



MINISTRY OF DEFENCE

Ministry of Defence

Strategic Trends Programme **Future Character of Conflict**



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The Future Character of Conflict

1. **Introduction.** There are a number of options available to a government seeking to achieve its policy objectives. These options include the use of soft and hard power involving activities across the diplomatic, economic and military levers of power.¹ This paper seeks to describe what military forces are likely to experience in future conflicts, and provides pointers to those areas which will be essential to their success. Conflict follows a natural cycle of adaptation and response, but its evolution is neither linear, nor constant.² Much in the last Defence Review remains valid. However, while we have adapted well to some of the demands of current operations there is a growing sense that aspects of Defence are out of phase and lagging; we are still optimised for the conflicts that we fought in the past. Future conflict will be increasingly hybrid in character. This is not code for insurgency or stabilisation, it is about a change in the mindset of our adversaries, who are aiming to exploit our weaknesses using a wide variety of high-end and low-end asymmetric techniques. These forms of conflict are transcending our conventional understanding of what equates to irregular and regular military activity; the 'conflict paradigm' has shifted and we must adapt our approaches if we are to succeed. From the evidence collected for this paper, it is clear that the challenges of the future will demand even greater institutional agility in the face of major resource constraints and some profoundly worrying indications that the West may be losing the initiative in terms of dictating the way war is fought. This paper, which draws upon the recently updated National Security Strategy (NSS) and the Department for International Development (DFID) White Paper, will offer a view on the future character of conflict and then identify the broad implications.

2. **The Challenge.** There are several dilemmas facing a Defence strategist today. On the one hand, conflict is a chaotic, human activity, in which the adversary gets a vote; surprise, even shock, are features of this strategic landscape. On the other hand, Defence planning for conflict involves aligning policy and resources, and has to be a rational process. The planning cycle involves committing substantial resources well in advance based upon long range forecasts. Conflict's inherent unpredictability has traditionally been mitigated by spreading risk. Such hedging has been managed in different ways, including the maintenance of a range of balanced forces. This approach may be challenged by the growing pressure on resources and the increasing span of conflict. The first task of the strategist is to understand the



specific problem. In the past, analysing the nature of the problem was relatively simple in that the adversaries were well defined and this provided a relatively sharp focus. However, future conflict will take many forms and the picture will be increasingly blurred. The second task of the strategist is to achieve an asymmetric edge, so that at every level we can maintain a capacity to shape events and seize the initiative, or respond to the unexpected. In the past, the Western way of warfare put a high premium on technology to deliver the edge. From 2020 this can no longer be assumed; indeed, some of the technology on which we base our way of warfare to project and employ power is already vulnerable. The third task of the successful strategist is to allocate resources in order to achieve decisive effect, and when resources are short, to decide where and how to take and mitigate risk. This paper will argue that the UK needs greater capacity to understand emerging conflict, and then greater institutional agility to anticipate, learn and adapt under diverse mounting pressures. Professor Sir Michael Howard warns:

‘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’.

3. **Scope.** This paper briefly sets out the global and national strategic context for Defence. It then analyses trends in the character of conflict (with snapshots at the 5 and 20 year points) drawing deductions. It concludes by outlining the broad implications for Defence.

4. **Assumptions.** However, this paper is based on 6 broad assumptions derived from current policy:

- The UK has significant global interests and will therefore wish to remain a leading actor on the international stage as a permanent member of the United Nations Security Council (UNSC), a nuclear power, a key member of North Atlantic Treaty Organization (NATO), the European Union (EU) and other international institutions, irrespective of the potential for its power base to decline.
- Defence will be the Nation’s ultimate insurance policy. We cannot rule out the re-emergence of a major state-led threat, but in the foreseeable future, there is no state with the intent and capability to



threaten the UK mainland; threats are more likely to be manifested in less traditional, non-military domains. However, the sovereignty of some of our Overseas Territories will still be subject to territorial claims by other states, which will seek to exert pressure on them through some or all of diplomatic, economic or military means.³

- Future planning will be conducted against a background of finite financial resources while the military purchasing power of potential competitors is increasing and their pace of adaptation is outstripping ours.
- Our adversaries are unlikely to engage us on our terms and will not fight solely against our conventional strengths. They will seek an asymmetric advantage and some will employ a wide range of warfighting techniques, sometimes simultaneously in time, space and domain. Their logic will not necessarily be our logic and thus our ability to understand adversaries – and our ability to make them understand our intent – will be challenging.
- Since final resolution of conflict will involve people and where they live, strategic success will often, but not exclusively, be achieved through the results of actions on the ground.⁴ These actions are unlikely to be purely military although it will be vital for the UK to achieve military effect both on the land and in the global commons.
- The UK will act with others where shared interests and values coincide. We will routinely operate with allies and partners, in particular as a supporting partner in a US-led coalition. It is extremely unlikely that the UK will conduct warfighting without US leadership, but in other operations the UK may be called upon to lead a non-US coalition.



Context – The Threat Drivers

Deductions from Context

- Global trends indicate increasing instability and growing opportunity for confrontation and conflict. In particular, the changing dynamic between the major powers will influence how the UK prepares to fight. Globalisation will accelerate the pace of change in the character of conflict, and create a 'Global Joint Operational Area'.
- State failure will be one of the dominant, defining features of future conflict. Preventative engagement may help to mitigate the occurrence and consequences of state failure if the military instrument is used as an integrated element of UK 'smart power'.
- The access to resources (energy, food or water) will drive states' security interests; control over these resources and their methods of distribution through the global commons will be a critical feature of conflict in the international system. It may dictate why we fight, where we fight and thus how we fight.
- Extremist non-state actors, particularly al-Qaeda and its associates, are likely to remain a significant threat to the UK and its allies.
- The future character conflict could result in the UK having less discretion than may be assumed. We may be obliged to engage in conflict and, once engaged, we may not always control the manner in which we fight.

5. **Summary of Context.** Setting aside strategic shocks and acknowledging Professor Sir Lawrence Freedman's observation that 'the extraordinary may not necessarily be the most distant', it is still possible to assert, with a fair degree of confidence, what the dominant threat drivers are likely to be out to 2029. These are covered in more detail in Annex A and are summarised as follows:

- **UK Geo-Strategic Perspective.** The UK will retain multiple global interests with inextricable ties to Europe and North America. In this sometimes uneasy triangular relationship, it will be necessary to maintain a position of balance as the US-Chinese and EU-Russian relationships develop.



- **Climate Change.** Climate change may create instability, especially in those states that are already vulnerable to other pressures. UK Armed Forces may need to operate in areas of climatic extremes.
- **Demography.** The world's population is rising and this will lead to increased demands for resources. Some states will regard the security of their food and water supplies as issues of national survival and will act accordingly. Within the UK, a changing demographic balance towards a more multi-ethnic society means that some conflicts will create risks, including extremism, within our own communities.
- **Globalisation and its Impact.** The UK will continue to rely on globalisation for its prosperity.⁵ Globalisation requires cooperation, and this will have a stabilising effect, but it also creates tensions and, in some cases, these will be a driver of instability and conflict. The physical and virtual networks that support globalisation, known as the global commons, will have to be protected and this may reduce the level of discretion for the UK.
- **Energy Resources.** By 2029 there is expected to be a considerable increase in demand for energy. The UK will be critically dependent upon energy imports and securing them will be non-discretionary.
- **Failed and Failing States.** States that cannot adapt to the changing global context will risk collapse, and many such failures will be accompanied by substantial outbreaks of violence. The poor governance, economic deprivation and inequality that characterises failed and failing states is likely to spread to neighbouring states. The UK may feel compelled to act decisively to restore stability or, at least, to contain the impact of instability.
- **Ideology.** Ideological movements, based on religion and identity, will remain a significant factor and people will continue to fight for their beliefs. Ideology will not be geographically bounded.

6. **UK Defence Resources and Funding.** Although it is difficult to make financial predictions, we will need to address cost increases above the Gross Domestic Product deflator (including manpower associated costs), and be prepared to consider choices within a defined financial envelope. Such



choices may include: quality versus quantity;⁶ the level of contribution in coalition/alliance scenarios; scales of effort; concurrency assumptions; as well as infrastructure, estates, training and support.

