

Generals and Generalship

Lieutenant-General Jonathon Riley CB DSO PhD MA FRHistS (Late R.W.F.)

As a General, Jonathon Riley commanded 1 Mechanized Brigade in the Balkans, the U.K. Joint Task Force in Sierra Leone, MND (SE) in Iraq, was the senior coalition officer in U.S. CENTCOM, was DCOM I.S.A.F. in Afghanistan and Director-General and Master of the Armouries. He was chief of staff of 6 Armoured Brigade and of the 1st Armoured Division and was also the Director of the Higher Command and Staff Course. He holds three academic degrees, including a PhD, and has published a total of 30 books, some in several editions, as well as numerous articles and essays.

EXTRACT

This chapter defines generalship at various levels and compares modern generalship with historical models and mores. It examines the role of the General in balancing ends, ways and means, especially at the strategic level and in the light of the role of armed force, and forces, in achieving strategic objectives. The role of the General in decision-making is explored, in the light of the requirement to seize and maintain the initiative while balancing tempo against risk. The location of the General, the impact of a widening of the battle space into the digital realm, cyber space and space, is discussed, along with the impacts of the legal and media factors in war. This widening will, it is argued, blur the boundaries between the tactical, operational and strategic levels. Finally the possible impact of artificial intelligence is discussed.

If we are to answer the question posed in the title of this article we must begin at the beginning – to establish what is meant by a General, and by generalship – good or bad. It is a subject upon which many eminent authorities have already written, among them such names as Sun Tzu, Carl von Clausewitz, Anton Jomini, John Ruskin, J.F.C. Fuller, Martin van Crefeld, John Keegan and Richard Holmes. In the presence of this august company, all judgements may be inadequate.¹

At the outset, we must be clear that this is not a discussion about the peacetime role of General Officers, where they will be judged by standards of administrative competence, or according to the prevailing political culture, or against passing social norms. No, this is a discussion about generalship in war, where Generals are judged by results just as those of Russia, Ukraine and Israel are being judged during the current struggle. Those who have failed, or have been perceived to have failed, have paid dearly; President Putin has sacked at least eleven general officers since the invasion of Ukraine, for example.² No General can stand the consequences of failure in war at any time, especially when weapons of mass destruction may be employed with truly devastating effects; and routinely where the glare of the legal and media spotlights illuminate military operations today as never before.

Considerable care is needed when discussing Generalship in an historical context. The responsibilities and required competencies of a General have changed over the centuries and one must be careful not to judge Napoleon, for example, or Wellington by modern standards. Our understanding of strategy, the operational art, and battlefield tactics are different from theirs: complex, modern, war – sometimes referred to as “4th Generation War”, or ‘Three-Block War’ – was far in the future in

¹ For a full discussion on the subject in an historical context, see Riley, Jonathon (2007) *Napoleon as a General. Command from the Battlefield to Grand Strategy* (London and New York, Continuum Books), Chapter 1.

² van Brugen, Isabel (18 July 2003) ‘Full List of Russian Commanders Dismissed by Putin in Ukraine War’, *Newsweek*, available at [newsweek.com/full-list-russian-commanders-dismissed-putin-ukraine-war-1813706](https://www.newsweek.com/full-list-russian-commanders-dismissed-putin-ukraine-war-1813706). Accessed 3 April 2024.

1815. Technology too has advanced in the intervening period of time: the full effects of the Industrial revolution had hardly begun to be felt by 1815, and technology then was little different from what it had been 100 years before. Looking to more modern times, a battalion commander today, at least in the U.S. Army, has more firepower, over greater ranges, and can see more of the battlefield, by day and night, than his counterpart at Corps level during the Vietnam War.

Nor do our cultural norms make any sense in the context of the world of, say, 1815 – when slavery was still widely practised, women had no role in statecraft and democracy was considered a dangerous and Jacobinical idea. Our norms make no sense to that period any more than theirs do to us. Thus it is not right to judge a field commander with the benefit of hindsight, because he made his decisions based on the information available at the time: our lives and experience go forward, following what Steven Hawking calls ‘the arrow of time’;³ we are able to review those experiences by looking back, but we cannot change them.

