war has not gone to Moscow’s plan: battlefield reverses and heavy losses have highlighted flaws in both strategic planning and force design.

Nevertheless, the order to mobilise reflects not just the Russian leadership’s attempt to resolve some of the serious problems the Russian military faces on the battlefield, but a serious escalation of commitment to achieving their goals. Indeed, it reflects the Russian political (and especially military) leadership’s recognition of the failure of the original Special Military Operation and the shift of the Russian state to a war footing. In short, while the mobilisation process has proved flawed, the result is that the scale and nature of the challenge that Russia poses to Ukraine directly, and more indirectly to Euro-Atlantic security as a whole has significantly evolved.

In some ways, Russia’s partial mobilisation seems to take the war into unfamiliar conditions, since it is the first time such an order has been given since 1941. But it is not unprecedented, and Russian observers are discussing the experience of mobilisations in the Russo-Japanese War (1904-05), World War I and the Great Patriotic War (1941-45). In so doing, they emphasise examples of the complications of ‘partial’ mobilisation, especially problems caused by limited transport, difficulties of organisation of draftees into new and effective formations (and the extra costs of maintaining them), and shortages of officers.

Some Russian observers suggest that such ‘muddled’ mobilisation, characteristic of more than one war in modern Russian history, is a recipe for defeat.”


They also point to problems caused by the gradual nature of partial mobilisation. Essentially, this reflects the point that too few troops were drafted in the initial waves of mobilisation, which led to insufficient troop concentration and subsequent battlefield failures, which then generated demoralisation in the subsequent waves of those drafted, undermining the war effort as a whole. This demoralisation was compounded by the emergence of loopholes allowing the wealthy to escape service. Furthermore, a partial mobilisation can complicate and confuse a subsequent general mobilisation because of imbalanced contributions by different regions and the problems of coordination. It would have been better for the Imperial Russian authorities, such observers argue, having recognised that the war would be serious, to impose a general mobilisation at the outset. Some Russian observers thus suggest that such ‘muddled’ mobilisation, characteristic of more than one war in modern Russian history, is a recipe for defeat.9

If history provides some interesting examples, there are also more recent indications. In the post-Cold War era, the Russian state has reformed and rehearsed mobilisation processes as the political and military leadership has sought to shape contemporary national and military strategy. Some Russian military analysts note a long-standing ‘mobilisation crisis’ in Russia, arguing that for much of the post-Cold War era, Moscow has had an intractable problem. Domestic political conditions have meant that the leadership could not mobilise armed forces to respond effectively to smaller, local conflicts, since mass mobilisation in such circumstances would lead to protest. But large parts of the military would not countenance moving away from a mass mobilisation structure which they deemed essential to defending Russia in case of a larger war. Consequently, the question facing the Russian leadership became one of how to retain a mass mobilisation-centric establishment while managing available forces effectively in local conflicts without ordering a mobilisation. This conundrum has underpinned debate and dominated practical reform for years.7

“The Russian military has a long-standing anxiety about the ‘mobilisation gap’. This rooted in the concern that enemies, especially Germany, could mobilise, concentrate and deploy forces faster than Russia due to superior infrastructure and capabilities, and would thus be able to seize the initiative in a war by bringing superior forces to bear at crucial times and places.”

The challenge of mobilisation is also visible in Moscow’s more recent approach to military strategy, both as the leadership theorises about the changing character of war and how strategy is prepared and practiced. The Russian military, for instance, has a long-standing anxiety about the ‘mobilisation gap’. This rooted in the concern that enemies, especially Germany, could mobilise, concentrate and deploy forces faster than Russia due to superior infrastructure and capabilities, and would thus be able to seize the initiative in a war by bringing superior forces to bear at crucial times and places. This anxiety was only emphasised by the Russian army’s experiences noted above, which today feature regularly in professional Russian military discourse, and especially, of course, the blitzkrieg of Operation Barbarossa in 1941. These concerns underpin the discourse about the need to renew military strategy in the light of contemporary threats – particularly versions of ‘21st Century Blitzkrieg’. In late 2016, for instance, Putin stated that mobilisation preparedness was an important part of Russia’s national security, and the military have focused on what modern mobilisation means and how it is implemented in practice.8

It is worth clarifying what the Russian leadership means by ‘mobilisation’. At one level, this is obvious: it relates to the creation of, and then the equipment and deployment of a reserve of militarily-trained troops. More specifically, though, the Russian Ministry of Defence defines it as “a set of measures to transfer the economy of the country, the constituent entities of the Russian Federation and municipalities, state authorities, local governments and organisations to work in wartime conditions”. Furthermore, it includes

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the transfer of the Russian Federation’s armed forces to the organisation and composition of wartime. Mobilisation can be ‘general’ (i.e. throughout the country and applied to the entire economy of the state and its institutions), or ‘partial’ (i.e. introduced to conduct military operations within one theatre of war or in a separate region). 9

While Moscow might not have officially ordered a mobilisation since 1941, therefore, through the 2010s the Russian leadership has explicitly thought about and often rehearsed mobilisation measures. Exercises such as Vostok 2014 and Kavkaz 2016 went well beyond the military, seeking to reflect a ‘whole of state’ approach, and including various ministries, banks, and civilian authorities at the federal, regional and local level. Indeed, the leadership was explicit about such exercises being intended to check mobilisation systems across the country. 10

Such rehearsals in fact revealed numerous flaws across the system. Russian observers continued to point to problems with the mechanisms for maintaining and mobilising the reserve system, for instance, including how to replace combat losses. Significantly, senior officials themselves acknowledged problems in mobilisation competence: Shoigu criticised many officials, particularly regional governors, for their unpreparedness, and requested that Putin oblige federal officials, governors and mayors to attend mobilisation training courses. Consequently, combat readiness courses were introduced for officials, and legislation prepared and introduced in 2017 on the establishment of regional governor led territorial defence staffs to facilitate coordination between civilian and military authorities in mobilisation activities and introducing personal responsibility for federal ministers, governors, and municipal heads for regional mobilisation measures during wartime. 11 Even so, problems remained, including with regard to being appropriately equipped – during one surprise inspection in summer 2021, Shoigu appeared to be astonished to discover that a military commissariat in Moscow did not have computers. Russian media reported that Shoigu was ‘stunned’ to hear that military commissariats are poorly funded, with small salaries for employees and no money for automation, so there was no networking or exchange of information between offices. 12

This, then, is the context in which Putin instigated the ‘partial’ mobilisation in September. It is one that suggests a series of long-term difficulties and well-known problems in theory and practice, and an uneven historical record of success. In the event, when the order was given, the performance of the military commissariats in executing the mobilisation order appears to have varied significantly across regions. And Western (and some Russian) media has tended to emphasise public protests against mobilisation, with reports of attacks not only on military commissariat offices, but even officers themselves. Indeed, one officer was fatally shot, and in some cases, commissars appeared to do their rounds with police escorts. Moreover, some Russian media suggested that a quarter of a million Russians of mobilisation age fled the country in the first five days after the announcement (effectively a second wave of departures after the first had left in the initial months of the war).

Senior Russian officials and politicians criticised the overall initial performance for its heavy

12“Kak partizany pisma zakladyvaete”: pochemu Shoigu voz-mutivna rochobu koalimatu”, Gazeta, 8 June 2021, gazeta.ru/army/2021/06/08/13625318.shtml?updated

“Western media has tended to emphasise public protests against mobilisation, with reports of attacks not only on military commissariat offices, but even officers themselves. Some Russian media suggested that a quarter of a million Russians of mobilisation age fled the country in the first five days after the announcement.”
handedness, with many instances not only of the wrong people being drafted, including the elderly and the unwell, as well as others who were exempt, but then their poor deployment. Putin himself held a meeting of Russia’s national Security Council at which he criticised the turning away of volunteers and the deployment of highly trained people to motor rifle units. He stated the need to correct mistakes, to send home those drafted on incorrect grounds and emphasised the need for "strict observance" of the draft criteria, even assigning the Prosecutor General to oversee the military commissions.\textsuperscript{14} Subsequently across the country, some regional governors fired the heads of their military commissariats.\textsuperscript{14}

Nevertheless, problems have gone well beyond the draft of personnel. At one level, it appears that some (many?) draftees are not provided with the necessary equipment and supplies. The officer in charge of the military’s logistics, Deputy Defence Minister Dmitry Bulagov, was relieved of his duties and replaced shortly after mobilisation was announced, and videos began to appear on social media of the poor quality equipment being provided to draftees, and draftees appear to have had to purchase their own equipment (though it is unclear how widespread this actually is). Prices for such items have risen substantially, with some reports pointing to inflation rates of 10-20 per cent, or even higher. In some cases, governors and private companies appear to be helping provide supplies, but there are also now calls for criminal cases to be pursued against speculation and price gouging.

At another broader level, problems can be defined in two main groups. The first relates to the knock-on effects of the mobilisation on the Russian economy as those who are mobilised are removed from the labour market. Russian media reports suggest, for instance, that half of vehicle service stations in Russia have been affected by partial mobilisation, and that 90 per cent of surveyed car services think that the industry will face problems recruiting personnel in future. Just 10 per cent of surveyed car services believe that the mobilisation will have no negative effect on the industry. By mid October, some 62 per cent of services indicated that at least one employee had been mobilised, and seven per cent of services declared that three or more employees had been mobilised. Major official dealers also noted that they lost many customers.\textsuperscript{15} The mobilisation has also had a range of different knock-on effects on other parts of the economy.\textsuperscript{16}

The second group of problems relates to military questions. Some Russian (and Western) observers have noted that the partial mobilisation order was late, and that it should have been given in the spring (and there are indications that senior Russian military personnel were arguing for a mobilisation for months before the order). One of the consequences of delaying the order to September is that the Russian military’s ability to organise, train and prepare large numbers of incoming draftees is now much more limited than it would have been in the spring. Given the way that the Russian armed forces are structured, and how they have been deployed to the Special Military Operation, many of those who would have been conducting the training are either deployed – or even already among the heavy casualties that Russia has suffered. Consequently, there are reports of high casualty rates among mobilised troops both on their way to, and at the front.

Equally, to interpret the full significance of what the ‘partial’ mobilisation means, it is important to look beyond the draft process itself to aspects of the wider state system. Much has happened after September’s order, and on 19th October 2022, Putin authorised another series of measures which emphasise the sense of mobilisation as the Russian state moving to a war footing.

First, Putin signed an executive order moving Russia onto a war footing, imposing four levels of alert on regions across the country from a ‘maximum response’ level (essentially martial law) in the newly annexed territories, through a ‘medium response’ level in Crimea and other regions bordering the war, and a ‘high alert’ level elsewhere in the Southern and Central Federal Districts, to a ‘basic readiness’ level across the rest of the country. This order gave a range of additional powers to relevant federal and regional authorities.

Second, Putin called for the entire system of public administration to take part in providing supplies for the Special Military Operation and emphasised that enhanced coordination was required at all levels of state power. Thus, he gave instructions for the establishment of a Government Coordination Council to determine the requirements for meeting the needs of the Special Military Operation, to secure supply and repair of weapons, equipment, material and services construction and logistics. The Government Coordination Council was also tasked with improving coordination among federal and regional executive bodies and updating procedures and regulations on decision-making – essentially, both to ‘enhance the resilience of the economy and industry’ and to ‘give new momentum’ to the state’s work.

The Government Coordination Council is chaired by Prime Minister Mikhail Mishustin. It brings together senior government representatives (deputy prime ministers), security and law enforcement bodies, the Presidential Administration and State Council and other organisations to coordinate work across all regions as a ‘system wide’ effort to achieve ‘concrete results’, and holds regular weekly meetings to ‘resolve promptly questions arising’ in the defence industry.\textsuperscript{17}

\textsuperscript{11}Soveshanie s poslyeznymi chlenami Soveta Bezopasnosti”, Website of the Presidential Administration, 29 September 2022, kremlin.ru/events/president/news/69459


\textsuperscript{13}Vernatyx y tet... Rynok avtoresursow i iznuta tolksevoro”, Novoe Izvestiye, 7 November 2022, newizv.ru/article/gener-ral/07-11-2022/vernatyx-y-tet-rynok-autoresursow-iznuta-tolksevoro


\textsuperscript{15}Vernutsya v ten... Rynok avtoresursow i iznuta tolksevoro”, Novoe Izvestiye, 7 November 2022, newizv.ru/article/gener-ral/07-11-2022/vernatyx-y-tet-rynok-autoresursow-iznuta-tolksevoro

\textsuperscript{16}From countering Covid to combat operations: Russia’s Government Coordination Council, pictured during a session in March 2020, is chaired by Prime Minister Mikhail Mishustin.
This suggests that Moscow acknowledges the growing scale of the challenges Russia faces – “highly complicated, large-scale challenges related to ensuring the security and reliable future of Russia”, according to Putin19 – and that demands being placed on the Russian defence industry and economy more broadly are growing. It also draws our attention more specifically to the measures that the leadership is attempting to implement to put increasing pressure on the state system to improve its effectiveness.

Indeed, although the economy has not yet formally been mobilised, the defence industry is among the parts that have notably been moved to a war footing. On 20th September, immediately prior to announcing the partial mobilisation, for instance, Putin met senior representatives of the defence industrial complex to impress upon them the importance of implementing import substitution programmes and the necessity to increase production capabilities in the “shortest possible time, maximise the load on equipment, optimise technological cycles and reduce production time without compromising quality”.19 This effort is now being coordinated more explicitly with an intensified wider state effort.

There is little doubt that the Russian leadership has faced significant problems during its Special Military Operation. Many of these are familiar to those with even a passing acquaintance with Russian military history: dissonance between the national political leadership and the military, and, at the military level more specifically, perennial challenges in command and control and logistics all stand out. Russian observers are drawing on history to suggest that such challenges are not usually resolved by ‘partial’ mobilisation. Moreover, the Russian chain of command (in both civilian and military authority) has long been dysfunctional, even when dealing with matters of strategic importance, characterised not just by corruption but by mismanagement, sloppiness, indecision and negligence. Despite the explicit effort made by the Russian leadership during the 2010s to address these problems and implement a strategic agenda, and even practice mobilisation, such problems again emerged in the Special Military Operation and in the wake of the order to mobilise.

The overall picture of the draft, therefore, appears somewhat ambiguous: messy and problematic, but largely effective in terms of numbers (some Russian observers have suggested that nearly half a million were in fact mobilised), giving the Russian military a greater force availability.20 It is, in many ways, an acknowledgement that the effort required is greater than originally anticipated and the order to move to a war footing is a significant escalation of Moscow’s commitment. Where Moscow had initially intended that the Special Military Operation would be rather more limited, it now appears to take it as a strategic question. The tacit move towards mobilising defence relevant parts of the economy and the establishment of the Government Coordination Council are as important here in understanding what ‘mobilisation’ means as the draft itself.

Along with other factors, such as changes in the weather, the arrival of tens of thousands of draftees at the front lines seems to have contributed to a slowing of Ukraine’s counter-offensive. But with the war still underway at the time of writing in late 2022 and even the short-term outlook through the winter and into the spring unclear, two sets of questions remain. The first relates to whether the experience of the first few months of the Special Military Operation and the first wave of mobilisation have led to lessons learnt and improvements in the system, and what this might mean for handling more effectively any potential second wave. The second relates to the potential for a renewed Russian offensive and campaigning: some Russian specialists are now discussing the renewed potential for Russian campaigning and an offensive, either in the winter,21 or in the spring. What might this look like, given the levels of training and equipment available to Russia? And what does this mean, potentially, for escalation and any potential internationalisation of the war?
“We would never begin a war, but might be forced to participate in a war begun by others, or might be attacked if the government of another country thought we could not defend ourselves; therefore the better we are prepared, the less likely is it that any aggressor will try an adventure in which the chances of success would be so unpromising.”

– Neville Chamberlain, 1939

USSIA’S invasion of Ukraine in February 2022 has highlighted that Western allies had perhaps become complacent about the risk of large scale armed force being used for territorial expansion in Europe. It also threw into sharp focus the importance of military capability and readiness to underpin the credibility of conventional deterrence. Without arguing here the ‘whys and wherefores’ of any deterrence failure, the current situation leaves UK and NATO armed forces in the uncomfortable position of evaluating their ability to undertake and sustain large-scale deployments at pace after many years of little consideration.

From the military perspective, deterrence relies not only on having credible armed forces able to operate at scale but also on the communicated ability and willingness to mobilise and deploy them if required. The West would appear to have been found wanting in this respect and hasty actions are underway across NATO nations to try to recover the situation; several reports indicate that the British Army is worse off than many others. It was in this context that in June 2022 the new Chief of the General Staff announced a plan to mobilise the British Army to deter further Russian aggression and prevent [wider] war in Europe; it seeks to boost readiness, accelerate modernisation, re-think how the Army fights, and revisit the Service’s structure.

Against a backdrop of fiscal and social pressures in the UK, there will inevitably be polarised debate in Whitehall about the need to increase the readiness of the armed forces to meet the immediate or longer-term threat from Moscow. Despite an obvious impact on its economy, Russia recently announced a plan to reform its armed forces and increase

**AUTHOR**

Iain Harrison is Director Strategic Engagement (Land) at QinetiQ and a former Army officer.

**INDUSTRY PARTNERS: GREASING THE WHEELS OF MOBILISATION**
The need to counter improvised explosive devices [in Iraq and Afghanistan] led to the mobilisation of 5-Eyes intelligence, academic, scientific, industrial, law enforcement and military capacity to address a specific threat.

Deliver change than pre-2021. The Army’s ‘decade of delivery’ will be a bumpy ride which relies on programmes achieving their intended capability, to time and cost, in order to remediate land forces. Moves to adjust or enhance capability risk slowing delivery timescales or a hike in prices.