Themes in Future Conflict

Deductions from Themes in Future Conflict

- Future conflict will not be a precise science: it will remain an unpredictable and uniquely human activity. Adversaries (state, state-proxies and non-state) and threats (conventional and unconventional) will blur. The range of threats will spread, with increased proliferation of Weapons of Mass Destruction (WMD), cyberspace, and other novel and irregular threats.
- Even during wars of national survival or the destruction of WMD, conflict will remain focused on influencing people. The battle of the narratives will be key, and the UK must conduct protracted influence activity, coordinated centrally and executed locally.
- Maintaining public support will be essential for success on operations. Critical to this will be legitimacy and effective levels of force protection.
- Qualitative advantage may no longer be assumed in the future. Some adversaries may be able to procure adequate quality as well as afford greater quantity, whereas we will be unable to mass sufficient quality or quantity everywhere that it is needed.

7. **Conflict Themes.** Some conflict themes are enduring and will apply in both 2014 and 2029, and beyond. It is quite possible that there will be profound shifts in the way war is fought over the period but unlike in the 1990s there is no defining Revolution in Military Affairs (RMA) paradigm on offer in the West. Indeed, there is clear evidence that it is our real and potential adversaries who are thinking and adapting in a more revolutionary way.

8. **The Fundamental Nature of Conflict.** The fundamental nature of conflict is enduring. It will remain a violent contest; a mix of chance, risk and policy whose underlying nature is both human and, at times, apparently irrational, making its character inherently volatile. Conflict may be an agent of policy,



but once engaged, conflict can shape policy. Conflict will remain the realm of friction and uncertainty. It has features we will always struggle to control, and (due to smart, adaptive adversaries) it will, at times, force us to respond in ways we do not expect. The initiative is not a given and we must expect casualties, possibly in large numbers. While we have no alternative but to compartmentalise and rationalise conflict to make informed resource planning choices, we must do so aware that in reality, due to its fundamental nature, it is not easily disaggregated into finite constituent military tasks. Our engagement will change the conflict in ways that we may not be able to predict or fully control.

10. **The Evolving Character of Conflict.** The form conflict takes evolves. The information-age RMA spawned concepts like rapid effect leading to a belief in the late 20th Century and the early years of the 21st that the West could define war in its own terms, as exemplified, it was argued, by the defeat of Saddam Hussein.⁷ Much of our current capability and thinking about warfare dates from this RMA. There have been many benefits, including Network Enabled Capability (NEC), on which we increasingly rely. However, the RMA was not a complete solution to the problems of warfare in our time; it was unable to lift the fog of war or provide us with the means for decisive effect in every case. Smarter adversaries have adapted to counteract the Western preferred way of warfare. The US has realised the limits of this transformation and the belief it could limit the use of force to warfighting. It has re-learned that war is an adaptive system, not a check list of military tasks.

*'As we have seen, adversaries are studying the American way of war and will develop methods to challenge our established and often predictable preoccupation with the science of warfare and speedy recourse to precision fire-power, materiel, and money as the answer to operational challenges.'*⁸

The rapidly evolving character of operations in Iraq and Afghanistan should not have surprised us; this was entirely representative of what we should have known about our craft, but it appears to have been partly obscured by a wave of RMA-induced hubris after the Cold War. Those conflicts are neither exact models for every possible future war, but nor are they atypical in that both have re-taught us that the enemy gets a vote.



11. **Why We Go to War.** The motives for engaging in conflict have been described using the concept of fear, honour and interest.⁹ 'Force for good' (honour) was used to justify major discretionary UK military engagements after Mr Blair's Chicago Speech in April 1999.¹⁰ In the future, the UK may actually be more likely to use the military instrument for reasons of fear and interest and this may limit our discretion. For example, the UK may have to take action where it fears an aggressive state or non-state actor armed with WMD, or where our national interest is challenged by threats to resources. In any case, as the above analysis suggests, the hard distinction between fear, honour and interest may no longer be applicable to the conflicts in which we engage. The purpose of Armed Forces is to do what no other elements in the broader national security framework can do, that is to fight to protect those things that, as a nation, we consider to be essential to our way of life. Faced with a broader proliferation of threats, and a growing list of challenges to the UK, we may not choose to intervene in all cases. We may wish to consider a significant investment in preventative action, recognising that we may be required to fulfil this role concurrently in a number of widely dispersed areas. This should reduce the possibility of conflicts escalating into larger wars that would consume significant resources, and it could also provide a wider range of options to the Government. The spectrum of preventative activity, and the resources devoted to it, may require a refocusing of priorities within Defence. Should prevention fail it is important to recognise that once forces are committed, achieving success, however defined, will be non-discretionary and that political choice at this point usually becomes more restricted. Furthermore, it is clear that in the future, the precise character of any given conflict will evolve once we are engaged, due to the internal, competitive dynamic that comes into play.

12. **Partnerships and Alliances.** Partnerships, both formal and informal, offer significant potential benefits in terms of cost and capability, and as such are a potential strategic edge. They will operate through a shared perception of risk and reward, but will come at a price. This price can be financial, such as having to provide Command and Control (C2) infrastructure and training to our supporting partners, or it can be strategic in that partners may expect to influence our decision-making, in much the same way that we seek influence with the US through partnership. Some crises, in the context of our alliance partnerships, will result in the UK having less absolute discretion than it would wish in the frequency, location and duration of future commitments and this too will impact where and how we fight. Our choice of partners is likely to



grow and the weight of reliance we put on partnership as a core concept should impact the choices we now make. For example, the UK could concentrate its resources on certain areas and rely on partners to provide the full spectrum of capabilities. This approach would affect the dynamic of our relationship with our partners, and particularly the US. More clearly identifying what our partners (especially the US) require of us and what we are willing to offer in return, will better allow us to focus on the practicalities of interoperability. We need to recognise better the dynamics and limitations of partnership, in the same way that we now seek to understand how deterrence operates.



Partnerships as a Potential Strategic Edge

13. **Legitimacy.** All warfare requires the political support and consensus of the people in whose name it is waged. This is particularly important in a prolonged war; unfortunately it is very difficult to predict the duration of a conflict. The UK will look for strong justification in law, whether national or international, ideally backed by a UNSC Resolution. Our adversaries may be less constrained and demonstrable force protection will be required if we are to maintain public support. The changing balance of power in international organisations will heighten the tension between the ability for the UK to



achieve international legitimacy and the imperative to act quickly. The use of military instruments will only be viable once events have been correctly attributed through objective evidence, providing a strong basis in public support and taking that case to Parliament. Achieving this degree of internal legitimacy will take time, due to the likelihood that Parliament will require a UNSC Resolution; itself something that may become increasingly difficult to achieve when factors such as increasing global interdependence, for example in resources and financial markets, have to be taken into account. The result is that in future conflicts the UK is likely to be starting from a position of disadvantage in terms of military initiative. In order to confuse the international community both state and non-state adversaries may seek to obscure their involvement and we will need far better situational understanding, including near real time forensic attribution. Again, the requirement to build a compelling political case for action will inevitably eat into the time available for crisis management. Delays in decision making will impact operational tempo, putting a premium on more agile decision-making structures and processes, both nationally and within the alliance: these processes must be routinely exercised if only to demonstrate resolve. However, public attitude to legitimacy could be changed by an event – such as a Mumbai-style atrocity – designed to provoke a reaction. In such cases, robust advice on the limits of the military instrument will be key. Responding to the scale of the risk posed by the growing range of state and non-state actors will be one of the most difficult challenges for the international community, particularly legitimising responses to WMD proliferation.

14. **Weapons of Mass Destruction.** Proliferation of WMD, amongst states and non-state actors, will be a central, enduring cause of conflict. The risk of Chemical, Biological, Radiological and Nuclear (CBRN) use will endure; indeed increase, over the long term. The strategic anxiety and potential instability caused by CBRN proliferation is typified by international frustration over Iran and North Korea, with the risks of pre-emptive action and regional arms races, and where soft power alone has not been notably successful. Although nuclear weapons remain a 'game changing' factor we should not wholly fixate on this issue; while states are unlikely to stockpile Chemical and Biological (CB) agents, a small number of countries are likely to retain the ability to manufacture and mount offensive CB programmes. International terrorist groups may also acquire CB and radiological weapons. As WMD proliferate, more states are likely to weaponise systems, either to deter opponents or as instruments of power in their own right. Attempts to control



or counter proliferation have not all been successful. In responding to proliferation in a crisis, we will face a tension between the military logic for the immediate destruction of WMD – given the ways in which they may be concealed or protected – and the political imperative to give other levers time to work. Ballistic Missile Defence may mitigate some of the risk, but is unlikely to remove the threat completely. Consequently, it is likely that the UK and its Forces will fight adversaries who use CBRN weapons.



