

DefenceSynergia is pleased to reproduce below the Ministry of Defence verbatim text of the speech given to Royal United Services Institute by the Chief of the Defence Staff General Sir Nick Carter GCB CBE DSO ADC Gen on the 5th of December 2019.

Excellencies, my lords, ladies and gentlemen – it's a great privilege to be with you this evening to give this annual lecture. Last year I observed that there had probably never been a better week for a CDS to be controversial – I wonder how many of you can remember why? It was the day before the so-called meaningful vote on Theresa May's Brexit deal was due to take place – I say due to take place because, of course, it didn't – but nonetheless it was a good week to be controversial. This year I suspect I shall regard success as my not making any unwarranted headlines a week before the General Election. Last year I described a strategic context that was more uncertain, more complex and more dynamic than I could remember. I said instability was the defining condition with threats to our nation diversifying, proliferating and intensifying very rapidly. So, what's changed?

If anything, events over the last 12 months suggest the context has become even less stable. And the multi-lateral system that has assured our security, stability and prosperity for several generations continues to be undermined by assertive authoritarian regimes who behave as if their historic right of entitlement is being denied to them. As I put it last year – we have returned to an era of great power competition, even constant conflict – reminiscent, perhaps, of the first decade of the last century.

In terms of our immediate interests - Russian activity in the North Atlantic and in SACEUR's area of operations more widely is at a post-Cold War high; another page has been turned in Syria with Turkey's Operation Peace Spring in September; Iraq's government is fragile after several months of public disorder and there is public disquiet in Lebanon; freedom of navigation in the Persian Gulf is being challenged; Yemen remains in conflict; Libya is increasingly a proxy war; the security in the Sahel and West Africa continues to decline; the outcome of September's Afghan election remains undecided, which will impact the peace process and tensions in Kashmir have not diminished.

I could go on – but worryingly, I think, the trends are not positive. For example, the number non-International Armed Conflicts (i.e. those in which the provisions of the Geneva Convention are limited) is rising - according to the ICRC's legal classification the number has increased from fewer than 30 to more than 70 in the last few years.

Daesh, and the extremist ideas it represents, has absolutely not been defeated – indeed the threat from terrorism has proliferated – as was sadly demonstrated once again in last Friday's attack at London Bridge. And the conditions in parts of the world are not conducive to reducing the growth of extremism. For example, the IMF and the Brenthurst Foundation state that 62% of the population of sub-Saharan Africa is under the age of 25, by 2030 the population will be around 1.65 billion, and by 2050 it will have doubled

from today to around 2.1 billion, with some 900 million living in cities. Poor governance, conflict, parlous economic growth, and climate change suggest that population displacement and migration will increase significantly from the relatively small numbers we have seen so far. And of course, none of this is helped by great power competition and a new scramble for Africa's resources. Looking to the Middle East, Chatham House's paper on Future Trends in the Gulf tells us that youth unemployment is the highest in the world, now exceeding 25%. Gulf economies and political systems, are becoming increasingly unsustainable, due to low oil prices – three of the six GCC countries need oil to be at \$100 a barrel to balance their books, even without population growth, and in four of the GCC, hydrocarbons will run out within the lifetime of citizens being born today. None of this will be conducive to internal stability and it will lead to these states becoming vulnerably indebted.

Of course, all of this instability is reflected in the activity levels of our Armed Forces – with some 36 ongoing operations and 36% of trained strength being committed either to operations or at very high readiness. Our activity has been focussed on deterrence and reassurance, counter terrorism, increasingly persistent presence – a theme I shall return to – and the generation of modernised capability. For striking the right balance between the fight tonight and the fight tomorrow is important not just for the sustainability of our Armed Forces, but equally importantly to ensure we are capable of dealing with the threats of the future.