Of course, Army modernisation is now being delivered in parallel with the war in Ukraine, which is yielding some very useful lessons for armed forces, and armies in particular. While Future Soldier had accounted for many of these, the conflict has highlighted some ‘old truths’ about the importance of combat mass, the centrality of fires (and ‘fighting deep and close’ concurrently), battlefield survivability and resilience, especially for headquarters and command and control systems. Future Soldier will reset a peacetime army but may not account for the need to fight at scale with the right levels of sustainability for longer duration conflicts where battle casualties – both human and equipment – need to be replaced; this may need more considered analysis.

The notion of mobilisation also has many different interpretations and implications. For some it will conjure up large scale whole-of-nation efforts – such as the World Wars and (at lesser scale) the Gulf Wars – to ‘assemble and organise the personnel, supplies and materials for active military service’; these can include call out of reserve forces, out-load of supply bases, take up of vessels from commercial trade, pre-deployment medical preparations, acquisition and integration of mission/theatre-specific equipment, pre-deployment training, and home-base enabling and security activity. Others may interpret mobilisation in a more limited way based on experience on operations since 2003; for example, the need to counter improvised explosive devices led to the mobilisation of 5-Eyes intelligence, academic, scientific, industrial, law enforcement and military capacity to address a specific threat. ‘Modern mobilisation’ could be seen as a refined blend of these two ideas. Intuitively, mobilisation on the scale of World War II feels less likely in the near future but key elements of what underpinned it and Cold War planning have strong resonance; amongst many others: being able to create combat mass (not necessarily raw numbers) at the speed of need; having stockpile and materiel resilience (including replacement of platform battle casualties); and having a secure and resilient home base. Recent experience of mobilising experimental capabilities signposts how innovative technologies and ideas can be adopted at pace and a wider base of non-traditional stakeholders can be mobilised. Naturally, achievement of operational readiness sets many of the conditions for successful mobilisation.

“If industry is part of our force structure. We are dependent on industry to perform and, if we do not have a healthy industry, we do not have a healthy force.” – Frank Kendall, US Under Secretary for Defense Acquisition, Logistics and Technology, 2012

2 The ability of a force to maintain the necessary level of combat power for the duration required to achieve its objectives. NATO Terminology.
3 NATO Terminology.
Within this context, UK-based Land-facing defence industry has had to work hard and adapt quickly to support the Army, despite having to contend with many years of ‘feast and famine’ funding, and several changes in strategy. For decades, industry has played key enabling roles in helping the Service achieve and maintain readiness (across workforce, equipment, sustainability and training), for mobilisation and deployment, and enabling deployed operations – through materiel manufacturing and other operational and support functions.

While the notion of a ‘defence enterprise’ exists as a loose concept, the Ministry of Defence is now trying to define it – and its purpose – better; it also seeks to determine how its various stakeholders can work collaboratively to meet the intent of the UK’s numerous defence and security industrial strategies. The recent Land Industrial Strategy is an important step in forging closer Army/industry relations; it also needs to be underpinned by the right culture and behaviours throughout the ‘land enterprise’ – taken loosely for now to include Army, Defence Equipment & Support, Defence Digital, industry and industry associations.

Despite various conflicts in the intervening period, reductions of armed forces since the Cold War ended and a continuous drive for efficiencies and ‘just in time’ support have led to significant consolidation by Western defence industry. In the US this was framed by government commitment to rationalisation whilst retaining competition at prime contractor level; it led to the creation of five large US defence companies from an original 51 prime contractors in 1990. Consolidation in Europe was slower, partly due to nations’ aspirations to retain sovereign industries, but has included some mergers within states and cross-border joint ventures. In 2022, the global top ten companies by defence revenue comprised five US, three Chinese and one UK firm.\(^1\)

While the term trips easily off the tongue, [defence] industry is not homogeneous – and the Army’s requirements are very broad. In addition to established large companies, the Army is also supported by a vibrant and innovative community of small and medium-sized enterprise businesses, albeit their technology is enabling new ways for industry to make direct contributions to operational outcomes. Industry staff can reinforce the capacity of home-based support functions such as intelligence analysis, information operations, training and training support, and data management for decision support. Potential adjustments to Future Soldier provide an opportunity to explore options for increasing the role of industry in contributing to a wide range of support operations, thereby freeing uniformed personnel to increase combat mass at ‘the tip of the spear’.

Explaining the role of defence industry and its benefits (and risks) as part of civil servants’, officers’ and more senior soldiers’ training and education will underpin the workings of the ‘land enterprise’ and prepare individuals for working with industry. The Land Industrial Strategy (and similar strategies) set the conditions well for greater [two-way] transparency and closer collaboration between the Army and industry. As suggested earlier, a ‘working with industry’ module for military and civil service staff will help embed the right behaviours, as will industry/Army exchange opportunities – albeit on a smaller scale. A better understanding of industry will also increase the confidence of Army and Defence Equipment & Support staff to challenge industry to do better in scoping requirements and delivering projects.

“There is the history of munitions production: first year, very little, second year, not much, but something; third year, almost all you want; fourth year, more than you need.” – Winston Churchill on mobilisation

There is an intrinsic tension between holding sufficient stockpiles to meet the needs of large scale, high readiness forces for prolonged ‘hot’ conflict and the likelihood of that conflict happening. Understanding what should be held is a blend of the logistician’s ‘4Ds’ planning yardstick – distance, destination, demand and duration – supported with algorithmic support from scientific modelling; albeit the base data in some models can be outdated and assumptions on weapon usage change as Land operating concepts evolve. The need to hold large stockpiles can be mitigated by having assured production lines and supply chains that deliver within the deployment timescale; if this works, operational risk is limited. Several key Land forces’ munitions tend to be [relatively] low volume and high cost production, with – in some cases – complex global supply chains and shorter shelf lives; when the likelihood of ‘hot’ conflict at scale seems remote, there is a partly understandable risk taken to minimise investment in these and focus on other more

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Occasionally an anathema to some military personnel, businesses exist to make a profit; by doing so they are able to continue to exist and fulfil other important social and shareholder functions. Businesses produce goods or provide services with the aim of selling them to customers and making that profit; they also play vital roles in creating jobs, fostering innovation and, increasingly, driving sustainability. In the defence context, industry supports the armed forces and contributes to national economic growth. For decades industry has either deployed on operations alongside the Army or has provided surge support in the home base for the duration of an operation. While the sight of contractors on deployed operations will be familiar to many,
pressing requirements. Self-evidently, the Ukraine conflict has darkened the sky with ‘chickens coming home to roost’.

Both World Wars saw substantial industrial production challenges in their early months. However, despite a rolling assumption that large-scale war would not occur for ten years and a popular narrative that the UK was wholly unprepared for World War II, successive governments implemented some key lessons from the Great War and started re-armament programmes earlier in the 1930s. Coming out of global recession in the 1920s, there was a need to balance wider social and economic recovery with a growing government agenda to re-arm. However, many industries were reluctant to absorb the risk of investing in excess defence capacity or to give up engineers (already in short supply) to full-time armaments production when many people felt the risk of war was low.

An important way of addressing this was the ‘shadow factories’ scheme whereby state-owned but private sector built-and-operated facilities enabled the country to focus on scaling up re-armament during the mid-1930s and to surge on the outbreak of war.

An essentially economic war enabled by defence spending at between 5-7% per cent of gross domestic product, the Cold War saw large-scale forces and stockpiles forward deployed and held at very high readiness in their likely theatre of operation. Some nations adopted innovative ways to increase their reaction times such as the US Marine Corps holding a brigade’s worth of equipment and materiel in Norway and another brigade’s worth of equipment held afloat for the troops to be flown in to marry up with it. The scale of spending on defence meant that Western forces were not only reasonably well equipped, the were also at the forefront of many technical developments. The size of the immediate post-Cold War British Army and the fact that it had near full scaling of equipment in unit lines and a corps’ worth of stockpiles meant that the divisional-sized deployment for the 1991 Gulf War could largely be accommodated from within existing resources. However, there was a need to mobilise a number of key specialists to provide medical support and to enable logistics deployments at the anticipated scale and intensity. Therefore, while industry supported the operation with some short notice mission specific items, the need to mobilise large scale industry support at short notice was more limited. Late political decision-making and the importance of operational security for the 2003 Gulf War meant that industry’s involvement was also modest. Several theatre-specific platform modifications — urgent operational requirements — were embodied at short notice prior to the war, following experience gained the previous year on a major exercise. In the war’s aftermath and over the following 12-14 years in both Iraq and Afghanistan, industry played an important role in helping to find and field at pace technical solutions to complex tactical problems such as countering improved explosive devices. While this was generally small scale, operational needs resulted in several non-traditional industry skills being mobilised. During this time the Army mobilised itself through Operation Entirety to ensure the right focus on structures and training to meet the needs of concurrent operations; industry played a limited part in this.

“No matter how clearly one thinks, it is impossible to anticipate precisely the character of future conflict. The key is to not be so far off the mark that it becomes impossible to adjust once that character is revealed.” — Historian Michael Howard

Recent history suggests relatively limited experience of collaborative working across the ‘Land enterprise’ and almost no focus on how mobilisation of a large scale Land force ready to fight for a sustained period might be supported. Even the Land Industrial Strategy does not refer to mobilisation and only uses the word mobilise once. However, some of its proposed initiatives — such as the Land Integrated Operating Service — should help to tackle some of the systemic equipment challenges and forge closer Army/industry relationships. Regular ‘Land enterprise’-wide mobilisation wargaming would also start to address some of the key issues that may have been forgotten.

As a brief codicil, while this article focuses on Army mobilisation, it is clear that, as societies become more connected and thus more vulnerable to influence, there is a missing element of mobilisation planning. A large deployed Land force will need to draw on the political authority of the government and moral, industrial and other practical support from society. “A more comprehensive and purposeful national mobilisation strategy [is needed] that accounts for the links between the military, civil, digital, economic, social, and psychological domains. These domains should no longer be treated as separate and need to be understood as key elements in an overarching national resilience framework.”

“The Defense Department found itself in a circumstance similar to that of the Army at the end of the Vietnam War, in that they ‘had lost a generation’s worth of technical modernisation there while gaining a generation of nearly irrelevant combat experience’.” — War on the Rocks, 9th August 2022

Having spent the first 15 years of the 21st century largely engaged in counter-insurgency, the 2020s present the British Army with the...
concurrent challenges of having to undertake wholesale modernisation whilst seeking to (re-)learn and apply the lessons from an actual large-scale conflict and developing an up to date operating concept. An ambitious programme of experimentation and technology exploitation is running in parallel, and seeks to leapfrog some capability shortfalls. This, and the Army’s eye-wateringly large modernisation portfolio, presents it with significant capacity, change management and capability integration issues, at a time when staff horsepower has been much reduced. Even those confident in engaging with industry have difficulty finding the time to do so and in navigating complex commercial processes.

Not only is the conflict in Ukraine emphasising the value of rapid adoption and innovative use of certain modern technologies, it has reinforced the importance of sustainability and resilience – two key facets of industrial war. It has also highlighted a familiar theme of disparity in the ‘economics of the battlefield’ whereby expensive tanks are destroyed by low-cost anti-tank missiles or improvised means, such as un-crewed air systems fitted with freefall explosives. While tactics can mitigate some combat platform casualties, the British Army will need to modernise its warfighting capability to include appropriate battlefield survivability; it will also require enough strategic resilience and a mechanism – such as an armoured replacement regiment – to replace platforms sufficiently quickly if some are lost in battle.

“Coming together is a beginning; keeping together is progress; working together is success.” – Henry Ford

Better integration within a ‘land enterprise’ can enable industry to play a greater role in helping the Army modernise, and achieve and maintain readiness. There are a number of examples of defence industry embedded in key operational support roles where it is hard to differentiate between core military and contracted outputs. While relations are not always harmonious, more experience of this and careful selection of where industry support is used will reassure military personnel of its value and help build mutual trust within the ‘land enterprise’. Better collaboration with industry can help improve Army readiness and sustainability in six important ways. First and foremost, industry needs to deliver what it has been contracted to do or has said it will do – and achieve (or exceed) agreed performance, cost and time parameters; failure to do so needs to be held account. Despite a few high-profile cases, statistically Army projects and service contracts are generally successful. Manufacturing to military specifications often happens at the leading edge of technology and some material or integration difficulties are inevitable; in these circumstances, early and open dialogue is key.

Next, with its combination of skilled workforce and the ability to undertake internal investment dynamically, industry has the capacity to push boundaries and pace on research and development; this includes spin-in from non-defence sectors. The exploitation value of this investment can be increased exponentially by having a clearer understanding of longer-term military goals and/or operational challenges. It is unsustainable (and unreasonable) to expect all research and development to be funded in this way; the Army needs to set and resource its research priorities.

Thirdly, as commercial entities, industry will be acutely aware of their costs and supply chain. At times of global security stresses, they will be constantly searching for supply chain resilience and innovation to maintain optimum outputs at the lowest possible cost. Increasingly incentivised by industrial strategies, companies can both benefit commercially from providing assured onshore support for the UK and contribute economically and socially to national prosperity. Greater dialogue within the ‘land enterprise’ can also provide useful supply chain business intelligence and assure critical capabilities and technologies for UK use.

At a more practical level, industry can (and should) be pushed harder to simplify user interfaces with machines and technology, and ensure far greater commonality across different platforms and technology. A public sector desire to avoid vendor lock-in and keep commercial options open can often result in through-life support being subordinated to gaming a competition during acquisition; there is little incentive for industry to think long-term and invest in innovative through-life support and growth plans from the outset. The industry component of the ‘land enterprise’ can support the Army better through closer interaction between businesses and a genuine adherence to open standards and interoperability protocols.

While seemingly a tactical issue, industry is less practiced at dealing with espionage and, in extremes, sabotage. Large-scale mobilisation against a peer competitor is likely to give rise to significantly greater threats in the home base, both directly to defence industry or through pressurising supply chains or politically-motivated civil unrest. Industry needs to be a part of a national coordinated and integrated security plan for periods of mobilisation.

Finally, advances in technology and information systems mean that functions that were traditionally forward based can be undertaken from the home base. This also provides the opportunity to reflect on innovative ways of using industry to contribute directly to operational outcomes – albeit within the laws of armed conflict. This could either be as sponsored or other sorts of reserves or as straight commercial contracts; some recent
As the threats to regional security and national interests grow, the ‘land enterprise’ needs to be more adept at being able to mobilise at short notice and operate or fight at scale for extended periods of time. In these circumstances, and in preparing for it, industry will be an essential part of the team. As Frank Kendall said “if we don’t have a healthy industry, we don’t have a healthy force”. Furthermore, as the old adage goes ‘you can’t surge trust’, so effective working relationships across the ‘land enterprise’ need to be forged, nurtured and respected for the difficult days as well as the good ones. This is also something for everyone, not just a select few senior leaders or specialist staff.

As the ‘land enterprise’ lead partner, military organisations set the tone and the requirements. Global and regional security threats are reaching the point where defence industry ought to be on the sort of ‘war footing’ that was commonplace during the Cold War. This would help focus plans for production lines and re-establish ammunition and materiel stockpiles to a level which underpins credibility in conventional deterrence. A strong science and technology base are essential to sustain warfighting competitiveness; the pace at which ideas move from the laboratory to the front-line can also be a deterrent in their own right but rely on focus, investment and exploitation pathways. A more agile and collaborative approach to some capability acquisition is required; this can partly be satisfied by Defence Equipment & Support’s Buy and Try at Scale on Operations initiative or, as QinetiQ might describe it, Prototype Warfare. However, it also needs routes to scale and support at enterprise level.

Like most military endeavour, solid collaborative planning is at the heart of addressing the problem of ‘land enterprise’ readiness and mobilisation. A large-scale mobilisation of a fighting division has not been undertaken or exercised since at least 1991 and probably earlier; Operational Telic was a smaller effort overall. Given the complexity of the task and number of moving parts, there would seem to be strong merit in modelling and wargaming it with participants from across the ‘land enterprise’ – including industry. The former HQ Land Command used to wargame large-scale mobilisation in the late 1990s under the title of Exercise Lion Scabbard; the wargame also explored the efficacy of the human and combat platform battle casualty replacement chains. The effectiveness of support provided by industry will be enhanced by having access to relevant Secret level threat briefs and an understanding of capability risks to help inform research and development investment and other key business decisions.

While understandably attractive, the ability to accelerate modernisation should not be over-estimated; the size and complexity of the Army’s portfolio, and the associated industrial and capability integration challenges are significant. Staff capacity to plan, deliver and integrate change is limited – and visibility (and sponsorship) of capability issues through-life has been eroded by staff reductions. While industry can and do support programme delivery teams and can also advise on the ‘art of the possible’, many of the core capability planning functions will reasonably remain military roles; staff re-investment in some key areas will help both plan capability change now and ensure planning coherence for the following ten years.

Given that most equipment in service in 2035 is either in service now or is just coming into service, platform-based capabilities must accommodate faster refresh rates for information- and other sub-systems. A platform-centric view can lead to a poor focus on procuring and maintaining software, data management and information systems; the need to integrate and assure systems supported by artificial intelligence and machine-learning will compound this problem. While delivering totemic platforms is important, similar emphasis is required on the ‘dull but essential’ components of capability such as logistics systems and stockpiles. Greater weight is also needed on integrating thematic multi-platform, multi-sensor, and multi-command and control system of systems to create genuine capability – for example, ground-based air defence.