Later in this article I will address the increasingly rapid advances in military science that dictate the employment of forces under a General’s command in modern multi-domain operations. But I contend even so, because war is adversarial, it remains an art, rather than a science, and that therefore generalship too remains an art, although tempered by science, rather than a straightforward exercise in professional competency. War ‘*is the foundation of all the arts*’, wrote John Ruskin, ‘*it is the foundation of all the high virtues and faculties of men*’.⁴

*For what art can surpass that of the general? – an art which deals not with dead matter but with living beings, who are subject to every impression of the moment, such as fear, precipitation, exhaustion – in short, to every human passion and excitement. The general has not only to reckon with . . . time, weather, accidents of all kinds, but he has before him one who seeks to disturb and frustrate his plans and labours in every way . . .*⁵

There are, therefore, no simple criteria for assessing good Generals, or at least what makes a good General.

A common dictionary definition of the general speaks of one who holds ‘extended command’: not helpful in itself. Moreover, Generals come in different sizes. A Brigadier General commands a brigade group or task force engaged in the close or deep or rear operations within the context of a higher formation. A Major General commands a division which is, however configured, the lowest level of command that plans and conducts operations simultaneously, and carries on the close, deep and rear fight. A Lieutenant General commands a corps, which today is more an operational than tactical level formation with responsibility for a theatre of operations, its lines of communication and its interaction with the air, space, maritime, nuclear, virtual or cyber, media and legal components of a force. Thus, the first defined aspect of generalship is command of a fighting formation, of combined arms, services and components, engaged in war.

Above this, at the highest level, a General will be responsible for managing the military aspects of his country’s policy and strategy, and the spending of its blood and treasure in war to achieve the goals of policy and strategy: policy being about the objectives or ends sought by a government or a coalition and, in reality too, the means provided to Generals by governments, strategy being about the ways this will

³ Hawking, Professor Steven (1998) *A Brief History of Time. From the Big Bang to Black Holes* (London, Bantam Dell Ltd), Chapter One.

⁴ Ruskin, John (1900) Lecture III, ‘War’, to the R.M.A. Woolwich in *The Crown of Wild Olives* (New York, U.S.A., A.L. Burt), p. 66.

⁵ von Boguslawski, Albrecht, tr. By Colonel Lumley Graham (1872) *Tactical Deductions from the War of 1870-71* (London, Henry S. King & Co and Creswell’s), p. 68.

be achieved. At the strategic and operational levels there is, for Generals at that level a circular aspect to the relationship of ends, ways and means. Generalship will determine the ways to achieve the given ends but, since the decision by any state to make war is a political one, no government – we hope – will take such a course without having the means to do so: the dramatic and it seems unfinished reductions in the defence capability of our country ought therefore to be giving rather more cause for concern than they seem to be doing faced with the power – and willingness to use it – of Russia, China, Iran, North Korea and various non-state actors like Hezbollah, Hamas, and the Huthis. It is true that strategic objectives are achieved through means as diverse as diplomacy, economic power and information as well as military power; but in the end, the threat or use of military power is often the decisive factor. Professor Sir Hew Strachan in his book *The Direction of War*⁶ contends that strategy is an attempt to make concrete a set of objectives through the application of military force to a particular case; it deals not with policy in the first instance, but with the nature of war – not a bad summary but implicit in it is the idea that strategy is first and last about military force, which is questionable. Even if it is only partly true, however, it means that senior military commanders and staff officers have a duty to help shape both strategy and policy by being clear about the means required and the deficiencies therein. Given the parlous state of British defence, the willingness of the current government to lock horns with Russia is, to use a well-worn word, incredible.⁷ No General should ever engage in a war that he knows he cannot win.

If the connection between the setting of objectives and priorities and the allocation of resources to achieve those objectives is not properly addressed, then the result may be under-resourcing, which is what British governments of all political parties did in both Iraq and Afghanistan – but especially Iraq. Under resourcing means failure in the worst case; a downward revision of objectives in most cases; the inability for the General in command of the theatre to carry out certain tasks; or in the best case, a considerably extended timetable to achieve success. Did the Russians perhaps fall into this trap in Ukraine, designating the war as a ‘Special Military Operation’ and engaging only about 190,000 troops including local levies and Interior Ministry troops – they were always outnumbered, if not outgunned, by their opponents.