Chemical, Biological, Radiological and Nuclear Proliferation

15. **The Declining Technological Advantage.** Historically, the technological advantage that we enjoyed, and on which so much of our explicit and implicit military culture rests, compensated for our lack of mass. Technology affects the way in which a force is able to fight and the credibility of that force to deter. However, the vanguard of technological development is shifting towards the commercial sector which, typically, is more agile than the military it supports, and it is moving East. Our acquisition and sustainability processes are now driven in part by what industry can and will provide. Increasingly, we will find ourselves reliant on industry for support, both in the home base and in theatre, if we are to be adaptive. Adaptation is not,



however, the preserve of developed states. Some seemingly inferior adversaries will be able to achieve tactical success because their access to alternative sources of technology will improve, their rate of adaptation will be faster than ours, and their costs will be significantly less. We should expect increasing challenges to our technical superiority; *'Procurement programs that take decades may be obsolesced in an afternoon by new technological innovations'*.¹¹ Responding to this will require an agile acquisition and support network capable of responding to changing operational needs. There is a sense that the West is currently too equipment-focused; in the future we may have to rely more on our people to provide an edge; this will require far greater investment in selection, training and education.

16. **The Centrality of Influence.** If the character of the last military era was defined by the West's ability to conduct precision strikes on enemy platforms and command nodes, the conflicts of the future are likely to be defined more by the centrality of influence. Our adversaries have already recognised the strategic importance of influencing public perceptions and will continue to develop and use increasingly sophisticated methods. This battle of the narratives, which is not just a matter of improved public affairs, will take place in a decentralised, networked and free-market of ideas, opinions and even raw data, which will weaken the immediacy and influence of mainstream news providers. Breaking events will be increasingly transmitted directly to individuals at ever higher tempo, often without government or editorial filters, or legal sanctions and safeguards. Although the 'propaganda of the deed' is well established and



Centrality of Influence

frequently demonstrated, modern technology will amplify shock action. In a contest of competing narratives, news will break faster than a government or



established media network can react. Greater transparency heightens the risk of turning inconsequential military incidents into strategic events. To win the battle of the narratives, UK Defence must be able to wield influence at all levels, across multiple media, within joint, multinational and interagency environments at much higher tempo than now. This includes an ability to rebut adversary propaganda but, crucially, argues for the UK adopting a coordinated but less centralised and more proactive approach.

17. **Hybrid Adversaries and Threats.** In future conflict smart adversaries will present us with hybrid threats (combining conventional, irregular and high-end asymmetric threats) in the same time and space.¹² Conflict could involve a range of trans-national, state, group and individual participants who will concentrate and operate both globally and locally. In some conflicts, we are likely to see concurrent inter-communal violence, terrorism, insurgency, pervasive criminality and widespread disorder. Tactics, techniques and technologies will continue to converge as adversaries rapidly adapt to seek advantage and influence, including through economic, financial, legal and diplomatic means. These forms of conflict are transcending our conventional understanding of what equates to irregular and regular military activity; the conflict paradigm has shifted and we must adapt our approaches if we are to succeed. In the 2006 Lebanon War, Hezbollah conducted its operations in a way that stunned the Israeli state. The shock of failure was felt in the Israeli Defence Forces (IDF) from the tactical to the strategic, and it has had a profound impact on US joint thinking. The acquisition by such hybrid adversaries of highly capable equipment, even in limited numbers via an under-regulated arms trade, will cause a disproportionate level of disruption and affect our freedom of action in all environments. Truly adaptive adversaries will also seek to play our own media and political systems to their advantage and they will adjust their tactics accordingly. In short, military success will be exported rapidly. Some argue that this is not a new phenomenon. However, it is clear that a range of responses will be required. The West is now reacting to our adversaries' attacks, rather than setting the agenda; if we are to regain the initiative, and win, we will have to operate in a different asymmetric or hybrid manner that can give us an edge against our enemies. To do this we may have to adopt responses that may well be currently unfamiliar to us, and some we do not understand particularly well, for example: prevention, stabilisation and cyber-operations.





Concurrent Inter-Communal Violence, Terrorism, Insurgency, Pervasive Criminality

18. **Increasing Interdependence.** A potential strategic edge is an integrated UK response to this complex environment. A more comprehensive or 'super-joint' approach, if it can be made to work, would allow the full range of state instruments to be brought to bear. Technical solutions to enable coordination between elements of a comprehensive approach will be essential but insufficient on their own. Success in this area of 'super-jointness' will require enlightened people who can advocate and enact the required changes. They will have to be resourced and empowered to find solutions and they will have to be given strong incentives to succeed. This may require more radical change across the national instruments of power, not to merge them, but to amplify their combined strategic effect. Within the military sphere, operations within any one environment will become increasingly dependent on cross-component capabilities. To achieve the required effect in a complex environment, further operational and tactical decentralisation, such as air/land/maritime integration at far lower levels, will be required. A comprehensive approach, which is a potential, although latent, edge will be a vulnerability, unless there is a systemic change that allows us to operate as one team.



Conflict in 2014

Deductions from Conflict in 2014

- Notwithstanding current operations, the number of conflicts affecting UK interests is likely to increase. Conflict will 'blur' and for all environments the battlespace will, contrary to RMA assumptions, be more and not less congested, cluttered, contested, connected and constrained.
- The UK must develop capabilities associated with Space, Computer Network Operations (CNO), Directed Energy Weapons (DEW), CBRN defence, non-lethal weapons, and other novel weapons.

19. This section addresses the additional characteristics of conflict specific to the 2014 timeframe. The traditional description of a spectrum of conflict, ranging from general war through to humanitarian assistance, implied discrete types of conflict. This linear analysis is unrepresentative of the contemporary and future operating environments. The idea that the UK could benchmark against general war and then ramp down for so-called lesser cases, will by 2014 be a flawed approach. In 2014 conflict may better be categorised as a mosaic of adversaries, threats, and responses. Our adversaries will comprise states, non-states and proxies; they will cooperate where they see mutual benefit, although no one element will have absolute control over the others. The threats they present us could certainly include an inter-state war but such a war may not occur in isolation, rather it will form the framework around which a wide range of threats, such as destabilisation, insurgency, cyber-attacks and crime, will coalesce. However, these latter threats could also occur in isolation.

20. **Probability of Conflict in 2014.** Despite the recent reduction in overall global conflict, there is a high probability of the UK being engaged in conflict in 2014.¹³ If the UK is still substantially engaged in Afghanistan in 2014, this will not only define the character of conflict for the Armed Forces but also limit our ability to engage elsewhere. Looking more broadly, a change in the strategic balance out to 2014 is unlikely: China will be the rising power, but the US will still be hegemonic. The direct military threat to the UK and its sovereignty by a hostile foreign state out to 2014 remains low, although



Overseas Territories are at a higher risk. Any state threat to the UK will be dealt with collectively under NATO Article V. State-on-state conflicts that do not directly involve the UK may have significant second order impacts on UK interests. However, the major threat to UK security in the short-term will be from non-state actors operating from, or within, failed or failing states.¹⁴

These also tend to be the location of intra-state conflict which, due to wider international interests, may draw states into direct confrontation. For example, the limited intervention in Afghanistan has become an enduring stabilisation mission with regional and global implications. Success, however defined, in Afghanistan is essential; even a perception that the UK has lost would affect our credibility in future operations, and credibility is vital for the strategic reputation that underpins deterrence.

21. **Adversaries.** In 2014 our adversaries – state and non-state – will know that to confront the US and its allies in a conventional, force-on-force fight will be to lose; as Professor Colin Gray has said,

“If an enemy chooses, or has no practical alternative other than to wage warfare in a regular conventional way, US air power will defeat it long before US ground power comes into contact.”¹⁵

This process of enemy adaptation is already well underway, and so is the US response. Adversaries will avoid engagements that play to Western strengths; for instance, they will seek to deny us access to theatre, using all the political and military levers that they can deploy. They will also seek to disperse into an increasingly complex battlespace, including amongst the people and below ground, where we will struggle to dominate. The human terrain, and its associated linguistic, ideological, tribal, sectarian and ethnic features, will remain highly complex. These differences will require us to think in a new way about UK capabilities; things that have been regarded as supporting or enabling functions such as deep cultural understanding (which includes fluency in languages), Human Intelligence or Civil-Military Cooperation will, in this environment, be battle-defining. It will be increasingly difficult to distinguish groups of adversaries from one another, either by their appearance or through the equipment and tactics that they use. Adversaries may also look to make conflict expeditionary and our approach to homeland security will need to develop accordingly.



Adaptation: Evidence of State-Based Asymmetry

Both Iran and China offer excellent but differing examples of a state's response to the traditional military threat posed to them by the West.