Despite having world-leading academic, research and commercial industry partners in the development and fielding of some breakthrough technologies, UK defence innovation focuses more on ‘discovering ideas’ than innovation adoption and exploitation. Generally its high-tech, safety intensive nature requires systems thinking to be applied from the outset and early engagement of regulators. Platform procurement must be complemented by through-life ‘contract for capability’ approaches where multifaceted industry teams (large firms and small and medium-sized enterprises) are incentivised to work alongside defence to invest in and embody next step improvements; the Land Industrial Strategy accommodates the concept but early adoption is key.

The British Army is having to undertake a swift ‘about turn’ in capability terms and re-familiarise itself with the concepts and capabilities of large-scale warfighting, with the associated need for mass, firepower and sustainability. UK Land-facing defence industry has been withering for the last 30 years and, but for some swift footwork in creating transnational joint ventures, might have disappeared altogether. The UK’s Land Industrial Strategy has created the framework for a ‘land enterprise’ to work together on the common goal of regenerating Army capability.

If the UK is to achieve a true offset approach to address some of its major defence capability shortfalls, there would seem to be the need for something more radical to be tried. Further study of the 1930s’ shadow factory concept might yield a different but complementary approach to tackling the still fragile Land-facing defence industry. Contemplated for the 21st century, government-owned/contractor-operated facilities could help regenerate Army capability and maintain future stockpiles and provide a foundation of levelling up skills and investment. Finally, closer collaboration has the opportunity to ensure resilience of the strategic base – both against physical or cyber-attack but also in the maintenance of core skills.

Regardless of how the war in Ukraine pans out and UK defence strategy and funding are determined, it is going to be a tough decade for the Army – and UK land defence industry. There is, however, a perfect opportunity to build on senior leaders’ intent and the supporting Land Industrial Strategy to cement relationships, collaborate and explore export potential for mutual benefit.

**“Effective working relationships across the ‘land enterprise’ need to be forged, nurtured and respected for the difficult days as well as the good ones.”**

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12DE&S, December issue 163, March 2022, page 4-5.
13QinetiQ, Deploying Prototype Warfare, 21 Sep 18.
FOR someone with a penchant for, and proven pedigree in, unpicking the past, Peter Wilson – the Chichele Professor of the History of War at the University of Oxford – has a surprising knack for finding his finger pressed firmly to the pulse of the present. That was certainly the case when the author of Iron and Blood: A Military History of the German-speaking People since 1500, which was released to widespread acclaim late last year, sat down for an interview with The British Army Review.

At the time, Germany, the principal subject of his academic toils, stood firmly in the international spotlight as it hosted crunch talks between more than 50 countries about coordinating efforts to increase weapons supplies to Ukraine and its Chancellor Olaf Scholz – undoubtedly labouring over many of the themes featured in Professor Wilson’s book – was facing mounting pressure to permit exports of Leopard 2 tanks to the front-lines.

Similarly serendipitous was the historian’s answer to the question of ‘what’s next on your agenda?’, which was posed as the issue of mobilisation monopolised military minds across the West.

“I am currently coordinating a project that examines resource mobilisation by looking at examples across Europe from the early 16th century through to the late 19th century. We’re looking at what you do if you can’t obtain what you need for defence or for war-making from your own population – so if you can’t conscript it, tax it, or requisition it. This is informing my thinking on how, what I would term pre-modernity, can provide insights on the present, not least as a significant proportion of armed forces in Europe during that time were composed of foreigners, there was the hire of auxiliaries, arrangements for the transfer of war-making resources and things like transit across neutral territory were handled in a certain way.

“Britain was extraordinarily successful at doing this [mobilisation] during the 18th century. For example, the Royal Navy had a relatively small manpower and most of its ships were mothballed, but it could mobilise quickly because it could take sailors from the Merchant Navy and, as the country depended on trade, the Merchant Navy then recruited Dutch and Scandinavian sailors to sustain its own ability to operate.

“Likewise, the Army was relatively small but could increase its size by about 50 per
cent through the hiring of foreign troops or subsidising allies and partners to provide manpower where needed on the Continent. This enabled highly successful interventions, neutralised countries like France and enabled Britain to conquer Canada for instance. Britain has quite a good history from which it could draw on for insights and inspiration for how it might deal with some of the problems it faces today.

“My broader perspective is that the age of what me might call national war-making is historically relatively brief – it emerged around 1870 and disappeared sometime during the last decades of the Cold War. We are now into, and I hate to use the term, a kind of post-modern and certainly post-sovereign world where states do not have the kind of effective capacity that one might associate with the ideas of sovereignty in its classic sense. We don’t really control economic trends, we are constantly compelled to compromise to secure trade deals, we don’t have effective control over our frontiers and ‘cyber’ has made things extraordinarily complicated. To some extent the vision of military and security services has been privatised and states have shifted toward attempting to regulate public goods and the provision of public goods rather than providing them directly.

“I’m not saying we’ve gone back to the past, but I do think the pre-modernity, which I see as being prior to the middle of the 19th century, can offer us a lot more insight into understanding today’s problems and it gets us away from the idea of national war-making – citizens in arms, state control and state delivery – being a Humpty Dumpty that we have to put back together again. We can’t – we are not going to go back to that type of warfighting, that type of diplomacy and that type of international order; we are into something different and therefore our solutions have got to be different.

“There are some aspects of the conflict [in Ukraine] which many analysts thought had disappeared – the tank-heavy armies, significance of large numbers of infantry and so forth – but as it becomes clearer, Ukraine isn’t the Russian front of the 1940s; it is really very different for a whole host of complicated reasons. This isn’t the past, we are in a different kind of present and we must think deeply and effectively about how to respond to it; to not just see the surface but to try to understand the longer-term trends. We need to understand the disappearance or the temporary absence of this type of conflict in the last 20 to 30 years and understand why it has returned and why it has returned in a format that is different than it was before.

“One of the characteristics in the way in which defence has been organised in Central Iron and Blood: A Military History of the German-speaking People since 1500 Published by Allen Lane, October 2022, Hardback, £40

“I don’t believe the old adage that we get direct lessons from history, but history helps us to understand the present and helps us to ask better questions of the present. It reminds us that problems are generally complicated and therefore solutions have to be complicated as well. History is a good check, a reality check, against simplistic answers and simplistic promises.”

“The complexities of the current situation have reminded Germany of the importance of having its own military strength. Where there had been a reluctance to engage fully with out of area operations and a desire to shelter behind an alliance system, there is a growing understanding that the country will have to pay more, and potentially more will have to serve, but in no way do the headlines of massive military spending mean we are going to see a new Wehrmacht or Kaiserheer returning. If party politics do not intervene, there is a good opportunity here. Germany is not alone in having had a wake-up call.

“The danger all Western democracies face if their societies do not have direct contact with soldiers and soldiers become a small minority in a population is that people become casualty averse and find it very difficult to accept the need for defence is serious. We have to invest, and we have to accept that investments are costly in blood and treasure.”

● Professor Wilson’s previous published works include Europe’s Tragedy: A New History of the Thirty Years War (2009) and The Holy Roman Empire: A Thousand Years of Europe’s History (2016). The author who was a Visiting Fellow at Westfälische Wilhelms-Universität in Münster in 2011 and is a Fellow of the Royal Historical Society, can count spells at High Point University and the National War College in Washington, D.C among his teaching assignments. The University of Liverpool and University of Cambridge alumnus has also been a lecturer at the University of Sunderland and Newcastle University.
MOBILISATION: NO TIME TO WAIT

As the opening article of this publication has reminded us, General Sir Patrick Sanders’ first public statement on becoming Chief of the General Staff made his views clear upon the context in which the British Army now finds itself and upon the subsequent priorities that he wished to set.

Whether domestically or abroad, both as an Army in its own right, and as an integral and integrated part of British Defence and of NATO, the security context was (and remains) such that a new mindset is required. Operation Mobilise was not to be just an Army slogan. It was to be a state of mind that led to a transformation of Britain’s approach to its Army that was to reach well beyond the confines of the Army itself. Mobilising an army, if it is to have any meaning, is not just about what that army does to itself, internally. Mobilisation starts and finishes through the choice, decisions, and actions of politicians, not soldiers. That fact alone, however, does not release soldiers from the responsibility to consider the implications of mobilisation for their army. And in so doing they should always remember that reality and experience suggest that mobilisation, as a political step, is one that is taken as a last resort.

By design, therefore, the articles in the opening section of this British Army Review have all addressed the Chief of the General Staff’s main effort: mobilisation. They have offered: an Army view of what this means in practical terms (Major General Charlie Collins’ article); an historical case study of mobilisation (Professor Matthias Strahn’s article); an insight into the context, realities and implications of Russian mobilisation (Dr Andrew Monaghan’s article); a Defence-related industry perspective (Brigadier (Retired) Dr Andrew Sharpe) is the Director of CHACR and completed 34 years of military service and nine operational tours.

The purpose of the British Army is to protect the United Kingdom by being ready to fight and win wars on land. One can be certain that the word ‘ready’ has not found its way into that statement by chance – the Army is an organisation that puts a great deal of effort into wordsmithing its more significant pronouncements. Readiness (both in terms of preparedness and in terms of will – of mindset) sits alongside capability as the two pillars of an army’s ability to mobilise itself for war.

The size, structure and readiness of the Army, however, has seen a steady reduction in all respects since the days of the Cold War. Such periods of comparative reduction are not a new circumstance for the British Army or, indeed, for any army. History shows us that policy and strategy planners of pretty much all nations have a tendency to reduce their armies in times of perceived peace and, more often than not, to have to expand their armies in a rushed and haphazard manner when threats emerge. In 2018, in the wake of Army 2020, of the work of Army 2020 Revised, and of the associated balancing, re-balancing and order of battle-massaging activities of such things as Project Marble Arch, the CHACR was invited to produce a book (subsequently entitled How Armies Grow) that captured a wide-ranging historical overview of the realities and challenges of mobilisation in the face of emerging threats and, worse, of neglected threats developing into fully-fledged security crises, or even war. At that time, with some foresight, the Army felt it wise to capture the thoughts of the contingency work and research that was done to think through how an army that was decreasing in both size and readiness may be re-booted, rapidly and effectively, if circumstances demanded it. The book was (and remains) a sort of historical annex to the Army’s mobilisation contingency planning of the first 15 to 20 years of this century – or at least to its contingency thinking.

Several years ago, while How Armies Grow was at the publishers, I was present on a staff ride that had been organised at the behest of the then Chief of the General Staff, and was attended by the then Commander of the Field Army (who is now the head of the Army that has written the foreword to this publication). Towards the end of the event, the Commander of the Field Army was speaking to an audience of senior leaders (mostly of colonel and lieutenant colonel rank, but including several 1* and 2* officers). He spoke immediately after a retired 3* officer, and strongly endorsed...
As he spoke, and as the Commander of the Field Army followed him up with strong direction (not 'suggestion', but 'direction') to turn minds away from the narrow focus of Op Entreaty and onto the demands of 'heavy war', quite possibly in Europe, my own mind turned to that period in my own experience when the British Army stood ready in Germany for just such an eventuality. Exercise Active Edge was a pain. Soldiers were clear that if 'Active Edge' were called there would be no distinction made as to whether this were an exercise or the real thing. At one end of the scale, commanding officers could call an Active Edge upon their own battalions and regiments. At the other end of the scale, the Supreme Allied Commander Europe could call an Active Edge on all or anyone – the whole of Northern or Central Army Groups if he wished. Within four hours of the call being made, all those involved would be expected to be stood to, armed and ready to leave their camp: kit packed and stowed; vehicles, tanks and armoured personnel carriers packed, bombed-up and ready for war. Although the suspicion was always that this was just another drill, the soldiers themselves did not know whether this was so until they were stood down by their company and squadron commanders. Married soldiers would say farewell to their families as they headed into camp, not knowing when (or even, in extremis, if) they’d be returning home. Sometimes, often, the units involved would be ordered to leave camp and head, on pre-planned routes, towards their pre-recced, ‘tactical exercise without troops-ed’, and familiar war deployment positions, only to be stopped some distance out of camp (sometimes a very long way out of camp) once the commander that had called the Active Edge was satisfied (or not!) with the unit’s performance. Failures of any kind, in terms of ‘activeness’ or the keenness

of a unit’s ‘edge’, could have career-limiting consequences. It felt very real – because it was real. The Army throughout those long years of the Cold War was in the unbreakable habit of asking itself two core questions: ‘are we capable enough?’ and ‘are we ready enough?’.

The more that I think about it now, as I write this article, the Army, after 40 years of strategic certainty about its role and importance (and, thus, the security of its funding stream, both relative to other Government departments, and to the other two Services), has, since the Berlin Wall came down, been going through about 30 years of an almost continual circular discussion about its raison d’être, relative importance, roles and responsibilities, and so on. For the soldiers of the 1950s to the 1980s there was no doubt about ‘the purpose of the Army’: the safety of the UK depended very heavily upon an Army that was good enough, big enough and ready to fight Soviet conventional land forces to a standstill in Central Europe.

“..."For the soldiers of the 1950s to the 1980s there was no doubt about ‘the purpose of the Army’: the safety of the UK depended very heavily upon an Army that was good enough, big enough and ready to fight Soviet conventional land forces to a standstill in Central Europe.”
DESPITE being military strategists born millennia apart, Sun Tzu and the British Army’s current Chief of the General Staff, General Sir Patrick Sanders, share similar thinking on the perils of passiveness. On the issue of inaction, the former stated “the art of war teaches us to rely not on the likelihood of the enemy’s not coming, but on our own readiness to receive him”, while the latter made clear his intent to mobilise the Service to deter Russian aggression – and prevent war – during his keynote address at the RUSI Land Warfare Conference on 28th June last year.

Outlining his singular focus for the Army, General Sanders said: “This is not the rush to war at the speed of the railway timetables of 1914. It is instead an acceleration of the most important parts of Future Soldier’s bold modernisation agenda, a move to a positional strategy, an increased focus on readiness and combined arms training and a broader institutional renewal that creates the culture required to win if called upon.”

In this context, the not-too-distant lessons of UK troops involved in Operation Pitting, the evacuation of non-combatant British citizens and eligible Afghans from Kabul in 2021, are apt. As a key stakeholder in the newly formed UK Global Response Force, 16 Air Assault Brigade Combat Team holds forces at very high readiness to respond to crises anywhere in the world and provided the bulk of personnel deployed to Hamid Karzai International Airport.

The Brigade’s largest operational deployment in more than a decade, Pitting underscored
the utility of very high readiness forces across the spectrum of conflict and this article reflects on both the strategic application and key components needed to deliver such capabilities.

THE UTILITY OF READINESS AND THE GLOBAL RESPONSE FORCE

The Integrated Review and associated publications – the Defence Command Paper 2021, Integrated Operating Concept 2025, and Future Soldier Concept – all stress the importance of high readiness forces. The resurgence of great power competition requires forces that can deliver effect across the full spectrum of conflict, providing policy makers with the broadest range of options. These forces must be engaged internationally, be more assertive in confronting threats early, and must have an increased focus on persistent global engagement. At the national level, forces must be capable of working effectively with partners across government to deliver truly integrated effects. Critically, forces must be able to deliver this spectrum of activity at short notice, with speed of response being a significant force multiplier.

The Global Response Force, built around 16 Air Assault Brigade Combat Team, the 1st Aviation Brigade Combat Team, and the RAF’s Air Mobility Force, is optimised to respond to the challenges outlined. The ability to deploy scalable mass at speed means the Global Response Force can react rapidly to a crisis, whether a humanitarian disaster or an escalating conflict. The lethality of attack helicopters gives it a potent warfighting capability and the ability to compete against more heavily armoured adversaries. Finally, the ability of the Force to project globally makes it ideally suited for ‘operate’ activity, to demonstrate political resolve and impact an adversary’s decision making. 16 Air Assault Brigade Combat Team demonstrated this during Op Fortis, where the insertion of paratroopers into Jordan was synchronised with wider Carrier Strike Group activity. The infantry units within the Brigade consistently train alongside the same combat support and combat service support force elements, providing highly capable all-arms groupings. This enables the Brigade to adapt to a wide range of tasks. Its logistics expertise, especially concerning deployment by air, also gives the Global Response Force a force projection advantage. The fact that the Brigade Combat Team is being reinforced by additional force elements as part of the Future Soldier programme can be viewed as a vote of confidence in its utility.

Operation Pitting was a timely demonstration of the Integrated Review’s conclusions on readiness. From May 2021 to July 2022, 2nd Battalion, The Parachute Regiment (2 PARA) held the Air Manoeuvre Battlegroup commitment. This sees an airborne infantry battalion and its associated combat support and combat service support force elements held at very high readiness, meaning forces are ready to deploy within five days. Within the Battlegroup, the lead company group is then held at extremely high readiness, able to deploy in 48 hours.

The activation and deployment of 16 Air Assault Brigade Combat Team forces for Operation Pitting chimed with the Brigade’s concept of employment. A small advance

Rapid response: Operation Pitting (pictured left and above) saw UK and US troops working together to evacuate civilians from Kabul following the fall of the Afghan capital to the Taliban in August 2021. British nationals and former British staff eligible for relocation under the Afghan Relocation and Assistance Policy were provided with safe passage to the UK from Hamid Karzai International Airport.
party, comprised primarily of the lead company group HQ, logisticians, intelligencers and signallers, deployed to Kabul alongside Joint Force HQ staff on 10th August to set conditions at the air point of disembarkation. Following formal activation two days later, the lead company group (based on A Company, 2 PARA) then arrived in Kabul in the early hours of 15th August. This proved a timely intervention: less than 24 hours after landing, several thousand Afghans swarmed the Hamid Karzai International Airport and blocked the runway. This was only re-opened following a prolonged clearance operation by A Company and US Marines on 16th August. Within 24 hours of this operation, the remainder of Air Manoeuvre Battlegroup (B and C Company, 2 PARA) had arrived in Kabul. With sufficient force elements now in theatre, the Battlegroup could expand the lodgement and secure the evacuation handling centre at the Baron Hotel.