The late Professor Sir Michael Howard rightly said that armed forces are an indispensable aspect of nationhood and no proper state can do without them. They define how other countries, whether allies, adversaries or neutrals, view you. The views of other countries will be shaped by both the size and capabilities of those forces, and their record of success. War, he continued, may be an evil but those who renounce its use find themselves at the mercy of those who do not. The purpose of the use, or threat of use, of armed force and armed forces, is designed to coerce other states into a particular course of action, or else dissuade them from one. Here again, Generalship is woven into this essential attribute of statehood both in the design of the armed forces and in how they are used. Strategy involves the use of force and *that* is what Generals do.⁸

What yardsticks, therefore, can be employed to judge how good a General is, or is not? The first may be performance against those unchanging principles of war.

⁶ Strachan, Hew (June 2014), *The Direction of War* (Cambridge, C.U.P.), p. 64 et seq.

⁷ See, for example, the Defence Secretary’s oral statement on the war in Ukraine on 10 September 2024, which went well beyond condemnation of Russia’s actions and support for Ukraine. www.gov.uk/government/ accessed 17 September 2024.

⁸ Howard, Professor Sir Michael (1970) *Studies in War and Peace* (London, Temple Smith) pp. 17, 154, 193, 196; Howard (1983) *The Causes of Wars and other essays* (London, Temple Smith), pp. 36, 131.

There is some variance between different nations as to how many these are, but those which are generally agreed on are listed in British military doctrine and do not need to be rehearsed here.⁹ The measurement that can be made is the degree to which the General understands and applies those principles and in doing so achieves victory in the realm of that great judge and teacher: WAR. Sun Tzu set this out many centuries ago: '*In war, then, let your great object be victory . . . Thus, it may be known that the leader of armies is the arbiter of the people's fate, the man on whom it depends whether the nation shall be in peace or peril . . .*'¹⁰ General Rupert Smith tellingly said in this context that the General has to be the man – or nowadays, the woman – who in a military organisation can recognise any problem at issue, in its entirety; define those things which are likely to be decisive (and very rarely is that one event or action only); and having done this, change the situation to advantage in order to *win*.¹¹ Put yet another way, he must balance his ends, ways and means while preventing the other side from doing so. It is government policy which defines the ends required in a war. Governments will also allocate the means to conduct a war, unless they have neglected defence (as they so often do). Strategy and the operational art describe the ways: it is the General who, having been given the ends and the means, must determine the ways; and to make war without having done so is to court disaster. But at the highest level, the General must give politically aware military advice on the available capabilities and attainable objectives, since no government should be allowed to go to war without having provided its Generals with the means to do so. In Britain, this is the business of the Chief of Defence Staff, supported by the Service Chiefs and the Chief of Joint Operations; in the U.S.A., it is the business of the Joint Chiefs. In our own country, there is a dissonance between the stated aims of government and the military means provided to achieve them – a dissonance that has steadily grown since the end of the Cold War under all governments and which has accelerated rapidly in the last decade. Can Britain seriously aspire to be a prominent nation in N.A.T.O., holding in perpetuity the post of DSACEUR, for example, with an army of only 70,000 and commensurately small naval and air forces? Going back to the point about not engaging in wars that cannot be won, then surely Generals still have a duty and a right to object when means do not match ends.

The second yardstick is by reference to the human condition, for at any level, the General is *the* central figure. As J.F.C. Fuller notes, '*The Gauls were not conquered by the Roman legions, but by Caesar . . . It was not the French Army which reached the Weser and the Inn, it was Turenne . . .*'¹² The human condition in the art of war remains central, until perhaps artificial intelligence replaces it – more of which later in this article. It remains central because of the moral component of war and of the exercise of command, especially decision making. The General must apply judgement and have the courage – both moral and physical – to make his decisions stick within the constraints of the laws of armed conflict even though the cost in life and limb may be heavy.¹³

The exercise of command by a General is not, therefore, to be confused with simple leadership, or information processing. Command encompasses the three essential functions of leadership, control and management (of men and resources), and decision making. These functions vary according to the size and complexity of

⁹ *Joint Doctrine Publication 0-01, British Defence Doctrine* (D.C.D.C., 2008), p. 2-3 – 2-5.

¹⁰ Sun Tzu, ed James Clavell (1983) *The Art of War* (New York, Barnes & Noble) p. 14.