Now, in support of deterrence and reassurance highlights this year include – and demonstrated by the 50th anniversary of Op RELENTLESS, the continuous at-sea deterrent:

The largest maritime exercise in the Baltic since the end of the Cold War - Exercise BALTIC PROTECTOR this summer tested our Joint Expeditionary Force's interoperability and involved all eight of our partner nations – although, of course, it is slightly debateable whether 'exercise' is the right term, given the effect we are seeking from them; Exercise TRACTABLE saw the latest rotation of British troops to Estonia, demonstrating our ability to reinforce Estonia by land, sea and air with over 200 armoured vehicles; We have conducted air policing both in the Baltics and currently in Iceland; We have returned to exercising in the High North, and we have seen a growth in maritime activity in the North Atlantic in response to increased Russian surface and sub-surface activity; In conjunction with the French we conducted a series of exercises under the GRIFFIN banner to test the Combined Joint Expeditionary Force with a view to its full operating capability being declared in time for the 10th Anniversary of Lancaster House next year; And it was notable that the final brigade was withdrawn from Germany this summer ending nearly 75 years of forward basing on the continent.

In terms of persistent presence deployed overseas, around 5,000 are deployed as part of our global footprint in overseas garrisons, as defence attaches and on loan service; around 5,000 are deployed on operations in the Gulf – and that number goes up and down depending on the threat – with the UN, in

support of the French in the Sahel, and on enhanced forward presence in Estonia; and deployments have taken place to more than 60 countries this year, and we will have conducted over 600 capacity-building tasks.

As we modernise our capability, HMS QUEEN ELIZABETH has been conducting trials and integration of the Carrier Air Group on the eastern seaboard of the United States. This was the first operation as a formed Task Group with UK escorts, support ships and submarines and is a key step en route to Carrier Strike initial certification at the end of next year. Next week we will commission HMS PRINCE OF WALES. And the first of nine P8 Poseidon maritime patrol aircraft have been received by the Royal Air Force. In the land domain it is excellent news that after a very long journey the Army will start to see the first versions of the UK Boxer mechanised infantry vehicle begin to enter service in 2021.

But I think it is important to reflect on the context in which all this activity is taking place. I referred to great power competition at the beginning. The challenge for us in the West is that the character of that competition, being conducted by authoritarian opponents, is attacking our way of life and our freedom in a manner that is remarkably difficult to defeat without undermining the very freedoms we seek to protect. There is a growing academic consensus that that the idea of 'political warfare' has returned. This is a strategy that is designed to undermine cohesion, erode economic, political and social resilience, and challenge our strategic position in key regions of the world.

The pervasiveness of information and the pace of technological change are transforming the character of warfare and providing new ways to execute this form of authoritarian political warfare including information operations, espionage, assassinations, cyber, the theft of intellectual property, economic inducement, the utilisation of proxies and deniable para military forces, old fashioned military coercion, using much improved conventional capability, and, of course, lawfare – all of which is backed by clever propaganda and fake news to help justify these actions.

Now, I think our own media has a really important role to play in setting up a well-informed public debate as well as protecting our democracy. And I hope we can avoid unfounded speculation as we've seen in the last two editions of a certain Sunday paper - where I learned that myself and the CGS were at "daggers drawn" over the future shape and size of the Army, with reductions to under 65,000 being contemplated; I learned we were mothballing one of our aircraft carriers; and that my tenure was about to expire. Whether this is fantasy journalism, wishful thinking or fake news from one of our authoritarian opponents - I leave you to judge.

But returning to political warfare - as Edward Lucas puts it in his commentary on this - "Strategic culture in the West is characterised by a sharp distinction between 'peace' and 'war' with little scope for active conflict in between. In this Western conception there is scope for debates, disputes, demands, tensions and major geostrategic contests without compromising the fundamentals of

peace all take place without compromising the fundamentals of peace. War only occurs when formal or informal armed forces engage each other using kinetic force.” He goes on to say “these regimes, by contrast, view the strategic landscape as characterised by a continuous and never-ending struggle that encompasses everything from what the West calls ‘peace’ to nuclear war. When they consider conflict along this spectrum, the primary change from one end to the other is the relative weighting that is given to non-military and military instruments. These regimes believe that they are already engaged in an intense form of warfare, but it is political conflict and not kinetic warfare. Their primary operational focus is on employing a range of mainly non-military instruments in non-traditional ways below the threshold of large scale conventional military operations to achieve strategic gains.”