Up to this point, the deployment of Air Manoeuvre Battlegroup had been broadly in accordance with the stipulated readiness timelines. However, it quickly became apparent that the scale of the security and humanitarian situation in Kabul was beyond anything that had been envisaged. Greater mass was required to stabilise the security situation, and thereby set the conditions for an efficient evacuation. It also required increased co-ordination between various UK headquarters and international partners, which necessitated the deployment of a 16 Air Assault Brigade Combat Team HQ node, as well as a substantial network of liaison officers. Within the 16 Brigade concept of employment, Air Manoeuvre Battlegroup 2 was the next formation to deploy. Despite being held at 20 days’ notice to move, 3 PARA were able to deploy two company groups (A and C Company) and elements of their headquarters within 48 hours. B Company, 3 PARA was reactivated at short notice and deployed to the Joint Air Mounting Centre to form part of the strategic reserve during the last seven days of the operation. Every deployment of additional forces was facilitated by the 16 Air Assault Brigade Combat Team mounting group. Overall, Operation Pitting validated the suitability of the concept of employment for the deployment of forces at readiness, and the ability of those forces to deploy within (and indeed ahead of) the stipulated timelines when required.

**THE COMPONENTS OF READINESS**

Operation Pitting highlighted that readiness is defined by two distinct but mutually reinforcing components. The first of these, termed procedural readiness, is effectively about battle procedure: ensuring that troops have the right equipment, the correct training, and are suitably administered to deliver effect in the timelines required. The second component, which might be termed cultural readiness, is harder to quantify but is equally important. In simple terms, it is the preparedness of the individual to deploy at short notice, and the knowledge of the wider organisation to enable this by rapidly adapting to changing circumstances.

**PROCEDURAL READINESS**

This is what is normally referred to as readiness, and it is effectively the metrics by which readiness is formally measured. Quantifying readiness is important for several reasons. First, it plays a key role in the formal assurance of high readiness forces. Without this assurance, the deployment of high readiness forces is less appealing to strategic decision makers. Second, it provides high readiness forces with a checklist of activity that should be undertaken to ensure the individual and organisation are optimised for rapid deployment. This covers everything from military annual training tests through to broad personnel readiness — such as ensuring passports, identification discs and vaccination records are all in-date. Maintaining high standards of procedural readiness is a burdensome activity, and it must be tested to
ensure units will meet the standards required for a short notice activation. 16 Air Assault Brigade Combat Team units regularly conduct administrative and logistical readiness assurance checks, which are as important as field training exercises.

Whilst these metrics are important, rigid adherence to procedural checks must not be a handbrake to the actual deployment of high readiness forces. In the event of an activation, even the most well trained and expertly prepared forces have a vast amount of activity to conduct to enable them to physically get out the door. The thicker the layer of procedure on top of this activity, in the form of checks and assurance notes, the slower and more burdensome the deployment will be. To that end, decision makers should accept that deploying high readiness forces may come with a higher element of risk, in terms of procedural readiness, than forces deploying on an enduring campaign who have the benefit of six months of pre-deployment training. However, in the Global Response Force context, this risk is mitigated by several factors. First, the higher frequency by which high readiness forces such as 16 Air Assault Brigade Combat Team are formally validated. Second, the robust selection criteria that is central to the ethos and preparedness of airborne forces. And third, the readiness culture that exists within 16 Air Assault Brigade Combat Team.

CULTURAL READINESS

Although hard to measure, cultural readiness is nonetheless a key component of overall readiness. The two components are mutually reinforcing; shortfalls in procedural readiness are often mitigated by the cultural readiness of the individual and the organisation. Cultural readiness gives a force the ability to respond rapidly to changing circumstances, and the confidence to deploy into a constantly evolving and poorly understood situation. To quote a former commander of 16 Air Assault Brigade Combat Team, “culture trumps strategy every time”\(^1\). Although cultural readiness cannot be easily quantified, it was nonetheless evident at various stages throughout the Operation Pitting deployment.

At the brigade level, cultural readiness is principally an understanding of the frictions of deploying forces at readiness, and the corporate knowledge required to overcome those frictions. Effective liaison, reinforced by subject matter expertise, is critical in this regard. On Operation Pitting, the ability of the Brigade air cell – which included embedded RAF personnel – and wider HQ staff to co-ordinate the deployment of troops in fighting trim helped ensure that subsequent waves arrived in Kabul with their weapons and radios on their person, rather than packed in freight. The Brigade Combat Team has the deep-rooted corporate knowledge required to facilitate the rapid deployment of forces, especially by air. 13 Air Assault Support Regiment, Royal Logistic Corps provides a bespoke mounting group for the Brigade Combat Team, which enables units to move seamlessly through the Joint Air Mounting Centre and onwards to RAF Brize Norton. The Brigade also excels at ‘theatre setting’ in the build up to an operation, by establishing a presence at critical locations that connect the theatre with the home base. On Operation Fortis, this involved the establishment of a forward mounting base in Cyprus. On Operation Pitting, this also involved supporting the temporary safe location in the United Arab Emirates. Repeated force projection exercises, even at small scale, enable the Brigade to constantly refine and hone these skills, especially in conjunction with allies. This was significant both on Op Fortis and Op Solidarity, which saw elements of 3 PARA parachute into Ukraine alongside US forces. This corporate subject matter expertise, and the connections required to leverage that expertise, are not developed overnight, but are rooted in an ethos that works towards a common end.

\(^1\)This is derived from the famous Peter Drucker quote: “culture eats strategy for breakfast”.

“Rigid adherence to procedural checks must not be a handbrake to the actual deployment of high readiness forces. In the event of an activation, even the most well trained and expertly prepared forces have a vast amount of activity to conduct to enable them to physically get out the door. The thicker the layer of procedure on top of this activity, in the form of checks and assurance notes, the slower and more burdensome the deployment will be.”
The ability to horizon scan is also critical for high readiness forces. Although some crises arise suddenly and without warning (for example a natural disaster), most develop gradually over weeks or months. Often, a critical event then occurs which requires the sudden commitment of high readiness forces – as evidenced by Op Pitting. Although the Taliban advance occurred over several months, the suddenness of their strike on Kabul and the rapid disintegration of elements of the Afghan state necessitated a deployment of high readiness forces. The juxtaposition is that the ability to respond rapidly in this scenario was underpinned by months of planning. The staff within the HQ are frequently involved in the development of contingency plans for a wide range of potential crises, which might require the deployment of high readiness forces. 16 Air Assault Brigade Combat Team planning for an evacuation in Kabul began as early as January 2021. Furthermore, joint planning between the Brigade and Joint Force HQ prior to the operation was paramount to developing a common understanding between both headquarters and facilitated effective collaboration across all staff functions – this interaction should endure. Overall, professional high readiness forces should aim to walk into pre-prepared contingencies where they can, and must be prepared to sprint into unforeseen crises using the most ready and flexible forces available when they must.

At the battlegroup and company group level, cultural readiness reflects the cohesion and trust that develops from persistent combined arms training, with the same combat support and combat service support elements. At the practical level, the fact that most of the Brigade is based in Colchester means that physical collaboration is easy to achieve. The benefits are even more significant in terms of group cohesion. The relationships that exist between 2 PARA and its supporting sub-units have been developed over years and are bonded by mutual experiences. This reinforces a shared ethos and breeds a strong Battle Group identity, distinct from that of the individual units. A strong degree of trust and mutual respect exists between commanders at every level, which allows the Battle Group to genuinely practice mission command. The importance of truly effective combined arms activity cannot be overstated: it enables the battle group to conduct conventional warfighting activity, but also rapidly adapt the structure depending on the operational requirement. This was particularly significant on Operation Pitting, where the Battle Group was re-organised into graduated response options during the deployment phase. The subject matter expertise provided by the combat support and combat service support elements of the Battle Group was a significant force multiplier, particularly in terms of combat engineering and logistics to sustain a force operating at reach. Moving forward, 2 and 3 PARA are working to entrench relationships with units outside the Brigade, who also play a critical role in enabling the Air Manoeuvre Battle Group. The Royal Military Police and Military Working Dogs, which were both critical to crowd control and passenger processing throughout Operation Pitting, are perhaps the strongest examples. Overall,
the stability of the Battlegroup’s composition enables it to be more agile, responsive and combat effective.

Finally, at the simplest level, cultural readiness stems from individual preparedness; the ability and willingness of a soldier to deploy. The mental and emotional stress of a high readiness deployment cannot be underestimated, not only for the individual but also their family and friends. Individual preparedness is derived from two factors. First, the mental resilience of the individual. Pegasus Company has always been the baseline of the Brigade in this respect; an uncompromising standard against which individuals are measured for suitability to serve in airborne forces. It is also reinforced by the Pegasus ethos, which aims to channel the determination, endurance, and selflessness of individuals within the Brigade towards a common end. Second, the desire to deploy operationally. Being at high readiness provides a constant operational focus, yet often that focus never comes to fruition. Operation Pitting demonstrated that when the opportunity to deploy does materialise, our soldiers will stop at nothing to secure a slot on the team sheet. Two vignettes will illustrate this statement. Following the initial activation, a soldier from the 2 PARA machine gun platoon was guarding the main gate of Merville Barracks. He was on the rear operations group and was not scheduled to deploy. As his platoon commander drove into camp following the recall, he informed the soldier that another individual had tested positive for COVID and was unable to deploy. One day – and several thousand miles – later, that soldier was securing the Baron Hotel rather than Merville Barracks. At a macro level, the fact that hundreds of soldiers from 3 PARA arrived back in Colchester within 12 hours during their summer leave, despite being formally at much lower readiness, is a testament to their eagerness to deploy.

CONCLUSION
What did the events and outcomes of Operation Pitting teach us about readiness? Fundamentally, the deployment validated the Integrated Review’s value of high readiness forces, where speed of response is critical to provide political decision makers with options to respond rapidly to crises. In the case of 16 Air Assault Brigade Combat Team, that speed of response is underpinned by a cultural readiness that exists from formation level right down to the individual. Whilst procedural readiness is important, it is not an end in itself. Rather, it is a series of metrics by which the readiness of forces can be measured. High readiness forces, and the headquarters that support them, must not become overly fixated on procedural readiness, which inadvertently delays deployability. What procedural readiness aims to quantify is the cultural readiness of the organisation. This is based on the mental resilience of the organisation’s people, the trust that exists between them, and their ability to work together in high pressure environments. This component of readiness is the true driver of operational output, and units must ensure this is not neglected in favour of spreadsheets and PowerPoint slides. Both aspects must be kept in balance if a unit truly is to be ‘ready for anything’.
On the 40th anniversary of the creation of the Army Families Federation (AFF) in 2022, the charity’s founder Lady Elizabeth Kitson stated: “Soldiers, and by this I mean all ranks from generals to privates, need their families to be happy and well looked after, especially if they are putting their lives at risk.”

Few would argue with this sentiment a year on, even at a time when the Service — in the wake of Russia’s invasion of Ukraine — is rightly focused on readiness and force generation and the support of military families may not initially appear a pressing priority. Why? Because families are a vital partner in the Army’s efforts to deliver and sustain military effectiveness — a view endorsed by the Chief of the General Staff. Responding to readers’ questions in AFF’s Army&You magazine, General Sir Patrick Sanders said: “I have been clear that the purpose of the British Army is to protect the nation by being ready to fight and win wars on land. If we judge that regular deployment rotations are required to allow us to meet that need, we will look at them.”

Therefore, understanding the role families play in supporting readiness and deployment, and the realities of that role, is essential. This article explores how the family supports the Army and, in turn, how the Army may need to adapt its reciprocal support in response to changes in the composition of military families and the nature of contemporary deployment.

ENABLING AND SUPPORTING OPERATIONAL DEPLOYMENTS

The contribution of families to supporting operational effectiveness starts long before any pre-deployment training or the arrival of a Service person in theatre. Ensuring that soldiers have the skills, experience and training to be at readiness to deliver Defence outputs requires multiple postings and attendance on myriad courses throughout their careers — and for the many Army families who choose to move as a ‘unit’ in support of developing this capability, this level of mobility can present challenges in day-to-day life.

1Army&You, Spring 2022, p.50.
2Army&You, Winter 2022, p.15.
3Army Leadership Doctrine, mod.uk
Most of the enquiries received by AFF relate to the impacts of mobility, whether the allocation of school places; trouble accessing NHS medical and dental care; the effect on spousal employment and the ability to build a career; or difficulties securing financial products and benefits. Families approach AFF for help in mitigating these impacts or to raise concerns about issues where there is a lack of sufficient support or understanding from service providers about their unfamiliar circumstances. Mobility and readiness are therefore inextricably linked, with the contribution of families being constant and significant, even when serving members are not deployed.

**SUSTAINING FIGHTING POWER**

Army doctrine defines military effectiveness as fighting power, with the three components of fighting power being physical, conceptual and moral. Families are undeniably important to shaping both the physical and moral components. The former includes soldiers – not just kit and equipment – and is diminished in the event a Service person must return home from theatre because their family needs support. Equally, from a moral perspective, fighting power is reduced if focus on an operational role is lost to worry over the level of support afforded to those at home. In the same way that Op Teamwork aims to enable the culture and behaviour required to establish trust between deployed personnel, the Army needs to ensure that the deployed force trusts that its families are being well looked after. That means families having access to the help they need, as and when they choose to access it.

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Dr Alexandra Hyde, a Research Fellow at the Women’s Library and Gender Institute, London School of Economics and Political Science, noted this contribution in 2014: “The military institution relies on women married to servicemen to help reproduce its community, to provide voluntary support and keep its social networks alive, to sustain its soldiers, to keep the family and the military institution in sync... even more so during an operational tour, women married to servicemen hold this fractious relationship together, working to produce stability out of instability by absorbing the shocks.” She added: “Forget the much-touted Army Reserve, women married to servicemen are the army’s own, invisible, reserve – a reserve army of labour. And they are invisible because the kind of work they do is the work of everyday life.”

Whilst the gender balance of partners of Service personnel may have shifted since Dr Hyde’s article, the concept of the non-deployed partner providing “invisible labour” endures and it is critical to the Army that it does so.

**GALVANISING PUBLIC SUPPORT**

Another important element of the moral component is public support for operational activity. This was evident during the Op Telic/Herrick era, when public questioning of the political decisions to deploy contrasted with the broader support for those Service personnel on operations and their families. The galvanising effect of organisations such as the Military Wives Choirs was vital in providing a focus for the public to show its support for the Army, regardless of the task it was executing.

Although the Army remains in the public eye through its Military Aid to Civil Authorities tasks, there is currently a lack of general awareness of its operational activity and providing a focus for public support for future deployments will be important. The front line of this focus is likely to be Army families, who live at the interface of the military and civilian communities. Therefore, the Army might consider how best to support the community of Army families to leverage their ability to...
encourage and sustain the nation’s support for operational deployments.

**EMOTIONAL TOLL**

It is critical that the Army continues to recognise and mitigate the negative impact of deployments on its families. Traditionally, the focus has been concentrated on tackling the emotional toll placed on the families directly associated with specific deployments. This approach has been long recognised, with the *Emotional Cycle of Deployment* being developed by Kathleen Vestal Logan in 1987. The model highlights that the emotional impact begins well before the actual deployment with the anticipation of loss, extends through the deployment and continues beyond the serving person’s return as they reintegrate themselves back into the family unit.

But are the experiences of modern Army families more complex? Given the lengthy pre-deployment training often required before an operation, and the deliberate ambiguity between operational deployments and the extended exercise deployments of ‘persistent engagement’, the impact for families is stretched beyond the Cycle of Deployment and features significant periods of separation and the associated challenges that come with it. Consequently, there is a requirement to closely monitor the impact of extended training and persistent engagement cycles to ensure that the welfare support provided to families experiencing a lengthy duration of separation – albeit short of that of an operational deployment – is sufficiently robust. Should we still assume emotional stress is restricted to the Cycle of Deployment or does applying a chronological approach limit our understanding of the realities of the impact?

Recent research by Dr Emma Long on Army partners’ experience of deployment suggests that the former is “limited in its utility of framing experiences of time around deployment". She argues that applying the concept of liminality reveals some of the complexity around partners’ emotional experiences, including the impact of previous deployment and the imagining of future ones. The emotional stages of deployment are more complex than a chronological approach may define. For example, Dr Long highlights that: “During the pre-deployment stage, army partners live the deployment stage. They prepare for the eventual absence of their serving partner by bolstering coping strategies and assuming more control over the household to limit the impact of separation... during the deployment stage, partners also live the post-deployment stage. They take on almost total domestic and childcare responsibilities during deployment, yet they facilitate and maintain ‘space’ for their serving partner, aware of the need to keep communication avenues open to ease experiences for all family members post-deployment.”

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The adverse impact of deployment on younger family members featured in the primary evidence included in *Further and Higher Progression for Service Children* – a research paper produced by the Service Children’s Progression Alliance and University of Winchester, which identified not just a negative emotional effect but an academic one. It said: “Several had poorer A-Levels than GCSEs and/or not as good as they had hoped; it may have been attributable to being a service child, with factors such as deployment combined with caring roles and studying stress.”

The study’s literature review also highlighted...
a connection between deployment and an increased incidence in emotional and behavioural issues, a higher occurrence of mental health issues in children and parents, and an increased incidence of children taking on the role of carer.