Iran, having weathered the bloody stalemate of its war with Iraq, has refocused its military efforts in a bid to avoid the strengths of its Western opponents. While still aspiring to be the dominant regional power, and to that end retaining major combat forces and a nuclear and missile development programme, they have avoided areas where they are likely to be overmatched by the West. Areas such as air superiority and conventional naval competition have been abandoned and alternative systems have been developed, such as the combined use of submarines, mines, shore batteries, missiles and a wide variety of heavily armed small craft, all of which have been integrated so as to neutralise the more capable warships of the Western navies within the Persian Gulf and put both Theatre access and bases at risk. However, to fully exploit the attributes of hybrid and asymmetric warfare they have trained, equipped and financed, amongst others, the Hezbollah organisation which has proved extremely difficult to counter and has constantly provided Iran with ideological leadership of the region at little cost or risk. Iran has closely examined the abilities of the West and has tested its high and low-end asymmetric tactics. It will continue to incorporate innovative conventional and novel capabilities, as well as utilising the increasingly effective weapon systems purchased from Russia and China.

China has followed a different course and has moved away from the concept of massed armies formerly used to counter the Soviet conventional threat and Western military superiority. In order to meet contemporary threats it has developed a major cyber-warfare capability and an anti-satellite programme, these combined with its nuclear programme are seen as major elements in its drive to become a world power. The Chinese military have closely studied the Western way of war and have critically examined Western campaigns in Kosovo, and both Iraq conflicts and have developed strategies that aim to counteract US and allied strengths. These techniques are likely to include disrupting or destroying US C2 nodes and neutralising US sea and land operating bases; the Chinese call this approach 'the assassin's mace', and it uses all the instruments at the disposal of the state in order to raise the costs of any US action to prohibitively high levels.



Additionally, in pursuit of its regional aspirations, China has mechanised and digitised its land forces while attempting to create a blue water navy and a technically competitive air force, thus creating the ability to project conventional power, against other states, within the region. Although both states have adopted different responses in detail, we see in each, examples of high and low-end asymmetry being fielded to circumvent Western military strengths and threaten our vulnerabilities.

22. **Extremist Non-State Actors.** Extremist non-state actors will range from state proxies through to single-issue interest groups or trans-national criminal gangs. The merging of state proxies, extremist ideologies and criminal interests into a toxic cocktail, along with the effects of globalisation, such as more porous borders, will make some non-state actors harder to counteract. They could employ a wide spectrum of military capabilities, albeit some at a limited scale, but they will nevertheless be capable of innovative tactics that exploit inherent UK vulnerabilities. For example, the 2008 Mumbai attacks involved more than 10 coordinated shooting and bombing incidents; at least 173 people were killed and some 300 more wounded, overwhelming the civil authorities. Social networks will become an important feature of future conflict, and conflict in one area may more easily ignite conflict in another, in effect creating a 'Global Joint Operational Area'. Extremist non-state actors are likely to remain a significant threat to the UK. Thus the role of the military in homeland security and consequence management should be reviewed.

Adaptation – Evidence of Non-State-Based Asymmetry

Invariably overmatched in purely military terms, non-state actors have displayed a remarkable ability to neutralise the traditional powers of the state and to exploit their weaknesses. This can be seen in numerous examples, from the Irish Republican Army (IRA), through the Stern Gang and Provisional IRA, to the Taliban.

As an example, Hezbollah is an interesting case. It is a sophisticated, adaptive and successful modern non-state actor that has demonstrated the ability to innovate on a large scale. By 2006 Hezbollah had developed major political influence within the government of Lebanon. It had a wide reaching social administration throughout Southern Lebanon and a highly effective media operation based upon its own TV and radio stations. To support these, and utilising a powerful lessons learned process, Hezbollah had developed a



sophisticated strategy, one which the Israelis did not detect. Hezbollah honed its military capability using doctrine drawn from the Iran/Iraq conflict combined with training and materiel from Iran. These developments were explicitly designed to exploit the perceived weaknesses of the IDF and to ensure that Hezbollah would survive any Israeli assault for long enough to allow international pressure to restrict the IDF's actions. In the 2006 Lebanon War, Hezbollah employed an integrated strategy. They held ground, conducted limited manoeuvre, and they restricted IDF maritime access. They utilised cutting-edge anti-armour missiles (destroying or damaging approximately 50 Main Battle Tanks in the process), armed Unmanned Aerial Vehicles (UAVs), Signals Intelligence technology, anti-ship-cruise missiles, urban strong-points and deep tunnel complexes in difficult terrain which the IDF could not bypass. They evaded the Israeli Air Force and exploited an Israeli inability to conduct combined arms air/land manoeuvre. Hezbollah conducted their own deep strike operation, using surface-to-surface missiles and a comprehensive Information Operations campaign to strategic effect. Hezbollah shares its military strategy across a wide variety of our potential adversaries in near real time.

In a parallel example, al-Qaeda has inflicted relatively little physical damage upon the military capabilities of the West. Its success lies mainly in its expert exploitation of the ideological and information arenas, where Western governments are ill-prepared, combined with its ability to survive despite the most determined efforts of those governments to destroy it. For many non-state actors, including Hezbollah and al-Qaeda, survival represents success. Success for their opponents is far more difficult to define; however, Special Forces acting in concert with other government agencies have been able to disrupt their networks, as in the case of Iraq.

23. **The Impact of New Technologies.** By 2014 threats that are new to most of us (but which are, in some cases, already very real) will be impacting the character of conflict. Space is a critical enabler in modern society, and it is a domain in which technology is proliferating and the environment is becoming contested. CNO against UK Defence are already a daily reality and will have grown markedly by 2014. CNO are a leveller, with Western forces being, for instance, very dependent on civilian information structures, which, along with our reliance on commercial logistic infrastructure may provide opportunities for less technically-advanced, but cyber-savvy adversaries to hit us where it hurts at relatively little cost to them.¹⁶ CNO may be used in conjunction with



traditional kinetic and DEW to achieve strategic to tactical effect. Our military and civilian applications will become increasingly blurred and these systems may be susceptible to DEW. Unmanned systems will become increasingly capable and autonomous but in most cases they will not have replaced the human. There will also be an increase in the use of non-lethal weapons, particularly in situations that may preclude other forms of force.



Unmanned Systems Increasingly Capable

24. **The Battlespace in 2014.** There are likely to be certain defining characteristics of the joint battlespace in 2014. The RMA assumed it would be less dense: the opposite has been shown to be the case. In future conflict we may be forced, through strategic imperative or operational necessity, to engage our adversaries in areas that reduce the effectiveness of our capabilities and confer an advantage to indigenous combatants. Each of the environments maritime, land, air, space, information (including cyberspace) and electromagnetic will be affected differently, and will be inter-linked and



porous, with activities in one having effect in others. The current construct, of sea, land and air fails to capture the emerging environments, such as the deep ocean, space, underground and cyberspace, and it fails to expose the environmental seams along which our adversaries will attack. The following features characterise the future battlespace:

- a. **Congested.** Historically, in a conventional context, the UK Armed Forces have usually sought to avoid congested battlespace when we were trying to achieve freedom to manoeuvre. While we will continue to seek to dictate the terms of battle to our adversaries, our choice in this regard will not be absolute. We will need to bring military effect to bear where it will achieve our strategic goals, not just where it suits us. In the future, we will be unable to avoid being drawn into operations in the urban and littoral regions where the majority of the



Operations in the Urban Environment

World's population live and where political and economic activity is concentrated.¹⁷ The ground will often be densely populated, possibly with dissatisfied and disadvantaged people, many of whom will be armed. The maritime environment will contain large numbers of vessels, busy shipping-lanes, choke-points, ports, canals and waterways. The airspace will be similarly congested with the diffusion of technology leading to a proliferation of friendly, hostile and non-aligned airspace users, including unmanned aircraft. The proliferation of space-based assets, exemplified by the independent launch capabilities of countries such as Iran, and the greater commercial use of satellites will serve to make orbital space increasingly congested. The electromagnetic and the information (including cyberspace) environments will also become



congested. All physical, cognitive and virtual domains will become increasingly interconnected.

b. **Cluttered.** Clutter (which leads to an inability to distinguish individuals, items or events), particularly in congested environments, will provide the opportunity for concealment and will confound most Western sensors. Our adversaries (and at times ourselves) will seek to blend into the background, but locals, with their innate knowledge of their environment will hold an advantage. Increasing requirements for legitimacy will