¹¹ Lecture to the Higher Command and Staff Course, Joint Services Command and Staff College, 2002. See also the discussion in *The Utility of Force*, (London, 2006).

¹² Fuller, J.F.C. (1936) *Generalship. Its Diseases and Their Cure. A Study of the Personal Factor in Command* (Harrisburg, U.S.A, Military Service Publishing Co.), p.30.

¹³ See the discussion in von Clausewitz, Carl, ed. and tr. by Michael Howard and Peter Paret (1976) *On War* (Princeton, U.S.A., Princeton University Press) pp. 100 et seq.

an armed force but must always be exercised. Command is like sovereignty: it is indivisible. Napoleon remarked on this at an early stage in his career as a General when faced with a division of command of the Army of Italy between himself and Kellermann. Writing to the Directory in Paris in May 1796 he said that: '*I am certain that one bad General is better than two good ones.*'¹⁴ And if command is indivisible between commanders, it is also not possible to separate a commander's responsibilities from his authority over resources, and his accountability for the consequences of actions undertaken in his name. As General John Kiszely always rightly pointed out when commanding the 1st Armoured Division, experience shows that if these are separated, trouble always follows. Troops, resources and tasks may be delegated to subordinates, but always in pursuit of one end – the ultimate responsibility for achieving that end cannot be delegated, nor divided. Kiszely has also pointed out that much of the decision-making required by Generals is aimed, at all levels, at seizing and maintaining the initiative – making the enemy dance to your tune – through seeing or creating opportunities, using the offensive in the physical and virtual realms, taking calculated risks, achieving superior tempo and sustaining one's forces.¹⁵

At low levels, command and leadership are often synonymous, so what distinguishes the sort of leadership required by a General, who is perhaps best thought of as a leader of leaders? The first thing is physical and moral courage, usually more of the latter than the former for a modern General – another distinction with historical times when a General was expected to be in the forefront of battle. Moral courage for a General usually hinges on those hard decisions alluded to earlier, which incur the probability, not just the possibility, of death and injury to combatants and civilians on both sides. It is worthy of note that modern assessments of moral courage and character are frequently bound up with views of morality. In this context, there is a distinct connection between professional competence or fitness to command, and social (frequently sexual) behaviour. This connection is fuelled by the activities of the modern media. No such connection existed before very recent times and any attempt to draw it would have been regarded as insane: *mores*, or customary standards of behaviour, are historically and culturally specific. One can say that if such standards had been applied, say, 200 years ago, then neither Napoleon nor Wellington, cited earlier in another context, would have got very far.

On the other hand, there have been many cases over the last century where Generals have conspicuously ignored the laws of armed conflict: from the Japanese and the S.S. in the Second World War; through the North Koreans and the Vietnamese – North and South – in their wars as well as, at times, the Americans in the latter case; to all three of the factions in the Balkan Wars of the 1990s; and most recently the Russians in Ukraine. This has produced short term successes of a kind but in the long term it is always counterproductive. World opinion may not matter much to those who behave in this way, but justice has a long arm, as the generals hanged by the war crimes courts of Nuremberg and Tokyo, and more recently Ratko Mladić and others, can testify. Professor Sir Lawrence Freedman explores this topic in the context of a number of civilian officials and senior officers who have been in positions of authority in war and peace across Africa, Asia, South America and Europe. What should Generals do, when civilian leaders require action that is either illegal, or which is in conflict with moral or professional values, or which exceeds the capabilities of the armed forces? Or where politics and egos are the compelling drivers of strategy,

¹⁴ Chandler, David (1967) *The Campaigns of Napoleon* (London, George Allen & Unwin), p. 158.