Research undertaken for AFF by the University of Warwick and QinetiQ in 2018 identified that deployment and postings represented a major barrier to spousal employment, partly due to the impact on childcare arrangements.\(^9\) This was echoed by AFF’s childcare survey in 2020, with responses highlighting that the top challenge to accessing childcare was the serving partner’s inability to regularly assist with childcare responsibilities.\(^12\) Families outlined that the absence of the Service person on frequent training, exercises and deployments resulted in spouses and partners feeling that there was no option for them but to take full responsibility for childcare, leading to a detrimental impact on their employment and career. Echoing the findings of the Living in our Shoes report, some families commented that long periods of separation caused them to feel like single parents. With dual income families now being the norm in society – a trend likely to accelerate in a cost-of-living crisis – ensuring spouses and partners, whether civilian or serving, are able to maintain employment and have a fulfilling career is vital.

**IS TIME APART TOUGHER IF YOU LIVE ‘OFF PATCH’?**

The potential disruption of a deployment will be different for every family and, therefore, a one-size-fits-all response may not be sufficient. As the nature and construct of military families change in line with wider society, the challenge for the Army will be to provide relevant and effective support for all families during deployments – not just those living in service family accommodation or near a unit but those living in their own home and away from camp may find deployment more difficult. For those who are in their own home but live near the unit, it might be assumed that they can access the military peer network nearby but there is a danger that these families will not feel connected enough to their fellow spouses and partners if they are not living directly within the community. And what of those residing further away, with the soldier commuting to their place of work weekly? Are they less vulnerable because they have stronger local family and civilian support networks or more vulnerable for not living close to those with a shared experience to lean on? Similarly, how do the needs of other groups differ during a deployment? Do those who are dual serving, divorced, part of a blended family or who have family members with additional needs face unique challenges?

Further work to understand the pressures of deployment and what further support from the Army, and those charities and organisations that assist the military community, are supporting all families as they navigate deployment.

**NEW CHALLENGES**

This analysis will need to consider the new and emerging challenges being faced by families and how to mitigate them, such as the pervasive nature of social media and its ability to share information on operational activity – including potential injuries and fatalities – almost instantaneously. A recent article in The Moscow Times reported that the family of a Russian soldier was alerted to his potential death when a photo of a body, taken in an area where they knew him to be deployed, was published on social media.\(^12\) Whether because of Ukrainian civilians chronicling the unfolding war or a deliberate attempt by Ukrainian officials to expose Russian losses,
such news – RUSI Research Fellow Sarah Ashbridge argued in the article – should not be broken online. The military historian and forensic archaeologist commented: “Your average person shouldn’t be seeing pictures of decomposition… imagine if that’s how you find out that your family member is dead.”

Hearing the worst news directly from the Service and before others is an essential component of the moral contract between the Army and its families. This is something AFF is acutely aware of, with the charity’s forerunner, the Federation of Army Wives, being instrumental during the Falklands War in successfully lobbying for next of kin to be informed before the media were permitted to release any details. Op Minimise has since ensured that any news of death within a theatre is suppressed until the family concerned can be officially informed but the challenge for the Army is whether this can be maintained in an era of pervasive social media coverage.

Of greater concern is the prospect of social media being used as a vehicle for ‘fake news’ – misinformation deliberately generated by an adversary as part of psychological operations – which could distract deployed forces and distress those at home. Whilst the Joint Casualty and Compassionate Centre and unit welfare teams are accustomed to responding to actual events, dealing with reports of multiple and apparently credible, but ultimately ‘fake’ casualties could quickly consume the official notifying system. The drain of reacting to phantom cases – confirming the status of Service personnel and reassuring families – would be a significant drain on welfare resources, creating delays and diverting support away from those in actual need.

**EXPECTATION OF COMMUNICATION**

Modern means of communication – video calls, instant messaging et al – present a further potential source of friction. Historically, communication between a soldier and their family during a deployment took the form of letter writing or 20 minutes of phone calls a week. This is in stark contrast to the new normality of near-constant connectivity where continuous communication forms a key element of building and maintaining a relationship. Will such ready access to partners and parents become an expectation for families and, if permitted and technology in theatre enables it, what are the likely pros and cons? For those at home, the positives of video calls could be countered by seeing the toll of a tour on their soldier. Equally, whilst retaining access to the Service person may help resolve some of the many minor frustrations of separation, such as having the opportunity to ask a quick practical question or seek some emotional support, does it come at the risk of preventing the building of emotional resilience? In addition, does this impact the forming of the alternative support networks which may be required by the spouse, partner or child to endure the deployment in the event that lines of communication are cut for operational reasons? On the flip side, it is important to consider how providing a soldier with a more significant window on family life – a blurring of the distinction between theatre and home – may affect their mental health and wellbeing.

**FAMILIES’ FUTURE COMMITMENT**

How the nature and composition of families develops in response to changes in modern society, and how the Army evolves in 2023...
and beyond will have a direct bearing on the extent to which Army families will be able – and willing – to support the Service and vice versa. As Programme Castle reassesses career pathways in the Army and offers the potential for lateral entry, increased movement between the Regulars and Reserve, and personnel being seconded to and from industry, this may impact on the numbers of those who define themselves as being a ‘military family’ and in turn the levels to which they might contribute towards operational effectiveness. Similarly, the Future Accommodation Model and Defence Accommodation Strategy are set to change where, how and with whom military families live, which may have a knock on effect on the community support provided to families and their ability to weather the challenges of operational deployment. In AFF’s 2020 Big Survey, 72 per cent of respondents stated that the removal of ‘the patch’ would have a significant or some negative impact on their ability to cope with having a Service person deployed on operations or exercises, with 56 per cent stating that it would have a significant or some negative impact on operational effectiveness. One quote from AFF’s survey highlighted the link between the patch and unit cohesion: “Service family accommodation provides the nucleus of unit cohesion. Unseen in calm times, this benefit may appear intangible but is central to the morale of a unit when deployed on operations both at home and overseas.”

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CONCLUSION
Army families play an integral role in readiness and deployment: in terms of sustaining the frequent mobility to allow Service personnel to develop their skills and experience to be at readiness and operationally effective, as well as in supporting the physical and moral elements of fighting power. The challenges faced by families who undertake this supporting role exist beyond the deployment cycle. There are enduring emotional impacts and negative effects on partner employment and on children’s academic and pastoral wellbeing. The modern nature of life, and of warfare, will provide new challenges to Army families during deployment – from expectations relating to connectivity to the threat of social media in exposing families to the realities of operations and potential misinformation. In turn, both the Army and charities need to consider how to combat these evolving and emerging challenges.

When the Chief of the General Staff articulated the importance of Op Mobilise, he stated: “I expect this change to be command led. And that includes all commanders: from the general in Main Building, to the young lance corporal in the barrack room, from the reservist officer on a weekend exercise to the civil servant in Army Headquarters.” There is, however, a fifth cohort crucial to this operation and one which the Service needs to ensure is recognised and fully supported: Army families.

18Chief of the General Staff speech, RUSI Land Warfare Conference, June 2022, go.gov.uk/government/speeches/chief-the-general-staff-speech-at-rusi-land-warfare-conference
WEAPONISED migration refers to those population movements which are deliberately manipulated or induced, by state or non-state actors, for political or military ends. 📌 Contrary to what one might read in the papers, it is not a new phenomenon. 📌 But it has risen to prominence in recent years following a spate of incidents on the frontiers of the European Union. 📌 This article concerns Russian activity. Specifically, it explores how and why Russia might weaponise migration against the West in the months and years ahead. Although a number of scenarios are possible, two are discussed.

On 29th July 2022, as this article was being researched, the Italian newspaper la Repubblica broke an intriguing story. Russia was attempting to destabilise Italy, the paper alleged, by sending thousands of migrants across the Mediterranean from areas of Libya controlled by the mercenary Wagner Group. It noted that almost 39,000 had reached Italy in the first seven months of the year, compared to less than 28,000 in all of 2021, and just 13,000 the year before that. What was Russia’s goal in doing this? According to an Italian intelligence officer interviewed by la Repubblica, the Kremlin sought to influence the outcome of Italy’s upcoming general election (which was held on 25th September following the collapse of Mario Draghi’s government in July). “Libya is a cannon aimed at the electoral campaign,” the source said. “Immigration is perhaps the

1This is derived from the famous Peter Drucker quote: “culture eats strategy for breakfast”.


2The world’s leading expert on the subject, the American political scientist Kelly M. Greenhill, has identified at least 80 attempts to weaponise migrants since the adoption of the 1951 Refugee Convention alone. See Kelly M. Greenhill, ‘When Migrants Become Weapons,’ Foreign Affairs (March/April 2022).

3In 2020, Greek security forces clashed with migrants crossing from Turkey, after President Erdoğan announced that he was ‘opening the doors’ to Europe. In May of the following year, similar scenes unfolded on Spain’s border with Morocco, as migrants attempted to enter the Spanish city of Ceuta. Within months, another crisis was developing along the EU’s border with Belarus.
The refugee crisis and destabilise Europe. Civilians in a conscious attempt to exacerbate that Russian forces in Syria were targeting Soon after, senior Western officials alleged orchestrated flows of Middle Eastern migrants across its border with Norway and Finland. Of 2015-16, for example, Russian officials migrants against the West. During the winter of 2015-16, for example, Russian officials orchestrated flows of Middle Eastern migrants across its border with Norway and Finland. Soon after, senior Western officials alleged that Russian forces in Syria were targeting civilians in a conscious attempt to exacerbate the refugee crisis and destabilise Europe. Therefore, a government which included the two men might be less hostile to Russia’s interests.

This remarkable episode was merely the latest in a string of Russian attempts to weaponise migrants against the West. During the winter of 2015-16, for example, Russian officials orchestrated flows of Middle Eastern migrants across its border with Norway and Finland. Soon after, senior Western officials alleged that Russian forces in Syria were targeting civilians in a conscious attempt to exacerbate the refugee crisis and destabilise Europe. Therefore, a government which included the two men might be less hostile to Russia’s interests.

Even as you read this article, in fact, Russia might be less hostile to Russia’s interests. Its ongoing efforts to cripple Ukraine’s energy infrastructure have left millions of Ukrainians without heating. One objective of such attacks is clearly to demoralise the Ukrainian population, perhaps in the hope that Kyiv might sue for peace. But they are also intended to inflict costs upon the West: specifically, as President Zelensky warned EU leaders in a video address on 20th October, by “provoking a new wave of migration of Ukrainians to European Union countries.” The destruction of Ukraine’s power network will make vast swathes of the country effectively uninhabitable during the winter months, forcing millions more Ukrainians to leave their homes and seek refuge in neighbouring countries. And while Western nations have thus far been quite welcoming of refugees, there is no escaping the fact that a new exodus will place a strain on housing, schools, and hospitals at a time when much of Europe is battling double-digit inflation.

“While Western nations have thus far been quite welcoming of refugees, there is no escaping the fact that a new exodus will place a strain on housing, schools, and hospitals at a time when much of Europe is battling double-digit inflation.”

In short, the current Russian government clearly views migrants as a potential tool to be used in pursuit of its various goals (whether they be political, military, or otherwise). It has weaponised migrants on a number of occasions in the past, it is weaponising them today, and it is likely to weaponise them again in the future. This being so, it is worth asking how and why Russia might do so in the months and years ahead.

‘ALL OUR HOPE IS IN THE FAMINE’

The simplest way that Russia could weaponise migration would be to withdraw from the Black Sea Grain Initiative and return to blockading Ukrainian food and fertiliser exports. This would cause global food prices – already high before Russia’s full-scale invasion in February 2022 – to soar, eventually triggering a wave of famine and mass migration across much of the Middle East and Africa. It is impossible to predict precisely how many people would be uprooted by this, but in a

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5Salvini, for example, has said that Russia’s annexation of Crimea was legitimate and described Putin as ‘one of the best statesmen currently on Earth.’ See Kathleen Doherty, ‘Italy’s Snap Election Could Hand Putin the Win He Needs,’ Foreign Policy, 10 August 2022.
6Ashley Cooper, ‘Vladimir Putin “making refugee crisis worse to undermine Europe”,’ Independent, 2 February 2016.
9Andrew Rettman, ‘Putin weaponising winter against the EU, Kyiv warns,’ EUobserver, 24 October 2022.
normal year Ukraine exported enough food to feed some 400 million people.\textsuperscript{11} Inevitably, many tens of thousands – if not many more – would turn to Europe for refuge, in a re-run of the 2015 migrant crisis.\textsuperscript{12}

Why might Vladimir Putin want this? To answer that question, one has to understand that Putin believes his regime to be engaged in an existential struggle against a colonial West.\textsuperscript{13} However, given the military and economic superiority of his enemies (principally the United States) he has – so far at least – sought to avoid escalating this struggle into open war. Thus, he has sought non-kinetic means to undermine and divide the West, and few issues have proven to be quite as divisive as migration. In 2015, at the height of Europe’s migrant crisis, the President of the European Council, Donald Tusk, warned that disagreements within the bloc actually risked “destroying the European Union”.\textsuperscript{14} And while such disagreements may not be as heated today as they were once were, they have not been fundamentally resolved, as the current row between France and Italy illustrates.\textsuperscript{15}

Putin knows that the prospect of another migration crisis keeps European leaders awake at night, and that, by extension, Russia’s ability to blockade Ukrainian food exports represents significant leverage. Such leverage could be used to secure, for example, sanctions relief or an end to Europe’s military support for Ukraine. Indeed, this is precisely what Margarita Simonyan, editor-in-chief of state-controlled broadcaster Russia Today, told an audience at the St. Petersburg International Economic Forum in June last year. With Vladimir Putin sitting next to her, she recalled several conversations with other Russians who had told her that ‘all our hope is in the famine’. She continued: “What does it mean? It means

\begin{quote}
“As Putin grows increasingly desperate to inflict costs upon the West, he will take ever more extreme decisions, including perhaps triggering a wave of famine-induced migration. After all, he has already demonstrated that he is willing to inflict untold misery on innocents in pursuit of his objectives.”
\end{quote}

that the famine will start now and they [the West] will lift the sanctions and be friends with us, because they will realise that it is necessary to be friends with us.”\textsuperscript{16}

At the time of writing, the Black Sea Grain Initiative still functions. For a number of reasons, including a desire to maintain cordial relations with states across the Middle East and Africa (most notably Turkey), Putin has not yet torn up the deal. There are, however, reasons to believe that he will do so in the future. Firstly, Russia’s commitment to the scheme is distinctly shaky. In September, Russian officials warned that the deal could fall apart because Western states were not honouring their pledges.\textsuperscript{17} Then, at the end of October, Russia announced that it would suspend its participation in the initiative indefinitely in response to a drone attack on its Black Sea Fleet based in Sevastopol. Although it soon recommitted itself to the deal, it is hard to avoid the impression that Russian officials are looking for an excuse to jeopardise the agreement. Moreover, as Putin grows increasingly desperate to inflict costs upon the West, he will take ever more extreme decisions, including perhaps triggering a wave of famine-induced migration. After all, he has already demonstrated that he is willing to inflict untold misery on innocents in pursuit of his objectives. He will do everything in his power to avoid defeat in Ukraine because such an outcome would surely mean an end to his regime – and quite possibly an end to his own life too.

**THE SUWALKI GAP**

At the beginning of November, Polish Defence
interests by impacting NATO’s ability to move easily through the Suwalki Gap – the relatively narrow corridor of land connecting Poland to the Baltic States. Why does that matter? Imagine, for a moment, that the Russian armed forces were ordered to seize the Baltic states. (It must be noted that, at present, Russia lacks the necessary manpower and materiel to conduct such an operation, though that might change were the country put on a total war footing). In such a scenario, time would be of the essence. When RAND Corporation war-gamed a Russian invasion of the Baltics in 2016, it found that across several games the longest it took Russian forces to reach the capitals of Estonia and Latvia was just 60 hours.\(^\text{15}\) NATO forces across Europe – including the Allied Rapid Reaction Corps – would therefore find themselves in a race against time, rushing to reinforce the Baltic states before they were overrun. This being so, anything that might slow the movement of NATO’s reinforcing troops, even by 10 or 20 hours, would prove invaluable to Russian commanders. The presence of thousands of migrants in the Suwalki Gap, either living in the area or travelling along its roads, could have just such an impact. This is, of course, a hypothetical scenario; nevertheless, it is one which NATO strategists should not overlook lightly.

THE FUTURE OF MIGRATION

Whether or not the scenarios described above come to pass, the challenge posed by weaponised migration is almost certainly one which NATO countries will have to confront in the years ahead. Indeed, several trends suggest that we will witness much more of it in the future. Firstly, growing geopolitical tensions – chiefly between Russia and the West (but elsewhere too) – mean that the number of states which might seek to weaponise migrants against others is increasing. Secondly, the number of migrants will grow significantly as the century progresses. Climate change and its effects threaten to make large swathes of Africa and the Middle East uninhabitable, displacing tens of millions of ‘climate refugees’ in the process.\(^\text{16}\) Where will these people go? Many will try to get to Europe, and recent history suggests that the current Russian government will be happy to assist them. Thirdly, current EU migration policy leaves the bloc hostage to the states on its periphery. Following the 2015-16 migrant crisis, the EU’s de facto policy has been to outsource the accommodation and processing of migrants to ‘gateway’ states such as Turkey, Libya, and Morocco.\(^\text{17}\) Such an approach circumvents the divisive question of which EU states should accept migrants, but does so by giving gateway states considerable leverage over the bloc. In short, the recent spate of weaponised migration is most likely not an anomaly; rather, it is a sign of things to come.