This form of warfare perhaps turns the Clausewitzian dictum that war is an extension of politics upside down – political warfare is war by other means. The risk with all this is unwarranted escalation leading to miscalculation. And the Syrian conflict is a case in point. The Carter Centre counted over 1,000 armed groups fighting in Syria at the beginning – including numerous foreign and domestic factions – the Syrian Armed Forces and its allies, the Free Syrian Army and its allies, the Syrian Democratic Forces, Daesh or ISIS, foreign influence including Russia (and Russian mercenaries from the Wagner Group), Iran, Lebanese Hezbollah, Turkey, Saudi Arabia, Qatar, the US-led Coalition, Israel and, of course, the Netherlands. And of course, these different actors all have very different agendas. Now this suggests that this is a tinder box that could easily ignite a wider conflagration.

All this requires a strategic response that integrates all of the levers of national power – a ‘fusion’ approach that brings coherence and consistency to our UK strategy. Both major parties in this campaign have said that they intend to have a strategic defence and security review, and in theory 2020 would be the next moment for an SDSR in the current quinquennial cycle. Either way it would help us in Defence to have a review that could help us answer some of these significant strategic questions.

I suggest that our starting point for a review should be a proper assessment of the threat and this should take the form of a net assessment that determines where our current trajectory will take us in 2030 relative to those of our competitors. We might deduce from this that our approach to deterrence needs updating, for the form of authoritarian political warfare that we are confronted with requires a more dynamic approach.

Our doctrine talks about the four ‘Cs’ of deterrence: comprehension, capability, credibility and communication. To this we should add a fifth ‘C’ – that of competition, recognising that escalation and de-escalation need to be dynamically managed on multiple ladders – effectively manoeuvre in multiple domains.

We also need to invest rather more, I suggest, in comprehension. I have regularly quoted Antonio Giustozzi in the past, who in reflecting on our efforts

in the first couple of decades of this century, observed that “every age has its follies, the folly of our age has been an irresistible desire to change the world without first studying and understanding it.” Hence the need for better intelligence and warning to inform genuine insight and understanding, and therefore further investment in persistent and forward engagement to establish networks, identify opportunities and develop relationships with allies and partners.

Clearly, we must never lose sight of the importance of credibility, which is drawn in large part from capability, but beyond it I think we should double down on our many strengths. I have been very struck in my year-and-a-half as CDS by our international status as what industry calls a reference customer. People want our training and education and they value our kite mark. Whether it is brands like Sandhurst, our Staff College or the Royal College of Defence Studies it is remarkable how many alumni around the world have become leaders or chiefs of their forces and who regard their experience at our institutions as defining. For example, three leaders in the Middle East were educated at either Staff College or Sandhurst and the current head of Pakistan’s ISI is a recent graduate of RCDS. And the trend continues – at this December’s Sandhurst Sovereign’s Parade the sons of the Emir of Qatar and the Agong of Malaysia will be commissioned.

The Navy’s Flag Officer Sea Training is the undeclared centre of NATO interoperability and maritime standards – with some 13 nations dependent on it for high-end training. Every year around 40 Air chiefs from around the world will attend the Royal International Air Tattoo and the preceding Air Chief’s conference, and over 80 countries send their students on our Air Force’s courses. These are brands that provide us with global leverage and thought leadership. And they are, to coin a recent phrase, ‘over ready’ for export. Indeed, we have a team in Jamaica at the moment looking to help the Jamaicans create an officer academy for the Caribbean as a whole.

But we also provide world leading training and capacity building. Whether it is specialised infantry providing training, advice, assistance, and even accompanying African battalions on UN and AU missions or the GCC Chiefs of Defence coming annually to London to discuss capability development, we have remarkable people who are wanted the world over.

A Defence review would confirm the importance of NATO. And while there has been much debate this week about its significance and its relevance, no-one should be in any doubt about how successful it has been. 70 years is remarkable longevity given that the average duration of a military alliance in the last 500 years has been no more than 15 years. Since 2014, NATO has undertaken the biggest reinforcement of deterrence and defence in a generation, with a particular focus on the readiness of armed forces and on an increase in non-US Defence spending.

It is also, I would suggest, conducting one of the most rapid transformations of an international organisation in history - it is turning its mind effectively to the

challenges of the future, including China, space, cyber, hybrid warfare, subversion, disinformation and new technologies. We have seen a NATO adaptation 'roadmap' on the challenges and opportunities of emerging and disruptive technologies, and NATO's first new military strategy for 50 years which takes a 360-degree approach to security. And the UK is at the very heart of this thinking.