¹⁵ Kiszely, Major General J.P. MC, (2000) 'Seizing the Advantage, Seizing the Initiative – New Opportunities, New Challenges' in R.U.S.I. Journal, August 2000, pp. 1 – 4.

rather than national or alliance goals? And how should those civilian leaders respond if Generals refuse to obey their orders?¹⁶

Perhaps the most important thing that any General does in war is to make decisions. He may make decisions intuitively or through process – but even when relying on intuition, the wise General will use his staff to assess those decisions using a formal process such as the estimate, in the light of the enduring factors of time, space, the environment and the available resources. Process also allows those decisions to be tested against the object of any General's problem – the enemy – using wargaming. But intuition, the product of intelligence and experience, can be trusted and one noteworthy aspect of those Generals with well-developed intuition, like George Patton, Bill Slim and Erwin Rommel, is that their timing was excellent – as was their ability to recognise a change in the situation.¹⁷

Decision making can be severely impeded at the operational and strategic levels by the demands of a coalition or alliance. For British Generals, operating in an entirely national context has been rare over the last two centuries or more. Leaving aside internal security and counter-insurgency operations, one can cite perhaps only the Anglo-Zulu and Anglo-Boer Wars of the late 19th Century; the campaign in Madagascar in the Second World War; the Falklands War and the intervention in Sierra Leone as having been undertaken by solely British forces. It is scarcely conceivable that Britain could or would fight any war today without allies. Command in this context will generally go to the biggest contributor. But whatever the mission, the General must understand what his coalition partners will and will not do, what are their caveats and red lines. In the N.A.T.O. mission to Afghanistan, I.S.A.F., for example, there were a number of nations who would not permit their soldiers to move outside the base perimeter wire at one end of the spectrum, while at the other end, there were nations who professed no caveats at all. In the context of coalitions and alliances – the two are not the same but here is not the place to expand on that – where tempo is low and risk is low, such as in a humanitarian operation, the frictions of multi-nationality – national objectives and red cards, language, culture, different procedures and so on – can be disentangled gradually over a period of weeks and months. They are thus tolerable, and tolerable to a very low level in the force structure; multinational battlegroups, for example, operated in Bosnia and in southern Iraq.

Where tempo is higher, and risk is greater, in an all-out war against a single enemy, the rules are different. Consider the likes of Napoleon, Hitler, Milosevic or Saddam who all were able to demand instant and complete obedience and controlled the strategic communications messaging; they consulted no clients or allies, called no councils of war, heeded no red cards. Putin today is such a one, as is President Xi of China, and Kim Jong Un in North Korea. Such an opponent will always operate at a higher tempo in making and implementing decisions than does an alliance, or even a coalition. It is the General who must ensure that the ways and means to deal with this mismatch in tempo are addressed where they should be, at the strategic level, allowing the operational commander as much freedom of action as possible.

The sort of decision making in changing circumstances, and the flow of information required to support it, raises the question of the position of the General in battle, in order to do the essential three things that a General must do to properly exercise his command. General Julian Thompson has described these as being first, to find out what is going on, secondly to communicate his intentions to his subordinates (and by implication his superiors) and third, to keep in contact with the

¹⁶ For the detailed discussion, see Professor Sir Lawrence Freedman (2022), *Command: The Politics of Military Operations from Korea to Ukraine* (London, Allen Lane).

¹⁷ Clausewitz, p. 102.

staff so that they can solve problems and adjust resources.¹⁸ Command and control for a General in a war are about *communications* in relation to *time*, so that decisions can be made that will control the course of events.

But to return to the legal and media aspects of the modern battlefield, a fourth essential function must be added to Thompson's list: the General must be able to explain himself and his actions – to his superiors, to his own people and to the uncommitted. This is one area in which the role of the commander has changed greatly in recent times. For many years we were all schooled in the belief that whoever makes and implements a decision faster than his opponent gains a tremendous, decisive, advantage – we had to go round the OODA loop, or the Boyd Cycle, like a hamster in a wheel.¹⁹ Seeking vainly for certainty in the uncertain field of combat, we all learned, would result only in being made to react to a more agile enemy with a superior tempo of making and implementing decisions. This logic leads to the view that in any contest between two opponents, one of whom relies heavily on process and technology, and one who relies on intuition, the latter is more likely to triumph if all other things are equal. Nothing in current force-on-force conflicts suggests that this has changed; but in Iraq, and later Afghanistan, it was necessary to modify that view. Because, in insurgencies, the enemy will manufacture incidents that appear to make government forces responsible for severe civilian casualties; or because mistakes are made; or because the media is usually happy to condemn legitimate forces unheard; but most importantly because legitimate armed forces need to be sure that they are operating within the laws of armed conflict, they are now *obliged* to quest for certainty. In part, this is because of the increasing nexus between violence, whether intra or inter-state, corruption and organised criminality. Opponents can currently hide behind criminality because in law, criminals are civilians and armed force cannot be used directly against civilians.²⁰