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1\(^{\text{The Economist}}\), ‘The coming food catastrophe,’ 19 May 2022.
2\(^{\text{In fact, evidence suggests that this is already happening: Frontex registered some 115, 000 ‘irregular entries’ in the first half of 2022 – an 84% increase on the previous year.}}\)
3\(^{\text{Putin has stated this explicitly, most recently in his speech on 30 September, during which he announced the annexation of four Ukrainian regions.}}\)
4\(^{\text{Gaia Vince, ‘The century of climate migration: why we need to plan for the great upheaval,’ Guardian, 18 August 2022.}}\)
5\(^{\text{Antonine Chrisafis, ‘French-I-Bu migration vote escalates after rescue ship docks in Toulon,’ The Guardian, 11 November 2022.}}\)
6\(^{\text{Isabel van Brugen, ‘Famine Will Force West To Lift Sanctions, Russian State TV Host Claims,’ Newsweek, 21 June 2022.}}\)
7\(^{\text{Michelle Nichols, ‘Russia questions U.N.-brokered grain, fertilizer export deal,’ Reuters, 6 September 2022.}}\)
8\(^{\text{Paweł Stasiowski and Maciej Oszuza, ‘Poland Starts Building Fence on Border With Russia,’ Bloomberg, 2 November 2022.}}\)
9\(^{\text{Alan Charlish and Pauqel Fiskuszczyk, ‘Poland says Belarusian services fired towards its troops,’ Reuters, 8 October 2022.}}\)
10\(^{\text{Se David A. Shlapak and Michael Johnson, ‘Reinforcing Deterrence on NATO’s Eastern Flank: War-gaming the Defense of the Baltics,’ RAND Corporation, 2016.}}\)
11\(^{\text{Gaia Vince, ‘The century of climate migration: why we need to plan for the great upheaval,’ Guardian, 18 August 2022.}}\)
12\(^{\text{Ian Urbina, ‘The Secretive Prisons That Keep Migrants Out of Europe,’ The New Yorker, 28 November 2021}}\)
Ukraine – A Case Study in Upstream Capacity Building?

As territory, towns and cities captured at great cost are liberated, there are numerous reasons why Russia’s invasion of Ukraine is experiencing ongoing struggles. These span the levels of conflict and range from strategic miscalculation and a centralised command structure inherently unable to adapt and react to poorly conceived and executed operational plans to tactical errors.1 All have contributed to the prolongation of what Vladimir Putin had seemingly planned as a short ‘special military operation’2 into the first mass mobilisation of the Russian population since World War II and continued escalation. From the Western perspective there have been lessons to draw from the conflict and the Ukrainian armed forces’ robust defence of their sovereign soil.

The tenacity of Ukraine’s troops has been buoyed by an influx of modern weaponry from NATO and the West since the Russian invasion began in February 2022. But preceding these important imports was a coherent package of support to the Ukrainian defence and security sector from the UK and its allies, which began in 2014 and – at the time of writing – appears to represent a successful case of upstream capacity building and investment that contrasts sharply with the chaotic collapse of Western support in Afghanistan. Does such an approach provide a model for future defence engagement activity3 or is there a danger of drawing premature conclusions from an ongoing war? And do we risk being too self-congratulatory by linking our support with the

AUTHORS

A Russian speaker, Major William George (RA) is the Chief of the General Staff’s Visiting Fellow at Chatham House, and holds an MA in International Relations. His primary area of research is Russian information warfare.

Captain Patrick Hinton is the Chief of the General Staff’s Visiting Fellow in the Military Sciences Research Group at RUSI. Patrick has an MA in International Relations from the University of Staffordshire and an MBA from the University of Warwick.

2 Putin, V. On conducting a special military operation (О проведении специальной военной операции). Feb 22.
successes of those unified in their fight for the survival of Ukraine as a nation state?

Perhaps the first question to consider though is why the British Army should occupy itself with such endeavours? The answer to which should be relatively fresh in Western military minds – capacity building aims to avoid the messy outcomes often associated with peacekeeping and stabilisation operations. As Nilsson and Zetterlund write: “Fragile countries are to be strengthened so that they can shoulder their own problems, thereby reducing the need for international assistance”. 4 The paradigm of capacity building is not without issue. It is poorly defined and can range from a short, simple training course in a specific skill through to a multi-departmental effort orchestrated over months or years with significant resource. It can span a broad spectrum of activities – from short-term training teams through to institutional reform. The selection of the capacity to be built is important. Indeed, “building the ‘wrong’ capacity or strengthening the ‘wrong’ actors might make a conflict even worse”. 5 Capacity building is similar to security force assistance, although is generally considered to have a wider remit where force footprints are small and often focused on basic tactical training. 6

**POST-CRIMEA COMMITMENT**

The expansion of the UK’s commitment to the development of Ukraine’s defence and security sector began in earnest after the Russian invasion of Crimea in 2014. There were two significant strands to this: Operation Orbital – the provision of training and support to the Ukrainian armed forces (primarily in the land domain) and assistance, afforded to the Ministry of Defence of Ukraine and wider government, in implementing security sector reforms. In summary, the blend of tactical training and equipping the Ukrainian armed forces was paired with the longer-term institutional changes required at the operational and strategic levels. 7 These efforts complemented both the NATO-led assistance to the country as an enhanced NATO partner nation and unilateral engagement. Ukraine has been part of the US National Guard State Partnership programme since 1993. 8 This offers, among other training opportunities, low level non-commissioned officer leadership training. The surge of the UK efforts since 2014 came during a period of increased focus on what the Chief of the General Staff at the time outlined as defence engagement, “one pillar of which was the development of regional capacity to enable security concerns to be dealt with by their respective regional governments. This built on concepts first articulated in the Strategic Defence and Security Review in 2010, 9 which viewed Defence playing a key role in early, upstream capacity building to prevent the causes of conflict.

Following a similar model to previous training missions (including in Afghanistan), Operation Orbital deployed in 2015 with a focus on training, mentoring and advising local military personnel and with the intent to improve the capacity and capability of the Ukrainian armed forces on a sustainable basis. By February of last year, more than 22,000 Ukrainian troops had received British training. 10 A consequent focus on planning, operations and low-level leadership assisted in the development of a cadre of well trained, tactically astute officers and soldiers capable of planning coherent military activity at the tactical level supported by and set within an operational framework. This was in tandem with NATO and other unilateral support to Ukraine, with multi-national training teams regular visitors to the country. 11

Concurrently, pre-dating the recommendations

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5 Ibid.
7 Ibid.
11 Cristina Gallardo and Clea Caulcutt, ‘Ukraine’s military recruits need training. Only one of Europe’s giants is pulling its weight’, Politics, 16 September 2022, politics.co.uk/article/uk-and-france-at-odds-over-military-training-for-ukrainians, accessed 12 December 2022.
of the Integrated Review, Operation Orbital was enhanced by UK support to the Ukrainian Ministry of Defence and other government departments to drive security sector reform and improve areas such as procurement that had previously been open to corruption. The increased workload in Ukraine was supported by a reinforced defence section, employed within the embassy in Kyiv, further improving and exploiting efforts from the Ministry of Defence, Foreign, Commonwealth & Development Office and partners across government. This encapsulated the all-encompassing, whole of government approach to national security later detailed in the 2021 Integrated Review. It is partly this exploitation of existing synergies of the work completed by partners across government that have made the capacity building in Ukraine a comparative success and potentially a useful model for further upstream projects.

WHAT LESSONS CAN WE LEARN?
The models currently in use for engagement activity (such as the Methods of Effect model) place the emphasis on what activity we will undertake in a given country and how we measure its effectiveness. There is less attention paid to the underlying suitability of a country or understanding if the model used is the correct one for the circumstances prevalent in that country. The war in Ukraine has been one of national survival with the majority of society united in its determination to expel the Russian invaders, a unifying factor that has undoubtedly played a significant part in the defence of their homeland. The fight has been in many ways a conventional, metal-on-metal battle rather than a counter-insurgency conflict (as some commentators considered it would develop into). The government and military have acted in tandem with a united and obvious intent, and Ukraine has welcomed efforts to develop its capacity and supported them internally. In previous upstream capacity building efforts this has not always been the case.

“The government and military have acted in tandem with a united and obvious intent, and Ukraine has welcomed efforts to develop its capacity and supported them internally. In previous upstream capacity building efforts this has not always been the case.”

Logistics have also been relatively straightforward. For the UK and many other European nations, it has been comparatively simple to move massed materiel across the Continent – although this supply chain is now being severely tested as the battle continues. The unity of the Ukrainian response and the country’s relative proximity should not, however, detract from what has been a coherent, layered and connected example of defence overseas engagement working to develop capacity and capability.

Of course, if the aim of upstream capacity building is delivering sustainable peace and stability, then it could be argued that the evolution of the Crimea crisis into a wider, conventional war suggests that international endeavours in Ukraine have been in vain. To do so would be harsh, given the Kremlin’s true intent towards Ukraine has gained significant clarity since 2014 and the limited options open to dissuade Putin from his current course, and should not deter the UK from continued investment in capacity building across the globe. Equally, the fruits of the multi-layered capacity building labour are clear. The enduring presence from 2014 to prior to the Russian invasion of last year has assisted in Ukraine’s defence. The basic measure of effectiveness with a desired end state of a capable and resilient Ukrainian Armed Forces and security sector has been achieved. It is Russia’s ongoing struggle against this capable, determined resistance that will have a deterrent effect. This effect demonstrates part of the utility of capacity

13Ibid.
building and other activities that fall under the defence engagement concept.

The conflict also raises questions about the effectiveness of the UK’s and NATO’s deterrence posture. Russia was not deterred by economic sanctions, diplomatic pressure or the limited presence in Ukraine of UK, NATO and Western allies in a training capacity. Indeed, the presence of Western force elements could have played into Moscow’s narrative of NATO encroachment and confrontation with Russia. This narrative has been amplified during the conflict with the Kremlin pushing its perception of a battle between Russia and the West both internally and increasingly across the global south. Although the deterrence measures taken prior to the conflict failed on several fronts this should not lead to an abandonment of the concept. What does deter aggression is a capable opposing force able to inflict damage and sustain a defence. In Ukraine, this form of capable deterrence has been further enhanced by the rapid influx of advanced, Western weaponry that has been used to inflict punishment on the attacker. A lesson and deterrent, perhaps, for future aggressors. In a stark back to the proxy wars of the Cold War, Ukraine is now awash with a spectrum of capabilities from Western allies.

The UK’s cross-governmental approach and close liaison with international partners such as NATO has partly realised the vision of the Integrated Review for a coherent approach to upstream capacity building to promote stability. It is this, working alongside a united, legitimate political body with popular support, that provides a potential template for future capacity building efforts and highlights the benefits of UK investment after the debacle of withdrawal from Afghanistan. Our continued training engagement through Operation Interflex – the successor to Operation Orbital outlined below – assists in what must be a capability interoperability and integration-at-speed issue for the Ukrainian armed forces.

**OP INTERFLEX**

British forces left Ukraine only days before the Russian invasion. The following months saw partner nations begin to send equipment to Ukraine and devise other packages of support along several lines of effort. In June 2022, whilst on a visit to Kyiv, then-UK Prime Minister Boris Johnson announced a major programme to train Ukrainian soldiers. This announcement developed into Operation Interflex – an endeavour that has seen Ukrainian troops trained by the British Army and partners in the United Kingdom, with a stated aim of training 10,000 soldiers every 120 days. The three-week package covers basic infantry skills such as marksmanship, medical training and cyber-security and partner nations such as Australia and New Zealand, as well as representatives from members of the Joint Expeditionary Forces, including Estonia and Denmark, have lent expertise to the effort.

An event hosted by the Royal United Services Institute and attended by representatives from Land Operations Command and 5th Battalion, The Rifles in November provided a number of insights on Interflex. After the initial rotations, the course was increased from three to five weeks as a result of the feedback loop received from units returning to Ukraine. The syllabus would be familiar to anyone who has undergone initial military training, although it is possible to see the influence of the specific conflict being prepared for. The course includes teaching on the law of armed conflict, trench warfare, marksmanship, section defence and urban training.

As well as the five-week basic combat
course, a second five-week junior leadership course aimed at junior non-commissioned officers and sergeants has been taking place. This concentration added command and leadership training as well as the military decision-making process. Soldiers are given instruction on how to coach marksmanship, complete commanders’ checks, are drilled in simulated mounted tactics and receive counter-unmanned aircraft systems training. The vision is to enable the Ukrainians to export parts of the programme and deliver them domestically. This is a key point for capacity building. It should not be entirely transactional from the donor to the partner nations.

Measuring the effect of such efforts can be difficult. Indeed, Western forces have been involved in other capacity building enterprises which have not been successful. Both Iraq and Afghanistan offer examples of vast investment in time and resource where the trained forces have not stood up to scrutiny. Both forces quickly capitulated in the face of Islamic State and the Taliban respectively, leaving Western forces embarrassed. Recent analysis has looked to determine the reasons for this issue. As Robinson argues, the gap between the imported army concepts and recipient culture was vast. The leading power brokers in both states did not want to create the liberal moderate state of Western peace builders’ imagination, and therefore the military transformation was out of step with that of the civilian sector. Ukraine, on the other hand, is more closely aligned with European sensibilities, both geographically and culturally. Indeed, anecdotal evidence from soldiers who have returned to the front after receiving British training is positive. In one example, a subsection of a Ukrainian unit that repulsed a Russian assault was asked by their commander about the source of their tactical knowledge. “This is what we were taught to do in UK training,” came the response. Another front-line Ukrainian commander whose unit took part in the Battle of Kherson stated that “we are delighted with the high level of preparedness of soldiers we are receiving from the United Kingdom who have been trained by Op Interflex”.

Of course, it is unlikely that the Ukrainians would publicly admit that the training was not having the desired effect as some of the praise may also have some value in encouraging partners to keep up support. However, capacity building has its limits. There was never a chance that Orbital would put Ukraine on a peer level with Russia and as such, NATO support has been, and – without a finish line in sight – will continue to be necessary going forward. This speaks to the importance of drawing a clear end point to efforts, rather than becoming stuck as permanent trainers to a population for extended periods.

**OTHER BEST PRACTICE**

The conflict in Ukraine has offered other examples of successful capacity building which might provide a model to build upon. Professional military education is one such area, and one that often does not receive the same level of coverage as combat training. The Defence Education Enhancement Programme is a joint US-NATO endeavour to professionalise the officer and non-commissioned officer corps of partner nations, and first came into being in 2007. It aims to establish “effective, self-sustaining defence institutions” and the Ukrainian chapter became the largest in the world in 2013. These efforts to “help the Ukrainian military transform from a rigid centralised Russian-style operational decision-making process to one where junior and mid-level leaders are expected to take initiative on the battlefield” have been credited with enabling Ukraine’s forces to operate with an agility and dynamism absent from their adversaries.

Sustainment is another area which has received attention during the conflict. US European Command and the Institute for Security Governance, part of the US Defence Security Cooperation University, began a programme in 2016 to help Ukraine establish effective sustainment planning protocols. US support to Ukraine was such that it overwhelmed the Ukrainian ability to incorporate repair and sustainment into its own organic capability. As a result, the US had to cover this burden, which in turn sapped resource from providing new equipment and support. Among the success stories is the pilot effort to improve domestic sustainment of the high mobility multi-purpose wheeled vehicle (or Humvee as it is more commonly known). Initiatives included servicing centres, developing maintenance manuals and creating a mobile repair unit. Since the

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24 Ibid.


“The example of Ukraine provides a useful distinction from the seemingly failed attempts to build armies in Iraq and Afghanistan. Rebuilding military forces and attempting to forge a functioning state with imported ideals has been proven to be a losing mission. Conversely, Ukraine’s cultural similarities and relative stability appear to have afforded the atmosphere necessary for successful capacity building.”

invasion in 2022, this issue has become exacerbated with a plethora of weaponry and equipment flooding into Ukraine. Indeed, by one analysis, the Ukrainian armed forces are operating 14 different artillery systems, “each with distinct maintenance and ammunition requirements, creating a tangle of logistics challenges.” This reinforces the importance of having institutions which have the capacity to absorb such increases in burden.

These two examples are useful to stress the importance of institutional capacity building over simply running training courses. Attempting the former is rife with vulnerabilities and each scenario will require a bespoke approach which takes heed of culture, history, and the complexities of organisational change programmes. It is also important to consider civilian elements of capacity building, as it is not purely a military sport. The Polish Medical Mission – a non-governmental organisation – provided bespoke deliveries of medical equipment to 50 hospitals from June to December 2022. Crucially, the logistic chains required to support deliveries to hard-to-reach areas in a conflict zone are now developed and remain established so they can be used going forward. Israel, which has received some criticism for not supporting Ukraine with military equipment, provides another example. A civilian-run field hospital was deployed to Ukraine for six weeks in the spring of 2022. The facility provided battlefield care but also prioritised wider local capacity building, delivering training in a variety of techniques to circa 800 Ukrainian medical personnel. The capacity to treat wounded people and return them to the fight is vital and is an area of expertise in which the British Army is highly skilled and experienced.

CONCLUSION

Upstream capacity building offers a means by which the British Army can contribute to peace and security, advance the vision of Global Britain and make use of its deep and well-developed experience throughout the defence lines of development – from doctrine development, sustainment and combat training to professional education and medical knowledge. The ongoing example of Ukraine shows the utility of long-term commitment to a force to provide vital capacity with which to counter aggression. It has also shown how resource intensive successful capacity building can be, and there is no end in sight to the support currently being given. This may become unpalatable to decision makers as time goes on.

The example of Ukraine also provides a useful distinction from the seemingly failed attempts to build armies in Iraq and Afghanistan. Rebuilding military forces and attempting to forge a functioning state with imported ideals has been proven to be a losing mission. Conversely, Ukraine’s cultural similarities and relative stability appear to have afforded the atmosphere necessary for successful capacity building. It is difficult to conclusively prove the correlation/causation link between capacity building activities and the effectiveness of a country’s armed forces but there is clear evidence of an enhancement of Ukraine’s military prowess. Whether attributable in part to multinational efforts or not, there is plenty of progress to be seen when you compare the events of 2014, when a much smaller Russian force was able to achieve its objectives largely unchallenged, to today’s well-orchestrated defence and counter-offensive operations.