Clutter in Congested Environments

make it more difficult to acquire, understand, track and engage possibly ambiguous targets. As already seen in Afghanistan and the recent Gaza conflict, collateral damage will carry an increased risk. On land, the enemy will develop and exploit underground facilities, neutral spaces such as hospitals, schools and places of worship, and dense urban, populated terrain ranging from small villages through to large cities. In cluttered environments, stealth technologies will remain an advantage, but not necessarily a decisive one. In cyberspace, the ability to remain concealed while attacking at range with plausible deniability will provide the opportunity for even small hostile groups to achieve strategic effect against the most powerful adversaries.

c. **Contested.** Adversaries will contest all environments where they seek to deny our freedom of manoeuvre. Technological diffusion and the innovative use of existing technologies will underpin the challenge. On land, mobility may be denied by the use of mines and massed



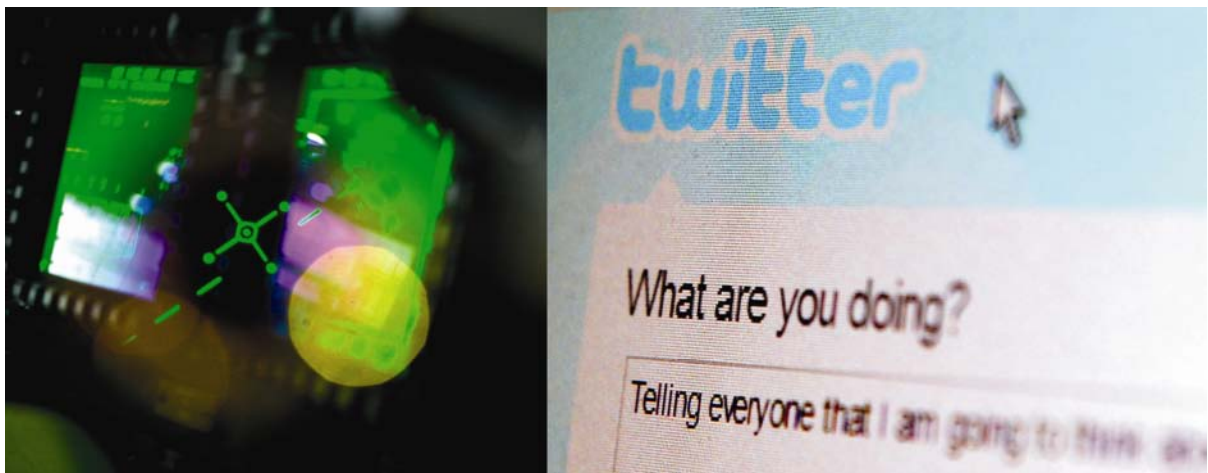
Improvised Explosive Devices (IEDs). Difficult terrain will become the contested battlespace, with adversaries seeking to hold or exploit ground for political, social and military purposes. In the maritime environment the need to operate in the littoral where there will be a proliferation of mines, anti-ship missile systems, fast-attack craft and submarine capability, will threaten access from the sea. In the air, the ability to operate, especially in the lower airspace and around air bases, will be contested. Similarly, anti-access and area denial capabilities, including the ability to disrupt satellites on which NEC relies, will have matured. Our adversaries will seek to limit our access to theatres of operation; they may do this directly, for example through the use of barrages of missile attacks, swarm attacks by UAVs, or by mining the approaches to our embarkation or disembarkation ports, or indirectly by influencing political will and public opinion. The enemy will seek to spread their influence more widely and also to threaten the UK home base. In the cyber environment, on which we are increasingly reliant, activity will be both stand-alone and also co-ordinated with military attack, as alleged in the Russian-Georgian conflict in 2008.¹⁸



Operating in the Littoral



d. **Connected.** Activity, including our own and that of the enemy, will continue to gravitate towards the inter-connected nodes.¹⁹ The nodes are centres of activity that will be threatened with attack and disruption, and will require protection and offer opportunities for exploitation. Nodes range from critical military infrastructure such as air and sea ports, and satellite ground stations, to strategic locations including centres of governance in urban areas and maritime choke points, and also where the adversaries' strategic interests are clustered, such as areas of major narcotics production and distribution.²⁰ These nodes will be of importance in all environments. Networks, such as logistics, will connect nodes by links and modes of re-supply routes, sea and air lanes of communication, and computer networks. These networks will be subject to disruption, and will therefore require sufficient robustness and adaptability to allow rapid reconfiguration. Access to the Theatre, whether physical or virtual, and which is likely to be via a node, cannot be taken for granted. In the virtual environments, both friendly and adversary forces will use the same nodes, which will be difficult to identify, protect or attack. Protection of our virtual networks against exploitation and attack will be (and should already be) non-discretionary. Physical access, on which the concept of expeditionary operations is predicated, will be increasingly contested, and this constraint can only be mitigated by substantial and protracted engagement with a wider range of potential partners.



Friendly and Adversarial Forces Using the Same Nodes



e. **Constrained.** In the complex battlespace of the future, Western legal and societal norms will place continued constraints on the conduct of operations. The increasing difficulty of discrimination between combatants and non-combatants is likely to require more extensive targeting preparation, and the legal and moral requirement to take all feasible precautions in avoiding, or at least minimising, collateral damage will lead to the greater use of precision weapons.²¹ However, the use of such weapons will still carry risk. Furthermore, concerns about the proportionality of the use of non-precision weapons are likely to lead to attempts to further minimise their use.²² The use of non-precision weapons, or the failure of precision weapons to avoid all collateral damage, while legally permissible, may generate adverse perceptions that undermine the legitimacy of operations. In particular, the view that the use of air power is a 'cruel overmatch or a blunt instrument' is likely to be encouraged by adversaries who recognise the reach, precision and utility that such technology represents. Furthermore, legal challenges may be raised against the use of novel weapons and systems, such as Unmanned Aerial Systems, DEW, non-lethal weapons and CNO. Ethical concerns are likely to result in policy constraints on the use of such technologies, and may lead to new international treaties and constraints. The application of domestic law and international human rights obligations to an armed conflict situation will continue to be debated and reviewed, and may result in unanticipated restrictions. Any legal, moral or ethical constraints, which uphold the legitimacy and legality of Western military operations, are unlikely to restrict the actions of, or be reciprocated by, potential adversaries.





Application of Domestic Law and International Human Rights

25. **UK Responses.** The range of our responses in 2014 will be restricted by current commitments and their residual impact. Where we are committed to stabilisation as a national objective, this will demand a more effective integration of all instruments of power to deliver political resolution. During this period, UK Armed Forces will operate internationally in circumstances of political or societal breakdown, and this challenge will frequently result in the potential for escalating violence. From 2014 there will be a proliferation of smaller conflicts and events that may require a range of concurrent military responses, from prevention through containment to intervention. In order to provide Her Majesty's Government with options, there will be a requirement for increased situational understanding, and judgment from our people, as well as improved cross-government, multi-agency and international co-operation. Experience shows the likelihood of new challenges in this timescale; these will warrant urgent and non-discretionary UK military responses. These responses may include: conducting humanitarian relief operations; non-combatant evacuations; dealing with imminent terrorist attacks or threats to UK energy supplies; or focused coercive actions (such as raiding by special or specialised forces). At home, Military Assistance to



the Civil Authorities, such as that being planned for the 2012 Olympics, is more likely to be required than is currently envisaged.

26. **Prevention.** Given our restricted range of response options in this timeframe, conflict prevention, through early and continuous engagement with allies and other partners, will be required to fill the gap in our capacity and provide us with the necessary agility. If undertaken, seed-corn investment now will build confidence and local capacity; will increase understanding; and may enable UK Armed Forces access to areas of operation in the future. It



Prevention Backed Up by Credible Military Force

has been assessed that £1 spent on conflict prevention generates over £4 in savings for the international community.²³ It is not, however, possible to guarantee the effectiveness of prevention and, even with hindsight, it is difficult to measure the effectiveness of prevent activities. There will, however, be an increasing requirement to become involved in prevention activity, on a far wider geographic scale, as the incidence of potential conflict hotspots increases. While such activities remain important, their low visibility within wider government circles make them vulnerable to cost cutting. However, as part of the 'super-joint' approach advocated earlier in the paper, the effectiveness and political utility of these forms of military missions may become more apparent. Prevention, including deterrence, containment or coercion, will be far more effective if it is backed up by credible military force.