A Defence review though will also need to be honest about the true state of our forces. This involves mobilising ourselves to improve readiness and enhance resilience; to protect our critical national infrastructure; and to think laterally about how to outmanoeuvre our opponents and communicate our actions. What worked for the predictability of stabilisation and counter insurgency operations in the last 20 years or so won't work in today's context. The efficiency initiatives of the last 25 years have taken risk against readiness and resilience. We have looked to optimise our logistic infrastructure, reduce inventory, rationalise stock, and outsource whatever we can to industry.

Do we know what 'just in time logistics' has done to our supply chains? Have we assured sovereign capability where we need it? Has our competitive procurement process shared risk with our suppliers as well as it might for our support solutions? And how do we improve the availability of our key platforms? What impact would Reserve, and Regular Reserve mobilisation have on our employers? These are all issues that must be tested, and our intention is to do just that in an exercise called AGILE STANCE next autumn. And we'll need commitment from our industry partners to learn the necessary lessons and help us prepare to fight the war we might have to fight.

A Defence review needs to do this at the same time as creating adequate headroom for us to modernise. Our modernised force will be framed through the integration of five Domains: Space, Cyber and Information, Maritime, Air and Land. This will change the way we fight and the way we develop capability. Our new UK Strategic Command which formally stands up next week as the successor to Joint Forces Command is charged with driving the essential integration across the modernised force to achieve multi-Domain effect. It will develop and generate the capabilities we need to operate successfully in this sub-threshold context (or grey zone as some call it) – including space, cyber, special operations and information operations. It will also command the strategic base, including the fixed parts of our global footprint, and the support, medical and logistic capability that enables operational deployment and mobilisation.

We have to move beyond 'Jointery' – integration is now needed at every level – not just at the operational level where the term 'Joint' applies. Modern manoeuvre in any domain will only be enabled by effects from all domains. I saw this vividly as a divisional commander in Kandahar where the integration of cyber, air and land effect realised an outcome that was far greater than the sum of the parts. As we develop our operating concept for this modernised force – trend analysis suggests it will, and I will read you a list:

Have smaller and faster capabilities to avoid detection; Rely more heavily on low-observable and stealth technologies; It will depend increasingly on electronic warfare and passive deception measures to gain and maintain information advantage; It will trade reduced physical protection for increased mobility; It will include a mix of manned, unmanned and autonomous platforms; It will be integrated into ever more sophisticated networks of systems; It will have an open systems architecture that enables the rapid incorporation of new capability, and rapid integration into the network; It will be markedly less dependent on fossil fuels; It will employ non-line-of-sight fires to exploit the advantages we gain from information advantage; And it will emphasise the non-lethal disabling of enemy capabilities, thereby increasing the range of political and strategic options.

Now, we might think of these as 'sunrise' capabilities, with the corollary being 'sunset' capabilities that could be used for a while in the emerging operating environment in a mix of 'high-low' systems but will increasingly become too vulnerable in a warfighting context. This modernisation will require us to embrace information-centric technologies, recognising that it will be the application of combinations of technology like processing power, connectivity, machine learning and artificial intelligence, automation, autonomy and quantum computing that will achieve the disruptive effect we need. Predicting these combinations will be challenging, so we will have to take risk, accept some failure and place emphasis on experimentation by allocating resources, force structure, training and exercise activity to stimulate innovation on all lines of development. This will enable adaptive exploitation as opportunities become clear.

To harness such a collective effort, we will need some strategic aiming marks to work towards. These might be to focus the functions where ethical application of Artificial Intelligence and autonomy could bring advantage, enabling platforms to be smaller, lighter and, perhaps, greener. And to value data as a strategic asset, rapidly detecting, attributing and rebutting 'fake news', and transforming the battlespace and the business – watch out the Sunday papers ...

Contributing to these strategic aims would be a series of ambitious initiatives whose aggregate effect would begin to build momentum. For example: Creating a 'strategic sentinel' able to gather and analyse intelligence and data from across HMG, allied and public sources to enhance the speed and effectiveness of decision-making; Creating a single source of the truth on the readiness of our forces at any moment without requesting or manually processing information, taking account, for example, of planned maintenance and personnel data Developing 'Nextgen Training' linking augmented reality, synthetic environments with live events with the training data fed back into training design and mission planning.