26 Jack Watling and Nick Reynolds, ‘Winter is Coming: Russia Turns to Countervalue Targeting’, RUSI, 1 November 2022.
28 Ben Lynfield, ‘Veteran Israeli Diplomat: “We Are Only Part of the West When It Suits Us”’, Foreign Policy, 20 October 22.
ITERATE TO INNOVATE: THE STAFF OFFICER’S ROLE IN AI ADOPTION

THE character of warfare is once again set to change, to accelerate to machine-speed, beyond the pace of lone human cognition. New and emerging technologies in the field of Artificial Intelligence (AI) will revolutionise military capabilities, bringing about an age of data and algorithmic enabled warfare that could see humans increasingly delegate dirty, dangerous, and dull tasks to machines.

However, such a revolution in military affairs will require behavioural change within the staff officer corps if we are to engender the necessary cultural shift that will see these technologies adopted and accepted by default. Staff officers must become comfortable with training and operating using an 80 per cent complete technical system during its development, rather than awaiting the fielding of a fully functional yet obsolete solution at the end of a drawn-out capability development programme. This article seeks to inform mid-level staff officers of their part in creating such a behavioural change, linking the force development strategy proposed by senior decision makers with the front-line command-led innovation activities currently underway across the enterprise. This will not only serve to energise the adoption of AI, but also to promote the use of iterative and innovative development aimed at reinvigorating Defence’s legacy concept, assessment, demonstration, manufacture, in-service and disposal processes.

AI has no single definition and is best described as a general-purpose technology that enables machines to perform tasks normally requiring human or biological intelligence.¹ AI is not a capability, domain, or platform, and as such, its development differs from that of other equipment used within a headquarters. Defence considers AI to encompass a family of computer technologies that includes ‘true’ AI, but also machine learning, data science and other technologies that deliver advantage through a combination of high-powered computer platforms, complex algorithms, and integrated data.² Current AI models possess ‘narrow intelligence’, and can perform only a predetermined range of functions, exploiting data formats they have been trained to analyse. Current AI systems, whilst excelling at specific data processing and categorisation tasks, are far more limited than in popular imagination. Human-machine teaming, however, where a human operator uses AI enabled machines to perform a task, creates advantage by combining machine-speed data exploitation with human heuristic reasoning. This allows an operator to synthesise and further analyse the output of a mesh-network of multiple AI models at greater pace and utilising more information than a human acting alone.³

Currently, Defence has multiple AI-specific projects underway. A number of these can be termed as intelligent decision support systems, designed to aid operational planning within tactical and operational headquarters. These include common operating picture systems, that visually represent live Defence and corporate data; automated planning tools, that provide a multi-factor integration of geospatial, planning, and adversarial data to deliver planning sub-steps; and simulation tools, that simulate second order effects in support of course of action wargaming. These intelligent decision support systems can greatly aid operational

AUTHOR
Major James Taylor (Grenadier Guards) is currently posted to UK Strategic Command’s Directorate of Joint Warfare.
planning, and capability demonstrators have already been fielded in headquarters on both exercises and operations.

Increasingly, however, all Defence projects will contribute to an AI ecosystem where even non-AI platforms or systems must interact with AI tools either as sensors delivering data to AI models or as digital systems providing the architecture required to collect, store, and move data to the systems and users who need access to it. Defence projects, therefore, whether a tank, drone, or computer network will all need to accommodate the requirements of AI systems as a key part of their design and development. Programmes can no longer afford to run as stand-alone, stove-piped, domain-specific projects but instead must be designed and built to operate seamlessly as an AI-enabled system of systems, requiring a coordinated governance structure to promote pan-enterprise coherence. Interoperability of these systems across Defence, and critically with governmental, international and industry partners, must be assured through standardisation and compatibility by design.

Defence has recently adopted an extensive AI governance structure, but this has initially focused more on promoting the adoption of AI technologies rather than developing coherency between AI and non-AI programmes. Defence AI strategies and governance documents are overseen by organisations such as the Defence AI Centre and the Defence AI and Autonomy Unit. Strategy and governance are then implemented through a series of 3* boards and steering groups with the objective of making Defence an AI ready organisation.¹ Recent enhancements to the structure are beginning to promote coherency between AI and non-AI projects and attempting to create synergy and the sharing of best practice between them. To promote this coherency, however, evidence must be gathered to demonstrate the needs of the AI user community, as well as the areas for development and improvement within future AI and non-AI programmes. AI, as a digital technology, benefits greatly from iterative ‘Agile’ development in partnership with the user community. Commercial software companies have long followed this approach, constantly developing, releasing, and updating software used on devices from smartphones to cars. Both the Defence AI Strategy and Financial Military Capability agree that an iterative approach is appropriate for AI development. The need for a user community to aid in developing the systems provides several opportunities for headquarters. Both tactical and operational headquarters will benefit from adopting the role of the user community to develop AI-enabled intelligent decision support systems in cooperation with the programme teams. Headquarters could

incorporate AI systems within their training exercises by default, allowing iterative development with user feedback, whilst promoting AI literacy within the staff officer corps. Experimentation during training will also engender a cultural change, increasing confidence in, and expectation of, operating with an 80 per cent technical solution during its development, rather than awaiting a 100 per cent yet obsolete solution once fielded. This will ensure that headquarters are trained on these systems, delivering a fight-tonight capability for a wide range of up-to-date planning support systems. Staff officers must embrace a mindset-change to accept that they will be using a flawed system. But whereas previously operating with imperfect systems such as the Bowman Combat Infrastructure and Platform may have simply caused frustration, staff officers must understand that they are operating with a system under development rather than a flawed end-product, and that their user-feedback will be crucial to improving the next generation of the system.

Incorporating AI experimentation within headquarters’ exercises will of course require funding and senior direction, and this is currently under discussion within Joint Force Development. Assuming that experimentation can be adopted and will be embraced by staff officers, considerable benefits can be garnered that would improve the output and survivability of headquarters. AI-enabled human-machine teaming offers significant advantages for operational planning by delivering more-informed decision making at machine-speed, shortening the observe–orient–decide–act-loop. By automating bulk-data-analysis within sub-steps of the combat or tactical estimate, staff officers can be freed from laborious data-processing tasks to apply intuition to synthesise the models’ outputs. Furthermore, wider varieties of data sources, including publicly available and commercially available information, can now be analysed simultaneously, supporting real-time audience sentiment assessment. Access to Defence operating data could also provide more accurate synchronisation, for example enabling planners to pro-actively manage supply requirements by analysing real-time logistics states, or synchronising effects in areas such as the electromagnetic spectrum where humans have traditionally struggled.  

By playing to the strengths of both human and machine, human-machine teaming can deliver better as well as more timely decision making through a greater understanding of military and non-military factors in real-time, without overmatching the capabilities or endurance of a human operator. Recent experimentation demonstrated that AI augmentation could shorten areas of the planning process, such as the battlespace area evaluation, tenfold without a loss of fidelity. Whilst human-machine teaming will retain its advantage once greater automation becomes possible, autonomy within the headquarters planning and decision-making cycle will create advantages. Automated data analysis on-board sensor platforms through ‘edge computing’ will reduce the processing power and workforce required within a headquarters, enabling its dispersion, mobility, and survivability. Whilst there is a continuing discussion around the ethical use of AI, and how much of the decision-making process can be delegated to a machine teammate lacking moral agency, it is believed that these challenges can be controlled by retaining the human within the human-machine teaming, whilst working towards a greater understanding of machine decision making and how to ensure it conforms to our moral and legal standards.

Once again, iterative development alongside users within a safe exercise environment will be the best way to address these ethical challenges before systems are fielded in an operational

theatre. Continual experimentation across a range of headquarters will generate the findings that the Defence AI Centre can share between AI stakeholders. These will not just aid in developing future models but will highlight pan-Defence line of development factors such as the training requirements of staff officers, necessary policy changes, and how non-AI projects should support the needs of AI systems. In time, it is hoped that such a body of evidence will demonstrate the benefits of iterative development and enable other appropriate programmes to adopt elements of ‘Agile’ rather than concept, assessment, demonstration, manufacture, in-service and disposal processes.

Staff officers should be reassured that considerable effort is being put in to adopting AI technologies and new ways of working across Defence. Although these are not always visible from within the confines of a brigade or battlegroup headquarters, structures, strategies, and policies are being adapted to enable innovation at pace. This is especially pertinent in light of the lessons of Ukraine, which demonstrated that operational advantage rests with the combatant who can most quickly adopt, field, and adapt new technologies, rather than with those who possess the most exquisite system at the outbreak of hostilities.”

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WHEN THE CHIPS ARE DOWN...

SHOULD economic historian Chris Miller ever wish to switch disciplines and enter the fold of fiction writing, he could do far worse than turn to his latest body of work for inspiration given its synopsis reads like a James Bond page-turner. Chip War: The Fight for the World’s Most Critical Technology certainly boasts many of the ingredients of a best-selling, high-stakes thriller; with China – a country that spends more money importing computer chips than oil from an island Xi Jinping considers a renegade province – among its pages’ chief protagonists.

There is, however, nothing fantastical or Ian Fleming-esque about the real-world jeopardy outlined by Miller’s extensively-researched title, as evidenced by it winning the Financial Times’ 2022 Business Book of the Year award. And while Chip War is a valuable resource for those concerned with commodities and global economic levers, its subject matter – the pervasive nature of a technology that today’s society is increasingly reliant on – also matters to the military. Modern arsenals are powered by processors and in future conflicts those ‘holding all the chips’ will have a competitive edge.

In a wide-ranging interview with The British Army Review, Miller – who is an Associate Professor of International History at Tufts University in Massachusetts, a Visiting Fellow at the American Enterprise Institute and the Eurasia Director at the Foreign Policy Research Institute – explored some of the prevailing themes of his ‘smart’ read.

“I am an historian of Russia by training and have written a number of books on different aspects of Russian politics, economics and technology and I actually started this project intending to write about the history of missile technology during the Cold War. I wanted to understand why it was that in the early stages of the stand-off, the US, Soviet Union and a number of other countries could produce the key military technologies of that period – nuclear weapons and long-range delivery systems – but by the end a huge gap in capabilities had opened up between the West and Soviet Union. As I dug deeper I realised the most interesting things about missiles were the computers and chips crucial to improving guidance, intelligence and communications – everything needed to have an effective precision strike regime in place.

“The Soviets accurately theorised the precision revolution but completely and utterly failed to implement it at home.”

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““I was doing that research about six years ago as the US-China tech competition was ramping up and one of the key things I was reading in the headlines was that although Chinese firms were on the rise, even giant companies such as Huawei and Alibaba were reliant on US origin chips. Although I had never at this point in my life seen a semiconductor, I could see they were far more important than I realised and what was meant to be a military story took on an economic globalisation aspect and emerged as Chip War.

“I was driven by a desire to find out why some countries can achieve certain technological advances and others can’t. In the Soviet Union, there wasn’t a deficit of funding for the military but nevertheless it proved impossible for the Soviets to do what the West clearly saw as being quite important. What is particularly interesting is that when the Soviet General Staff were projecting the future in the late 1970s and early 80s, they were writing about a tomorrow in which the West and NATO had precision strike capabilities and they didn’t, and they thought that was going to change the character of warfare. They realised this in advance of Pentagon officials, who developed their own understanding from reading Soviet military analysis in the 80s, and by the time we arrived at the 1991 Persian Gulf War, the conflict played
out exactly as Soviet military theorists had expected with manoeuvre becoming subsidiary to the ability to disrupt Iraqi command and control. When you look at the war in Syria, however, analysts in Israel and the US estimate that at least 80 per cent of the munitions used by the Russian air force have been non-guided, ‘dumb’ bombs that are not all that different from those dropped during World War II. It is striking that the Soviets accurately theorised the precision revolution but completely and utterly failed to implement it at home.

“A lesson of Russian operations in Ukraine is that although they now have certain munitions with a fair amount of precision, they haven’t been able to employ them in a way that has really made a difference. Russia completely failed to knock out Ukrainian command and control during the first days of the war, and since, and in month nine of the war they began expending a big chunk of their precision missile stockpile trying to knock out Ukraine’s electricity grid. This is not how Soviet military theory suggests precision wars are to be waged.

“Supply issues, dating back to the 1970s, have impacted Russia’s long-term ability to domestically produce – effectively and in large volumes – the type of components they need. This has influenced the design of weapon systems and also how the Russian military plans to fight. They haven’t developed their doctrine around precision systems because commanders are intuitively aware that they shouldn’t be too reliant on them, whereas in Western militaries you see the exact opposite.

“It is always hard to put your finger on a technology and say whether it is revolutionary or evolutionary but there has been an undeniable change in capabilities. Although many of the weapon systems that we rely on largely look the same as they did 50 years ago – artillery and fighter jets, for example, have the same basic structures – what’s changed is the computing, communication and sensing capabilities, not only in a munition but in the network of sensors feeding into it. Has that changed the character of warfare? There are big differences between NATO’s war in Afghanistan and Russia’s war in Ukraine, but if you consider how NATO might think about fighting a hypothetical conflict with Russia today, it would look different to the way it would have in the 1970s and that change is down to a greater reliance on computing power across platforms and a confidence that communications and information into your systems will be available. All of that is not necessarily solely delivered by semiconductors but it wouldn’t be possible without the proliferation of chips across military systems.

*The industry supplying chips is hugely
monopolised. If you want to produce an advanced processor chip today there are really just three companies in the world that can come anywhere close to the cutting edge and Taiwan’s TSMC is by far the leader. When it comes to the types of analogue chips that are used in sensors and radio frequency systems there is also monopolisation because of the unique know-how needed to design them. It is often the case that only one company has developed the expertise necessary and it’s very difficult for others to catch up to the level of knowledge required.

“This [monopoly] is a huge issue for the Pentagon as it can’t source all of the chips it needs for defence systems domestically, and it can’t even source them from close allies in Europe and Japan. It needs Taiwan, which is complicated by the country not being a US treaty ally and concerns over supply chain security. The risk of war in the Taiwan Straits is not simply a military problem, huge though it is, it is also an economic problem.

“If you wargame out scenarios of Chinese escalation, in a lot of cases one of the first questions that comes to the table from US, Japanese and European policymakers, is how do our decisions impact the electronic supply chains that run through Taiwan? I worry a lot about what would happen if China took one of the islands in the Taiwan Straits, most of which are uninhabited, in a Crimea-style move – potentially even bloodlessly – and looked to Taiwan and the US to say ‘your move’. The US President would get a briefing that says you can, a, do nothing or b, do something in the knowledge that anything you do will raise the risk of disruption to the world’s most important supplier of semiconductors, bringing many, many billions of dollars – if not trillions – of damage to the world’s economy. It’s a question of time horizon. If the choice were as binary as do nothing and trade stays open or do something and trade shuts off and you did the first, you would at least have one to three years to try and build up alternative supplies. The choice wouldn’t be that binary but the dynamic is a real one and we have gotten ourselves into a situation where we could be deterred from defending Taiwan because of the economic consequences. If you are China looking at the war between Russia and Ukraine, one of the key lessons is that the West is still yet to sanction Russia’s primary export, oil, which tells you the Western public’s willingness to bear economic cost is not huge.”

“If I had found that 90 per cent of the world’s most advanced processor chips were produced in Switzerland, I probably wouldn’t have written the book. But the fact that the most likely site of a great power conflict is also the biggest producer of chips that we can’t live without is both a great historical error and a source of major concern that is going to be very difficult for us to find a way to deal with. Without chips from Taiwan it would be hard to make a smartphone anywhere in the world within a year. Taiwan produces a third or so of PC processors each year and is key to data centre and telecommunication infrastructure roll outs – to say nothing of the dishwashers, cars, coffee-makers and microwaves that all rely on chips. If we lost that supply it would take a long time to build up elsewhere and in the interim the impact would be profound.

“It is not a problem that can be solved with billions of dollars and actually the amount of spending in the chip industry is so large that governments alone – despite their large budgets – can’t pay for all the investments. The US government has dedicated facilities to build aircraft carriers, which cost $10 billion to produce and are supposed to be in service for half a century, whereas a new chip making facility can cost $25 billion – two and a half times the cost – and it will be cutting edge for just a couple of years. That gives you a sense of the amount of capital investment that is needed, which is why there’s just one supply chain and unfortunately for us it runs straight through the Taiwan Straits.”
I once saw the ‘special relationship’ first-hand. In what might have been any other work Zoom call, had the subject matter been different, US and UK intelligence and policy people agreed shared approaches, projects and strategies. It was eminently sensible and efficient but relied upon a level of personal and institutional trust that this book details, all the way back to 1941.

Smith, the author of Station X and Foley: The Spy Who Saved 10,000 Jews, served nine years in the Intelligence Corps before becoming an award-winning journalist and writer. In his latest literary offering he chronologically details the history of the special relationship since 1941, exploring case studies from the Second World War, the Cold War, the world after the fall of the Berlin Wall and the War on Terror following 9/11. In this somewhat cluttered and congested genre, little of what he covers here is new but some readers may be unfamiliar with the examples of support to resistance and disinformation operations in the Soviet bloc; lessons which are now being more closely looked at in the wake of the invasion of Ukraine. However, the point of retelling Cold War spy stories and political spats is to demonstrate that intelligence sharing has continued uninterrupted despite public and personal political differences. Differences that are often reported by the media as evidence of the end of the ‘special relationship’. The withdrawal from Afghanistan demonstrated that the US President and the Prime Minister don’t need to agree or even discuss unilateral policy decisions and it doesn’t make a material difference to the ‘special relationship’. As Smith points out: “US presidents will always be inclined to do what they see as being in America’s best interests, regardless of how it impacts on any of their allies.”