Where destructive force is applied, it must be applied on the basis of excellent, multi-source intelligence and every General must be his own intelligence chief to a greater degree perhaps than ever before. Such force must be applied appropriately to its target in order to achieve the desired effect, and only the desired effect. Any General must also have his strategic communications staff and legal adviser very close at hand. The Israelis are aware of this in their current campaign in Gaza, even though, because their survival as a people is, in their view, at risk, they care less than we may do about world opinion.²¹ However, there are cases in recent times of Generals who have come dangerously close to prioritising a media presence and public image, over serious issues of command. The laws of libel being what they are, we can name no names.

Throughout the execution of an operation, therefore, the General must be in a position constantly to receive the best available information, review the situation, making fresh estimates in the light of events, and changing the plan as required – since as any soldier knows, no plan survives contact with the enemy intact. Clarity of thought, decision, and action are essential; and in war, so is speed. Only thus will risks be calculated and the initiative be maintained. The General's intuitive process

¹⁸ Lecture to the Higher Command and Staff Course, Joint Services Command and Staff College, 2002.

¹⁹ Hughes, Dr Thomas (Winter 2001) 'The Cult of the Quick' in *Aerospace Power Journal*, Vol 15, Iss. 4 (Maxwell A.F.B., U.S.A.), pp. 57 – 68.

²⁰ Riley, Jonathon, (June 2009) 'The Nexus: War, Insurgency and Criminality. Operational Experience from Bosnia to Iraq.' Speech at the R.U.S.I. Available at www.generalship.org/articles, accessed 27 September 2024.

²¹ See, for example, Dershowitz, Alan M. (28 January 2024) 'Civilian Deaths in Gaza: Relatively Low' available on <https://www.gatestoneinstitute.org/20343/gaza-civilian-deaths>, accessed 18 September 2024.

will be continuous, and the experienced General will in a sense feed it by positioning himself at the right place – and thereby develop an intuitive sense of where to be, at what point in the battle, so completing a circle. This must be balanced by the need to quest for certainty, discussed earlier, where targeting is concerned in order to avoid disproportionate collateral damage.

There are those who say that that because of the sort of complexity encountered in modern conflict, intuitive decision-making is no longer possible: that the General is faced with so many facets of a campaign, that he will be forced to rely on some formal process of evaluation in order to be able to make every decision. I offer the view, however, that the converse is true, especially if one accepts the contention that war and conflict are not wholly rational pursuits. The General who surrenders himself to process, or who allows himself to be deluged by the massive amounts of data available from modern command systems, and who abandons intuition, becomes the prisoner of that process and therefore of predictability. Defeating an agile opponent in conventional or unconventional war or dealing with a complex dispute in a peace support operation, or even addressing the priorities and risks in humanitarian interventions, requires a clear head and the ability to see the essentials.

Does the advance of technology change any of this? Technology provides new opportunities and challenges but does not alter the human condition. But as technology changes, so the employment of military forces must adapt to it. This is a relationship that is constant and always in need of attention since if it is ignored, disasters follow. The full effects of the industrial revolution during the Nineteenth Century were not, for example, matched by changes in tactics with the resulting carnage of the American Civil War, Franco-Prussian War and the first years of the Great War.²² During the latter part of the Twentieth and the early part of the Twenty-First Centuries, the rate and pace of technological change has increased ever more rapidly, making this relationship more than ever pivotal for a General. The notion of cyber warfare was certainly during the Cold War, as both sides strove to control the electromagnetic spectrum as it was then exploited. It was the Russian Admiral Sergei Gorschkov who in 1973 stated that success in the next war would go the side which best exploited the electro-magnetic spectrum.²³ The Russians' ability to jam modern precision-guided munitions, such as J.D.A.M.s, *Excalibur* 155mm shells and HIMARS missiles is simply part of that continuum, albeit one that has accelerated and is accelerating.