27. **Deterrence.**²⁴ Deterrence is a sub-set of prevention. By 2014, the even wider proliferation of WMD and CNO capabilities will further increase uncertainty and the need to better understand deterrence in its widest sense, be it nuclear, conventional or in cyberspace. Deterrence must be credible



enough to influence the perceptions of potential adversaries regardless of their mindset. Deterrence is likely to remain effective against state actors and may also have a degree of utility against some non-state actors although it will remain impossible to deter all extremists in all circumstances. There is considerable risk that simply because deterrence does not stop all of today's threats – terrorists in particular – it may be viewed as having limited effectiveness. Deterrence is primarily about stopping high-end threats and, in their absence, it must be assumed to be effective. If it is removed the smart, adaptive adversary will simply raise his game to a higher level.



Deterrence is Primarily about Stopping High-End Threats



2020 – A Time of Transition

Deductions from 2020

- The shift in the global balance of power will challenge the UK's relative power.
- Investments now in technology could hedge against relative technology decline in UK Defence. However, technology will not reduce the demand for sufficient high-calibre, capable and motivated people. The people we deploy on operations could be our asymmetric edge. However, demography and societal trends will constrain the supply of the people we need.

The period around 2020 may see the convergence of a number of ongoing strategic trends; hence we examine it as a time of transition between the 2 snap-shots we are analysing. The most significant of these trends is climate change; unless significant measures are achieved by 2020, its impact may be impossible to contain. Also by 2020 a shift towards multi-polarity will be underway with the power of China, India and possibly Brazil rising. China's economic power will be predominant in Asia and its influence will be global. Other powers, such as Russia and Iran, will also be seeking to secure wider influence. Rising powers will increasingly dominate international organisations, such as the United Nations (UN). Furthermore, the UK's strength in Defence technology, along with many other Western nations (but probably excluding the US), may have been surpassed by these emerging powers.²⁵ Critical resource shortages may also be reached by this point with the exhaustion of some of the oil fields within the Middle East.²⁶

However, from a UK perspective, the changes in the character of conflict are likely to be driven by a combination of the shifts in global power and the realisation that, without significant additional investment, the post-1945 Defence technological and qualitative advantage will be lost; the sum of all this will require a profound shift in our military culture. At the same time an ageing population will place increasing demands on the public purse, coupled with the continued effect of the recession of 2008/2009. The result is likely to significantly impinge on the fiscal resources available for UK Defence during this period.



Conflict in 2029

Deductions from Conflict in 2029

- The struggle for control over resources and the global commons may increase the incidence of conflict. The UK will retain strategic interest in a secure and stable mainland Europe.
- Direct conflict between the UK and a major power such as China or Russia is judged unlikely.²⁷ However, wars involving the major powers or their proxies are probable. It is possible that the UK may be involved in a coalition action against a state actor possessing significant military capabilities, with the UK fighting in some cases from a position of near-parity or even relative disadvantage.
- The incidence of intra-state violence, with both state, proxy and non-state actors will remain a continuing theme. The UK is likely to be more reliant on an increasing range of allies and partners in the conduct of operations and there may need to be more specific burden-sharing arrangements.
- The battlespace will be global in both geographic and virtual space, and highly congested. All domains, including densely populated and poorly governed urban spaces, will be contested by a wide variety of actors.
- The UK will aim to influence a diverse range of allies and partners; in particular we will continue to seek influence with the US. We must, however, be clear on what we want to achieve and how best to achieve it. As a first step, we need to understand better the notion of 'junior partner influence' within an alliance.
- The US will benchmark against China as well as increasing its capacity for Irregular Warfare at the expense of some traditional, conventional military capability.

28. This section will address the characteristics of conflict in the 2029 timeframe that we assess will change from the 2014 snapshot. Military activities across the mosaic of conflict will become increasingly blurred. It could become increasingly difficult to achieve military objectives in the complex urban and overpopulated environment in which we may find ourselves forced to operate. While military defeat of adversaries will be



achievable and indeed a necessity, this in itself will rarely deliver our political goals without a far more cohesive comprehensive approach.

29. **Resources and the Global Commons.** Notwithstanding the positive impacts of globalisation which should drive greater interdependency, as resource shortages build and pressures caused by climate change create the potential for instability, the underlying tensions are likely to further increase.²⁸ Already apparent today, these pressures are likely to mount, for instance, in South Asia, where conflict could draw in other powers such as China and the US. With large South Asian diasporas, any such conflict would have a substantial internal security impact on the UK. It cannot be assumed that by 2029 the West will retain sufficient military advantage over rising powers in all circumstances, which may embolden actors where previously they had been deterred. Access to resources and the ability to move them will become an increasingly important facet of international tension and conflict. In the competition that may ensue, the UK, in concert with its partners, may be called on increasingly to secure its requisite portion of these assets.

30. **State Actors.** In 2029 there will be a growing number of states competing for access, resources and influence which, coupled with the failure of some states, is likely to result in a background of intra-state violence in Africa, Central America, Central Asia and the Middle East. Additional factors, such as religious-based extremism, can be expected to add further volatility to this mix. Rivalry may take the form of conflict between proxies, although these could remain difficult to control. Having seen the continued proliferation of WMD, many states may have developed and deployed these systems. The possession of nuclear weapons, perceived as essential for survival and status, will remain a goal of many aspiring powers.

31. **Non-State Actors.** The distinctions between state and non-state actors will blur even further. Violent non-state actors will evolve to be better able to exploit information based technologies, to influence global opinion and to disrupt communication and economic links on an even greater scale. They will have developed higher levels of lethality to counter Western forces' protection systems, and they may have access to WMD together with the will to use them. A paradox of this use of violence as armed propaganda means that, in order to achieve continued impact, these attacks will become progressively more spectacular, causing mass casualties or by creating



significant economic effects. If we are to meet the challenge in 2029 we need to understand that non-state actors are not second-rate threats.

32. **Technological Developments.** The UK's access to the technology required to overmatch adversaries, for example in counter-IED, counter-swarming UAV, anti-cruise and ballistic missile defence, may be severely eroded and may increase the political risks of intervention. Technology proliferation means we will have to contest for technological advantage by ensuring the quickest possible cycle of adaptation. Non-lethal, DEW, space and cyber technologies will be available to us and our adversaries; similarly, disruptive technologies could emerge that overturn conventional military thinking and render specific capabilities less effective or even ineffective. On the one hand, for example, high-end novel threats, including counter-space capabilities, could seriously challenge access to theatres of operation. On the other, easily-obtained but relatively low-tech light weapons will constrain our operational freedom of manoeuvre. As we look to potential responses, quality and quantity will not be binary choices; increasingly both will be required, but in most cases this will be unaffordable. As the costs of maintaining a qualitative edge increase, UK Defence must decide whether to reduce its technological edge to niche areas or maintain broader based capabilities at lower technological standards.

33. **UK Responses.** Before the UK can consider any trade-offs between quantity and quality, it must consider its changed strategic context. Because of the shifting balance of power, in 2029 alliances will be even more important to the UK. Global interests will inevitably demand multinational responses within an international rules based system. Alliances can usefully pre-define the collective security (and therefore Defence) interests and associated threats, and also our combined potential responses to them. The requirement to support stabilisation or peace support activity within volatile regions (such as the Balkans) or failed and failing states will endure, along with a continued requirement to counter non-state actors. The UK must also continue to defend its critical national infrastructure, which will remain dependent on space and cyberspace. Homeland security will be a pressing concern. The proliferation of WMD and CNO threats means that the UK must have the capability, with its allies, to deter and if necessary defend against or counter such attacks. The UK will require sufficient nuclear deterrent and conventional forces, coupled with intelligence, warning and surveillance infrastructure to counteract potential threats. Nuclear and conventional



deterrence must be underpinned by sufficient capability and intent – and be well communicated to potential adversaries in advance – if it is to credibly prevent or, if necessary, contain conflict. Defence decisions taken now will shape the credibility of future deterrence. Securing the access through, and to, the global commons will remain vital if the UK is to retain its global influence and to maintain its relative prosperity and position of power. This wide range of activities will be beyond the UK's own resources and, therefore, it will have to work in close cooperation with partners, but it will also need sufficient conventional military power to underpin its diplomatic maneuvering and to retain influence within any coalition.²⁹

The US Perspective

The US is the pre-eminent military power and is likely to remain so out to 2029. It will retain the widest range of capabilities within its Armed Forces, from nuclear strategic forces, through conventional maritime, land, air and space capabilities, to forces now being reconfigured for Irregular Warfare. However, despite its considerable spending on its Armed Forces, it will have to prioritise to achieve the maximum defence and security effect.³⁰

Whereas US planning in the 1990s focused on deterring and defeating regional adversaries through major contingent operations, Secretary of Defense Gates has indicated prior to the 2009-2010 Quadrennial Defense Review that the US believes it needs to re-balance towards those adversaries pursuing new capabilities and concepts. These are, on the one hand, non-state adversaries and less well-off states embracing irregular options requiring counter-insurgency, counter-terrorism and stabilisation responses, and on the other hand wealthier states fielding complex high-end asymmetric threats, such as anti-access, area denial and nuclear weapons. Some states may do both. The form, degree, and duration of US adaptation is still to be decided; however it is likely that all Services will see a greater commitment to these threats.