And, of course, it is salutary to be reminded - as Rand did 15 years ago - that hardly any of the great military inventions of the last century emerged directly from a military requirement. They came from the outside world – and we are

unlikely to develop the capabilities we need unless we do so in partnership with the private sector where most of the innovation in technology is to be found. This is what we are doing in proving the technology for a single synthetic environment in a partnership with the leading gaming innovator, Improbable, and the long-established simulation provider, CAE.

And it is also how we see the Future Combat Air Technology Initiative - Team Tempest. It's much more a technology partnership than an acquisition programme for a Typhoon replacement. And it is exciting to see the momentum that has been generated as well as the additional investment by industry in advanced technology enterprises so far supporting over 1,800 jobs by the end of 2019 and some 120 sub-contracts across the breadth of the country. And it is particularly good to see Sweden and Italy now on board. Realising these sorts of relationships will likely involve the adoption of a new outcome-focused approach to procurement that shares risk and opportunity with our suppliers, enabling collaborative development and incentivising innovation to build the agility and adaptability we need to seize disruptive technological opportunity, with, I emphasise, a responsive commercial function at the leading edge. We simply cannot afford the luxury of a process that uses excessive specification as an insurance policy against programme risk and we must reduce cost.

This type of relationship must be based on a more open and transparent two-way conversation with industry, recognising that we all need to step up to the plate when it comes to the defence of our country.

I suggest a key input to a Defence review should include a proper look at our defence industrial strategy. This would look across the defence and security sectors to identify how we can enhance our strategic approach to ensure we have competitive, innovative and world-class defence and security industries that drive investment and prosperity as well as underpinning national security. R&D must feature in this too – we must embrace open, outwardly facing innovation - in recognition that nobody does it all in-house any longer. We must establish an academic and entrepreneurial ecosystem. We must utilise technology scouts to boost our R&D and pound the pavements visiting universities, research centres, start-ups and established companies looking to establish strategic alliances with the right partners.

Now, all this bears on human capability – our adaptive edge. Technology, the competition for skills in an evolving workforce and the abiding need to integrate across the Domains, and within them, will require a new approach that maximises the potential of all our talent from wherever it is drawn. The balance between generalists and specialists will tip increasingly towards specialist career streams.

We are establishing integrated career structures where appropriate that are blended between the services and our civilians – we are calling this 'unified career management' and the first of these blended career fields based on cyber will be initiated next year. It will be based on clearly understood skills

frameworks and, on that, we will increasingly encourage lateral movement and entry on an enterprise basis with the private sector to provide greater opportunity for talent to be maximised for collective benefit. We will pilot this imminently, looking to establish a common human resource management model with some of our key industry suppliers. 2020 was the horizon for Future Reserves 2020 – the so-called FR20 – and it would be appropriate to conduct an FR30 review that would build on the very successful foundation laid by FR20, as well as getting after this idea of an enterprise approach with civil society more broadly.

So, to conclude, I would suggest we are in a period of phenomenal change – more widespread, rapid and profound than humanity has experienced outside of world war. And it is more sustained than the two world wars of the last century combined – and it is still increasing. Our fundamental and long-held assumptions are being disrupted on a daily basis. Modernising will only get us so far – what is needed is a step-change in how we fight; in how we run the business; in how we develop our talent; in how we acquire our equipment; and in how we provide support – this requires transformation. As we enter the fourth Industrial Revolution, it is the same challenge and opportunity that faced our predecessors as they went from sail to steam.

This scale of change must be led from the top but, equally, change at this pace must also be delivered bottom-up, by our extraordinary young men and women, who have grown up with digital technology, and who are far more comfortable with the modern world than their leaders. Hence the importance of empowering them to unlock their potential. But we will not deliver change of this scale and breadth on our own – it needs to be part of a national enterprise. And it calls for a very different approach to risk, for we will not change without being prepared to make mistakes and learn from them, as well as being prepared to shatter some shibboleths in the process.

Thank you very much.

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