Smith suggests the nations’ common cultural heritage and shared belief in democracy and the rule of law have led to Great Britain being America’s most reliable ally since the 1940s. However, the heart of the real special relationship remains what it always was – organisational and personal ties between two intelligence communities that offer resources the other cannot and contribute to the day-to-day security of the other.

Historically this professional relationship then enabled warm personal relationships. For example, Government Communications Headquarters director Brian Tovey’s association with his National Security Agency counterpart led to the latter successfully arguing against US support for Argentina during the Falklands War.

In the context of the Sunni Awakening in Iraq in 2006–7, General Stan McCrystal is quoted as saying: “Many of the hard-line leaders Graeme [Lt Gen Graeme Lamb] proposed releasing were those whom my men had spent years of their lives trying to capture, losing limbs and friends in the process.” McCrystal added he “agreed on the spot... because I knew and trusted Graeme”.

After the invasion of Ukraine in 2022 the French head of military intelligence was sacked for ‘inadequate briefings’ and ‘lack of mastery of subjects’. In short, his intelligence analysis led to French policy being out of step. Smith concludes that when decision makers and governments with similar beliefs and values receive the same intelligence about the world, whatever their differences of policy, personality or national interest they are likely to adopt a similar approach and coordinate those efforts. And that is the real special relationship.
MACHIAVELLIAN OR MISREPRESENTED?

In recent years, Niall Ferguson, Christopher Clark and Alexander Watson have challenged some of the prevailing orthodoxy on World War I in the English-speaking world. They respectively argued for the desirability of British neutrality in 1914, stressed the key role played by Russia and Serbia in initiating the war and highlighted instances where Allied infractions of international law were every bit as egregious as those perpetrated by Berlin. These views met with considerable criticism and it is little surprising that Holger Afflerbach came in for a measure of the same – from Max Hastings in The Sunday Times’ Culture supplement – a mere fortnight after his new book, On a Knife Edge: How Germany Lost the First World War, was published in English.

In a nutshell, this chronologically arranged title is about the off-ramps the German government managed to miss after 1914 which would, in theory, have allowed it to de-escalate the conflict with a view to reaching an early peace with one or even all of its enemy belligerents. It is based on both the latest scholarship as well as original sources in German. The author’s knowledge of these events is nothing short of stupendous; to give but one example, the sidebar-like footnote on the historiography of the Verdun battle (pages 458-460) is worth the price of the book alone. Many of the insights he gives into the decision-making process on the German side would have been original even to a German-reading public when the original edition was published in 2018. It stands to reason that this should apply to an even greater extent with a translation for those used to prioritising the Anglo-American perspective on events.

On a Knife Edge will be seen as highly controversial by anyone used to viewing the old Imperial regime as a slightly decaffeinated version of the Third Reich. Once the reader gets acquainted with the political reality of the old Empire, which enjoyed open parliamentary debates and only a slight degree of press censorship, the notion of such a state being willing to engage in political compromise will no longer seem so preposterous. It is thus unsurprising that the heart of the book is to be found in the accounts of the events of late 1916 and early 1917. In those weeks, the confluence of an American peace initiative and last-minute hesitations in Berlin about unleashing the U-boats on neutral shipping appeared to bring about conditions that might have been conducive to an early ceasefire. The Allied refusal to seriously consider this possibility – Belgium was the only exception – leads the author to conclude that the Allied powers were every bit as responsible as Germany for the escalation and loss of life which ensued, a judgement which is likely to arouse controversy. The same goes for Afflerbach’s analysis of the peace talks held between the Central Powers and prostrate Russia at Brest-Litovsk. Here, he is certainly right to highlight the long-forgotten fact that the German government made the shrewd move to invite all belligerent governments with a view to turn Brest into the venue for a pan-European peace conference. His interpretation that this stood a reasonable chance to lead to a settlement with no annexations is certainly the boldest made in this book. The case made for late 1916 being a missed chance is powerful and much more difficult to debate. By Christmas 1917, however, Germany was fast approaching the point where more and more levers of power had been turned over to the army leadership and it is difficult to conceive of either chief of staff Paul von Hindenburg or his deputy Erich Ludendorff acquiescing in a deal which would have given up most or even all of Germany’s conquests.

Over the years, the notion that the massive bloodshed of the Great War was somehow futile has arguably been the most important propellant fuelling the debates around the conflict. Afflerbach is no exception, but he introduces us to a new dimension to it: I can think of no other recent piece of scholarship which so ruthlessly exposes the leaders of Imperial Germany for the ‘boobies’ that they were.”
A CATALOGUE OF KREMLIN INSIGHTS

In many ways this review of In Moscow’s Shadows – and recommendation – is unnecessary. If you are a member of the Ministry of Defence or any UK Government department you should know who Dr Mark Galeotti is, listen to his podcast and read his books. If you don’t know, you need to take yourself outside and give yourself a good talking to.

The Russian invasion of Ukraine has punctuated our era – only the wildly naïve think it will not generate reverberations that have epoch-defining ramifications across Europe and the world. The membership of the group who think the removal of Putin will materially affect Russian political culture is equally naïve.

Galeotti has been researching Russian history and security issues since the late 1980s. Considered ‘one of the most informed and provocative voices on modern Russia’ he has a list of academic achievements in the UK, Europe and the USA as long as your arm and has written multiple best selling books such as The Vory: Russia’s super mafia (2018), We need to talk about Putin (2019), A short history of Russia (2020) and The Weaponisation of Everything (2022).

His In Moscow’s Shadows podcast, a broadly monthly audio version of his blog of the same name, has been running since April 2020 and currently sits at 88 episodes. His subject is predominantly the intelligence and security apparatus of Russia but diverts into Belarus and surrounding countries, the Russian underworld, the orthodox church, the centrality of history and memory politics, disinformation, and hybrid war amongst other topics. It is considered ‘one of the most informed and provocative voices on modern Russia’ by the host.

Galeotti’s Podcast is matched by the expertise of its guests. Generally derisive of the idea of serving professionals undergoing a cultural revolution, the podcast’s consistently high production values ensure easy listening and this quality is matched by the expertise of its guests. Generally derisive of the idea of serving professionals undergoing a cultural revolution, this has ensured easy listening and this quality is matched by the expertise of its guests.

The podcast is released every month and is the monthly audio version of his blog of the same name. It has been running since April 2020 and currently sits at 88 episodes. His guest list includes ex-spy chiefs, CT officers and other former Russian officials, as well as the group of people who think the removal of Putin will materially affect Russian political culture.

Everyone in the world has heard of Putin. Most have heard of Navalny. Some have heard of Shoiugu. But Galeotti introduces a cast of actors such as Prime Minister Mishustin, Foreign Intelligence Service chief Naryshkin, Chechen Kadyrov, ideologue Dugin and “the most dangerous man in Russia”, Nikolai Patrushev. Galeotti has a somewhat unhealthy fascination with the latter – but for good reason. His power and authority are perhaps second only to Putin whilst his paranoia over Western interference in Russia will endure long after Putin leaves the Kremlin.

And therein lies the rub. Countering Russia’s strategic, operational or tactical actions – possibly even pre-empting or anticipating them – relies on an degree of empathy that can only come with understanding the structures, systems, pressures, frictions and people that generate them. Galeotti is a good place to start.

‘ESSENTIAL’ LISTENING FOR DEFENCE

This Means War is Peter Robert’s latest podcast for the Wavell Room, looking at the developing trends in the contemporary operating environment and what this means for the future of conflict. The host’s reassuringly irreverent style cuts through the common tropes of modern warfare that are often heard in the media and from some of those in uniform.

Inevitably a number of episodes of this podcast have surrounded Ukraine, however, Roberts avoids becoming bogged down by any one theatre or domain. Covering topics from China’s military rise and Houthi family politics to commercial space wars and the impact of pallets on military logistics, he unrelentingly ensures relevance to the military practitioner.

The podcast’s consistently high production values ensure easy listening and this quality is matched by the expertise of its guests. Generally derisive of the idea of serving senior officers appearing on the show, the listener instead gets to hear from leading specialists on a given topic, free from political or organisational censorship in each episode. This Means War is essential listening for the professionally curious soldier or officer and a fitting follow-up to Robert’s also excellent The Western Way of War.
BRIGHT IDEAS, LIGHT ON PREDICTIONS

The third in a trilogy of books by Pulitzer Prize-winning energy expert Daniel Yergin, *The New Map* predicts how trends in the energy markets will change the geopolitical balance of power. While his previous works, *The Prize* and *The Quest*, concerned themselves with the history of the energy trade, in this offering Yergin has taken it upon himself to imagine how new trends will play out. Much like Peter Frankopan’s *The New Silk Roads*, it is tempting to wonder whether this impossible task was initiated by the author or a publisher keen to replicate the sales of previous books.

The initial chapters are divided geographically as the author explains the energy security perspectives of the key players in the global markets, and so we read of ‘The Map’ according to the US, China, Russia and the Middle East. The trends identified here are easy to understand and offer good insight into how the balance of power has shifted in the last few decades. The significance of the fracking boom in the USA and the importance to China of the Nine Dash Line in the South China Sea are explained succinctly and illuminate much of those nations’ political decision making. Yergin’s analysis of Russia’s requirement for export markets for their energy production is excellent, and his explanation of how the European energy market has been ‘de-risked’ by growing diversity of supply is remarkably prescient, given Putin’s failure (since publication) to freeze Europe into accepting his ambitions in Ukraine.

However, the book is almost head spinning in its globe-trotting, timeline-jumping complexity. By whirling through the history of energy, Yergin produces a sketch of how the energy market has become what it has, but his reliance on case studies and anecdotes leaves the reader wondering what the author has left out as he zooms in and out from macro trends to micro examples. Also bewildering is his focus on the four major energy producers, with much less attention paid to the complex needs of both other producing nations and the major consumers. Nigeria and the rest of Africa are only ever mentioned as bit-part players, and Europe’s energy strategy only in the context of Russia’s future policies.

This continues as he goes on to analyse the current trends that he believes will influence the future of energy markets. The politics of net zero, the artificial intelligence revolution and the scramble for dominance of green technology are covered, but often through scrutiny on individuals or companies and only vague suggestions as to their implications. Yergin is undecided on the effects of climate change and how the emergence of electric vehicles will affect demand for oil, which is disappointing in a book that purports to offer answers to the question of where energy is headed. Arguments and themes are introduced well, but bold predictions rarely offered, with Yergin preferring to allow the reader to infer their own.

While his explanation of how nations attempt to achieve energy security is an illuminating perspective on this area of geopolitics, Yergin’s determination to see everything through this lens is to the detriment of his analysis. *The New Map* suffers from confirmation bias in much the same way as the subaltern’s guide to geopolitics, *Prisoners of Geography*, does, by tending to see every move made by nations as an attempt to secure energy supply without consideration for other motives. That said, as a primer to how nations have sought to achieve energy security, and an introduction to the possible implications of future technologies, *The New Map* is an entertaining, informative read.

ANTHOLOGY OF LEADERSHIP LESSONS

Entering its third full year, *The Centre for Army Leadership Podcast* has matured into an excellent resource that goes beyond the traditional bounds of what the Army might consider to be leadership into a more general – and valuable – examination of military psychology.

A study of the lessons that can be learned from different professional fields, both military and civilian, each one-hour episode adopts a loose format that provides the listener with a background of the interviewee and how they view leadership. Highlights to date include brilliant exchanges with author Simon Sinek and rugby boss Eddie Jones.

The podcast could be open to criticism for having greater relevance to only those senior in rank, but I suspect the recently launched sister show, *The Human Advantage Podcast*, will look to balance this.

Having been initially sceptical of an Army-produced product that is intended to be consumed at one’s leisure, I have been pleasantly surprised and stimulated by this genuinely insightful resource.
The Development, Concepts and Doctrine Centre published four new joint doctrine publications in 2022 to guide military operations and inform professional military education as British Army personnel progress through their career.

**Joint Doctrine Publication 0-01, UK Defence Doctrine (Sixth Edition)** is the UK’s capstone publication. Its purpose is to guide the employment of the military instrument and to explain its utility. As doctrine, it is connected to policy, strategy and concepts. While it must be coherent with, and refer to these documents, they are not covered in detail. The publication will be revised and revisited as the context develops over time, and as the philosophies and principles that guide the employment and utility of the military instrument evolve.

Divided into three chapters, **UK Defence Doctrine**:

1. Considers the enduring nature of war and the changing character of warfare. It highlights the changes to the strategic context and introduces the continuum of competition;

2. Reiterates the doctrinal tenets of the manoeuvrist approach and mission command, and also introduces integrated action, an evolution of our doctrine. It describes the principles of war, the components of fighting power, and legitimacy and the use of force; and

3. Explores how the military instrument can be employed, highlighting the horizontal and vertical integration across hard and soft power, operational domains and levels of operations. It describes the types of operations that Defence conducts and also details Defence’s contribution to an active deterrence posture.

**Joint Doctrine Publication 0-40, UK Space Power (First Edition)** is the UK’s keystone space domain doctrine. UK space power doctrine was previously encapsulated in **Joint Doctrine Publication 0-30, UK Air and Space Power (Second Edition)**, but given the recognition by NATO and the UK that space is an independent operational domain, it is now appropriate for emerging UK space power doctrine to be articulated in its own publication. While space capabilities have underpinned military operations for many years, the 2021 Global Britain in a competitive age: The Integrated Review of Security, Defence, Development and Foreign Policy accorded a priority to UK space operations that has been reflected in the creation of the Ministry of Defence Space Directorate and the establishment of UK Space Command. This first edition therefore brings together UK government policy, strategy, higher-level doctrine and enduring space power knowledge and experience to provide a basis for understanding the utility of the space domain in the military context. In line with UK doctrine policy, it pursues a NATO-first approach. However, given the close ties with United States Space Forces, it is also coherent with current United States space doctrine.

Divided into four chapters with a supporting lexicon, **UK Space Power**:

1. Sets out the fundamentals of space power. It introduces space and space power before discussing the space domain as a system, and outlines the characteristics and limitations of space power before placing it into a national and global context;

2. Introduces and describes UK space power roles alongside the key missions that sit below them;

3. Discusses how UK space command and control is conducted. It begins by discussing general principles, before moving on to cover specifics relating to the space domain; and

4. Sets out how space power is applied within an integrated approach. It discusses the three tenets of **UK Defence Doctrine**, sets out how space is integrated with the other operational domains and then considers the role of space power in deterrence.

**Joint Doctrine Publication 0-30, UK Air Power** is the UK’s keystone air domain doctrine publication. It is focused specifically on UK air power and brings together higher-level doctrine, government policy and enduring air power knowledge and experience to provide a basis for understanding the utility of the air domain. It highlights the strengths and discusses the
limitations of air power and considers those factors which, in broad terms, enable the effective employment of air power. It also explores its relationship with the other operational domains and its interdependence with the other elements of national and military power, as well as with multinational and private sector partners.

Divided into four chapters, UK Air Power:

1. Provides an overview of the basics of air power and introduces air capabilities. It discusses influence and power from the air and places air power into a strategic context;

2. Discusses in detail the enduring and fundamental roles of air power. It also introduces the key and critical enablers of electromagnetic warfare and command and control;

3. Provides more detail on the command and control of air power. This includes discussing the principles of command and control, UK capabilities and the planning and tasking of air power; and it

4. Considers the application of UK air power in the context of joint operations, cross-government integration and integrated action. It provides an overview of air power enablers and outlines air power’s utility.

Allied Joint Publication 01, Allied Joint Doctrine is the NATO capstone doctrine for Allied joint operations and activities. It explains the strategic context for such operations and focuses on the fundamentals of joint operations and activities.

The strategic context within which the Alliance operates continues to evolve. This is the most comprehensive re-write in the document’s history. In describing the strategic context and the Alliance, it introduces and explains the continuum of competition; it updates its explanation of deterrence; and it contextualises NATO’s core policies within the contemporary security environment. The publication also describes NATO’s fighting power and how this is orchestrated. In so doing it explains the Alliance’s four doctrinal tenets (the comprehensive approach, the behaviour-centric approach, mission command and the manoeuvrist approach) alongside supporting doctrine and concepts such as understanding, multi-domain operations and strategic communications. Command and control architecture and command relationships have been refreshed.

Finally, the document incorporates several cross-cutting topics associated with human security such as protection of civilians; children and armed conflict; cultural property protection; women, peace and security; conflict-related sexual violence; sexual exploitation and abuse; combating trafficking in human beings; and building integrity.

Allied Joint Doctrine is intended as guidance for NATO commanders and their staff. It describes the strategic context and provides guidance on how Alliance forces and its partners operate. It also provides a reference for NATO civilians and non-NATO civilians operating with the Alliance. This publication will be republished with UK national elements in spring 2023.

The following keystone publications are now in review:

- **Allied Joint Publication 3, Allied Joint Doctrine for the Conduct of Operations.** Expected summer 2024.
- **Allied Joint Publication 5, Allied Joint Doctrine for the Planning of Operations.** Expected autumn 2024.

Doctrine publications and supporting documents can be found at the following links:

- Defnet – Development, Concepts and Doctrine Centre (sharepoint.com)
- DCDC App on the Defence Gateway Development, Concepts and Doctrine Centre (mod.uk)
- GOV.UK – Development, Concepts and Doctrine Centre (gov.uk)
- YouTube – Publications may be supported by introductory videos and audio books which can be accessed from the Development, Concepts and Doctrine Centre YouTube channel.
“THE PURPOSE OF THE BRITISH ARMY IS TO PROTECT THE UNITED KINGDOM BY BEING READY TO FIGHT AND WIN WARS ON LAND.”

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