The US will respond to the growing challenge from China, and possibly other emerging powers. The US will still be engaged globally, although with an increasing emphasis on Latin and Central America as well as the Western Pacific. A significant change in the longer-term will be that the US, and by



implication the West's qualitative, as well as quantitative, superiority in weapons systems and armed force may be under severe pressure. The US will increasingly look to partner states for support. Partners will best assist by saying what they are going to do, then doing it, and doing it well.

A Chinese Perspective

Reading Chinese strategic intentions is difficult, not least due to the lack of data. China believes it is 'the rising power' and while it believes in 'harmonious development' it will become increasingly forceful as an international player, while playing the long diplomatic game with increasing sophistication.

China's modernisation of its Armed Forces, conventional, unconventional and nuclear, is aimed at countering any perceived US, Indian or Asian threat and, by 2029, will have developed its power projection and maritime security capability. It is readying itself to be able to fight 'High-Tech Local Wars', to deny US access and keep them at arms length. China realises that military hard power is an essential part of achieving its longer-term goals. China is already operating globally – it will use its military, economic and diplomatic power, to secure both resources and its share of the global commons. It wishes to achieve recognition as a global power, and in the longer-term, will seek parity of influence with the US.

China is likely to represent the most capable potential adversary for the US.

Broad Implications from the Future Character of Conflict

34. **The Utility of the Military Instrument.** The future character of conflict will challenge military forces structured and prepared for industrial-age war between global superpowers. Conflict is evolving, but it is not getting any simpler; the range of threats is actually expanding. Expanding our range of responses accordingly will be demanding without significantly more resource. The military instrument must be configured to deliver broad utility and we must better understand that the military instrument alone can rarely, if ever, deliver decisive strategic effect. Enduring success will invariably require the careful integration of all levers of national power. Shifts in relative power may also contribute to a further decline in the UK's strategic advantage, which will undermine some long-held fundamental assumptions about success in military ventures. Given current trends, we could over time lose the strategic,



operational and tactical initiative that we have perhaps taken for granted because of our historical qualitative and quantitative advantages. Contrary to some perceptions, this shift will happen in a period in which we will have to defend, or at least secure, our national interests.

35. **Uncertainty in Planning for Future Conflict.** Conflicts have their own dynamic that notions of discretion tend to understate. Adversaries are already adapting fast to the West's preferred way of war. If it is accepted that conflict is diversifying, then we need to review the utility of some of our traditional tools. Defence planners necessarily align concepts, resources and policy using an empirical process. This compartmentalisation of warfare risks misrepresenting the interconnectedness and interdependency of different military activities once a force is engaged. There may be a requirement to adapt the capability-based approach to embrace wider threats. Dealing with diverse and adaptive threats may demand more investment in high-calibre people, educated and trained to a new bench-mark. The US and Israeli forces have made this step change.

36. **Partnership.** Alliances are a relatively strong form of collective defence and offer the best chance of spreading the load in future conflict. The range of partners with which the UK wishes to operate is likely to grow. In the absence of formal, binding alliances, informal partnerships in areas where the UK has core strategic interests will be of increasing importance in order to provide the benefits of: collective security; burden sharing; confidence building and conflict prevention; promoting situational understanding; role sharing; and – critically – to enable access. Notwithstanding this approach, the UK may have to retain sufficient military capability to conduct an independent military operation in defence of its overseas territories. Effective partnership in future conflict will require enduring engagement to build understanding and capacity. Partnership will be contested and it does imply a degree of pre-commitment; and in some cases we will be seeking the same partners as our competitors. To make partnership work we will need to ensure cross-Defence Lines of Development³¹ interoperability with an increasing range of partners (for example the African Union and Private Security Companies), across all environments and at increasingly lower levels. While NATO has been a significant defining factor, informal regional partnerships, which come at a relatively low price, are an area where we should invest significantly more. One of the primary reasons we have sought partnerships, especially with the US, is to maximise the gearing that may



achieve influence, allowing the UK to 'punch above its weight'. Evidence of the actual strategic influence achieved is ambiguous, and we need to be pragmatic as to what can be achieved.

37. **Prevention.** Prevention is better and cheaper than cure. The UK should invest more in this area. However, prevention has practical limits. It is also difficult to quantify and investment here does not guarantee that we will be able to avoid conflict altogether. Indeed, soft power is at its most convincing when underpinned by hard power.³² Prevention requires timely, informed decision making (optimised through frequent practice) and the ability to act and react faster than the situation is unfolding. However, experience indicates that none of these can be assumed. Prevention, if it is to be credible, needs early investment and protracted engagement.

38. **Deterrence, Containment and Coercion.** Deterrence is, and will remain, fundamental to the UK's approach to conflict; if it fails, containment or even coercion may be required. These strategies rely upon clear signalling and mutual understanding of escalation and risk. However, they are presently focused on state threats. While they are likely to remain effective in many cases, the proliferation of WMD and novel threats, such as CNO, from both state and non-state actors, challenges the application of the underlying theory and force structures for conventional deterrence. Without much improved insights into how and what the adversary thinks and what will deter him, conventional deterrence will become more difficult. Counter-proliferation in the future will need to be far more robust and intrusive. Every capability choice and demonstration of intent we make now and in the future will shape the credibility of UK deterrence. Conventional deterrence, containment and coercion theory can thus be brittle in its application. Therefore, our strategic calculus will be more complex, making it increasingly difficult for the UK to wield its power.

39. **Future Operations.** We should expect that operations will be increasingly interdependent. It will therefore be necessary to seek closer joint integration. Future operations are likely to be conducted in increasingly complex terrain. We must adjust capabilities for operations in the urban and littoral environment, where the people live; operations will be about influencing people. We must structure and train to provide persistent security effect, to operate closely with partners including indigenous forces and, where necessary, to enable the delivery of civil effect. Capacity building will be a



major element in overcoming the problems of achieving sufficient mass. This will require a scalable and flexible approach to force levels during a campaign – and inescapably a degree of UK mass. We must develop and institutionalise cultural understanding in our education, training and deployable structures if we are to develop the necessary insight to permit deeper situational understanding. Future operations will be conducted in a competitive and complex information environment so we must develop the tool sets to fight and win the battle for influence – regionally, domestically and globally – and also in space and the cyber domains. Future operations will require the support of, and closer integration with, the other instruments of national power; the development of this ‘super-joint approach’ will be critical to success.

40. **Reach, Access, Duration and Scale.** While the research for this paper suggests that the military ability to fulfil a security-related supporting role at home is currently under-played, the UK should seek primarily to use the military instrument at range. However we will depend on access to deploy, employ and sustain forces and this may become increasingly problematic. Furthermore, while we may also seek to achieve rapid, decisive effect, we should not assume this will be the case: over time, enduring operations have been the norm in all environments with profound implications, not least for our planning assumptions. Our aspirations to achieve strategic effect in all environments will not always be matched by our ability to generate and sustain forces at sufficient scale.

41. **Situational Understanding.** The future character of conflict requires a shift of emphasis from platforms and C2 nodes towards better human understanding especially where target signatures are small or ambiguous. Western conventional dominance is based on the ability to find, fix and strike the enemy force. Future threat actors will seek to operate in congested and cluttered environments in order to avoid Western superiority, which will require us to exploit newer environments such as space, cyberspace, and non-lethal weapons. Situational understanding will also require an in-depth knowledge of the adversaries’ military capabilities and also their culture and decision making. Our people will need not only to understand the imperatives for campaign success, but also how to work within a highly nuanced context.

42. **Adaptation and Integration.** We must better organise for adaptation. The exploitation of novel military capabilities requires empowered champions



who will be able to leverage resources. Jointery, one of the foundations of our way of warfare, required a paradigm shift. However, success in future conflict will entail far deeper and wider integration. This 'super-joint' approach will have to extend across Government and reach far into our allies and partners. This will have significant implications for traditional notions of synchronisation, for example, inter-operability, C2, training and education. This requires a cultural shift far more dramatic than that which drove UK jointery in the 1990s. Strategic machinery will also need to become more agile as decision-making times compress, solutions could entail the creation of pan-Government structures. And our planning mechanisms must better match the speed of change anticipated in this assessment of future conflict.