In that context, the acceleration of the rate and pace of technological change and with it, the widening of the battlespace to include space – especially in the light of Chinese adventures in the direction of the moon²⁴ – the digital realm of information and offensive cyber capabilities. Cyber space is ungoverned space outside the military sphere, never mind within it. This expansion will be likely to confine a General more closely to his main headquarters. It will be here that the means will be found to manage this massive flow of information and here it will be analysed, focused and channelled. It is from here that the complexities of a coalition will be managed. It is here that technologies with rapidly evolving capabilities, such as hyper-sonic missiles, drone swarms and glide bombs must be controlled. It is here that analysis will best

²² See the discussion in John Terraine's collection of essays, (1964) *The Western Front: 1914 – 1918* (London, Hutchinson & Co. Ltd).

²³ Cited in, among many others, Baram, Abdul Karim (2009) *Technology in Warfare. The Electronic Dimension* (Emirates Center for Strategic Studies and Research).

²⁴ See, for example, Simone McCarthy (25 June 2024) 'China's Chang'e-6 moon mission returns to Earth with historic far side samples', available on <https://edition.cnn.com/2024/06/25/china/china-change-6-moon-mission-return-scn-intl-hnk/index.html>, accessed 18 September 2024.

be made on what means should be applied to required objectives – and objectives may now range from physical territory to capturing the imaginations of peoples; or to secure or deny vital resources such as minerals, fossil fuels, rare earths or water supplies. Anthony King explores this migration of command, suggesting that a more collective style of command and control is more suited to the needs of networking and decentralisation.²⁵ It is an opinion, but it fails to recognise the vital issue of the General's ultimate responsibility, which cannot be delegated. Books on generalship by academics are all well and good – but even the most brilliant has never carried that heavy rucksack of responsibility when in command – especially on operations.

What is not at issue, however, is that the boundaries between the tactical, operational and strategic levels of war are becoming blurred and the General's expertise, and that of his staff, must range more widely. Tactical brilliance and personal physical courage are no longer enough. The risks of miscalculation, therefore, are increasing and the possibilities of mitigation are diminishing. A foretaste of this came in Iraq, where there was not just an imbalance in strategic ends, ways and means facing the Generals in the theatre of operations, but a vacuum in strategy created by the lack of forward planning at government level which they and their staffs had to fill. The presentation of strategic objectives and the operational ways and means to achieve them was presented and reviewed by General John Abizaid in U.S. Central Command, General George Casey in Baghdad, and even national contingent commanders when needed, at the higher tactical level.²⁶

Being more closely tied to the main headquarters will inevitably give the general less opportunity for human contact through visits to subordinate commanders and troops on the ground. Technology will therefore have to provide the means of building that essential mutual trust, understanding and confidence between commanders through on-line contact rather than face-to-face meetings: assuming that the enemy's technology does not take down these capabilities. The human factor remains, in spite of where technology goes.

However, Artificial Intelligence (A.I.) may be the biggest game-changer in that equation even though technology rarely delivers what it promises, at least in the near term. If used as a staff tool, its powers of mathematical and logical calculus could greatly increase the powers of the staff, so long as it is not allowed to become a substitute for intelligent judgement and analysis – especially, for example, in determining what is a deception, engineered deliberately to attract A.I. driven algorithms. A.I. programmes and algorithms are often highly aggressive, the result of being designed for business, and they may be difficult to restrain when restraint is needed: an example of how, in effects-based warfare, there are always two sorts of effects: those that are intended and those that are not. Nor can A.I. be trusted with making moral or legal judgements, it could not, for example, carry out a proportionality test since such a test is highly subjective and based as much on art as on science. Any General who allowed that responsibility to pass from his hands would still be accountable for the consequences of any actions taken, in that blinding glare of the legal and media environment. If A.I. were to be allowed to replace the human factor in command then the logical conclusion is war between *opposing* A.I.-led forces, in ungoverned space. If, in such a situation, A.I. were to harness control of the means of war in space, the cyber and nuclear domains and combine them with nanotechnologies and biotechnologies, then the results can only be guessed at – but such a proposition marks the end of generalship as we have understood it.

²⁵ Anthony King (2019), *Command: The Twenty-First-century General* (Cambridge, C.U.P.).

²⁶ See, for example, Jonathan Bailey, Richard Iron and Hew Strachan [ed] (2013), *British Generals in Blair's Wars* (Farnham, Ashgate Publishing Ltd), Chapters 1, 5, 6.