43. **Institutional and Operational Agility.** There is only one way for Defence to position for an uncertain future and that is to be agile. This agility must be institutionalised at all levels from the organisation to the individual. It will require greater investment in training and education and also a pan-Government change of mindset. Two of the generally accepted critical characteristics of agile organisations are the ability to decentralise resources and decision making and having uncommitted resources to deal with the unexpected. We will inevitably have to invest in some long-lead expensive programmes to insure against some threats. However, a better understanding of the last sensible moments at which to commit – and in what programmes – could provide the institutional capacity to match capability better against emerging new threats. Moreover the future character of conflict will result in what some have called wicked, unbounded or insoluble problems. Attempts to solve these using a single institutional framework designed for tame, bounded and soluble problems are almost bound to fail.³³ In wicked problems there is no clear relationship between cause and effect and no single institution will be able to control the outcome. The principal skill will be the art of leadership required to persuade necessarily large communities of interest to face up together to those complex problems that defy scientific management approaches; wicked problems beg comprehensive responses.

44. **People – Restoring the UK Edge.** Given that technological and equipment superiority can no longer be guaranteed, the UK must make its people the edge. Investment in people – sufficient, capable and motivated – is essential and will require a shift in our approach to capability development if we are to succeed across the expanding gamut of operations. The UK



Armed Forces require the right number of people, with the right skills, who are willing and able to use them under a range of circumstances. We should therefore place an even greater premium on recruitment, retention and preparation. Mental agility will be a fundamental pre-requisite for institutional agility. We already know that education provides the broad outlook necessary for dealing with the unexpected, but our capacity to educate to the required level is under resourced. Similarly, training – both individual and collective – that replicates the full complexity of the operational environment has a significant part to play. Without the familiarity of well-practised procedures, including comprehensive and realistic exercises, responses to events will inevitably be slow and less effective. Regenerating capacity and time for education and training will be essential if we are to retain and develop our people.



The UK Must Make its People the Edge

Endnotes:

¹ Nye J.S Jr, 'Soft power is the ability to obtain preferred outcomes through attraction. If a state can set the agenda for others or shape their preferences, it can save a lot on carrots and sticks. But rarely can it totally replace either.'

² Joint Doctrine Publication 0-01.1 *Glossary of Terms and Definitions* defines armed conflict as a situation in which violence or military force is threatened or used for political ends, a contest between two opposing sides, each seeking to impose its will on the other. Conflict (be it inter or intra-state) may involve several factions. The term 'Armed Conflict' is often abbreviated to 'Conflict'. This paper uses the term nature to include those aspects of conflict that are constant and also those aspects that change according to context (classically referred to as character).

³ Cm7590, *National Security Strategy 2009*, London, TSO:2009, page 41.

⁴ Development Concepts and Doctrine Centre (DCDC), Higher Level Operational Concept, April 2007, paragraph 102.

⁵ The UK's economy will remain in the top 6 globally, and it will continue to host many leading multi-national corporations, retain leadership in some areas of science and technology and maintain its role in the international financial system.

⁶ Throughout this paper the term quality is used to describe the level of specification of a capability. It is not meant to suggest that the UK should compromise by accepting equipment that is poorly manufactured to a level below the required specification.

⁷ Governor George W Bush, while standing for election as President in September 1999, stated that 'the best way to keep the peace is to redefine war on our own terms'. Quoted in Jeremy Black, *War Since 1990*, page 7.

⁸ Rear Admiral Richardson J M US Navy, Director Strategy and Analysis US Joint Forces Command (JFCOM), *Joint Forces Quarterly*, Issue 54, 3rd Quarter 2009.

⁹ Thucydides quoted in US Capstone Concept for Joint Operations, version 3.0 dated 15 January 2009.



- ¹⁰ In his 24 April 1999 speech to the Chicago Economic Club, Mr Blair outlined a 'doctrine of the international community' based on the idea of a 'just war': a war based not on any territorial ambitions but on preventing humanitarian disasters.
- ¹¹ Rear Admiral Richardson J M US Navy, Director Strategy and Analysis US Joint Forces Command (JFCOM), *Joint Forces Quarterly*, Issue 54, 3rd Quarter 2009.
- ¹² High-end asymmetric threats include, but are not limited to, Chemical Biological, Radiological and Nuclear weapons.
- ¹³ *SIPRI Yearbook 2008: Armaments, Disarmament and International Security*, Oxford University Press, 2000, pages 43-70. SIPRI – Stockholm International Peace Research Institute.
- ¹⁴ Cm7590 *National Security Strategy 2009*, London, TSO:2009, pages19-25.
- ¹⁵ Professor Gray C.S, *Understanding Air Power*, Strategic Studies Quarterly, Winter 2008. In June 2009 at Royal United Services Institute (RUSI), Gray was cited by Commander US JFCOM as the pre-eminent living strategist.
- ¹⁶ *Ibid*, page 25.
- ¹⁷ The DCDC defines the littoral as those land areas [and their adjacent sea and associated air space] that are predominantly susceptible to engagement and influence from the sea. This may typically be thought of as being those areas within 100 km of the coast. It is likely that up to 60% of humans will live on or near coastal regions by 2040. DCDC *Global Strategic Trends*, Edition 3.
- ¹⁸ BBC Website 14 August 2008 <http://news.bbc.co.uk/1/hi/world/europe/7559850.stm> [accessed 17 Nov 09].
- ¹⁹ 'Cities always have been centers of gravity, but they are now more magnetic than ever before.' Ralph Peters, *Our Soldiers Their Cities*, Parameters Spring 1996, pp 43-50, page1.
- ²⁰ For example: Bab al Mendab, Malacca, Suez and Hormuz.
- ²¹ Article 57 – *Precautions in Attack* – Protocol 1 (1977) of the Protocols Additional to the Geneva Conventions of 12 August 1949.
- ²² As illustrated by the Ottawa Convention (1997) [On the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-personnel mines, and their Destruction], and attempts to limit the use of Cluster Bomb Munitions.
- ²³ Department For International Development (DFID) White Paper: *Eliminating World Poverty: Building our Common Future* dated July 2009. Also, Douglas Alexander, Secretary of State for International Development, speech to the Council on Foreign Relations, Washington DC, July 2007.
- ²⁴ Deterrence includes, but is not limited to, the Strategic Nuclear Deterrent.
- ²⁵ Middleton, Bowns *et al*, *The Effect of R&D on Military Equipment Quality, Defence and Peace Economics*, April 2006. Also quoted in the Defence Industrial Strategy.
- ²⁶ International Energy Agency, *World Energy Outlook 2008*.
- ²⁷ We judge that in 2029 the major powers will be US, China, Russia, UK, France, India, Japan, Iran and possibly Brazil.
- ²⁸ US JFCOM, *The Joint Operating Environment 2008: Challenges and implications for the Future Joint Force*, pp10-23.
- ²⁹ The UK will require a unilateral capability to defend Overseas Territories.
- ³⁰ Gates R, US Secretary of Defense, speech to the Economic Club of Chicago, July 2009.
- ³¹ The UK Defence Lines of Development are: Training, Equipment, Personnel, Infrastructure, Doctrine and Concepts, Organisation, Information and Logistics.
- ³² Professor Clarke M, RUSI, 27 November 2008.
- ³³ Grint K, *Wicked Problems and Clumsy Solutions: The Role of Leadership*, originally published in Clinical Leader, Volume 1, 2 December 2008.



Annex A – The Future Character of Conflict

Context – The Threat Drivers

- UK Geo-Strategic Perspective.** The UK is an outward facing nation with multiple interests and its strategic context will be driven by global interconnectivity. The UK is an island – but not a fortress – and it has inextricable ties to Europe and North America. In this sometimes uneasy triangular relationship, our interests are inter-linked with both of these power blocs, but they will not always be aligned. There are also tensions between our focus as a European power and our Atlantic outlook that will impact where and how we commit to future conflict. The military capabilities needed to service these geo-strategic relationships are diverse and could be quite disparate; a premium should be placed on those capabilities that have utility in the widest set of circumstances.
- Climate Change.** Climate change is recognised by leading experts to be a truly new factor in the dynamic of conflict. It will have two major impacts on conflict. First, the operating environment will change, with increased desertification, melting ice caps, reduced water run-offs, higher ambient temperatures and more severe weather events. UK Armed Forces may need to be able to operate in areas of climatic extremes, from the Polar Regions to the desert. Second, and more importantly, climate change will affect large numbers of people, many of whom live in regions and states that will not be able to adapt quickly enough to avoid the worst effects. This is likely to create instability, especially in those states that are already vulnerable to other pressures.
- Demography.** The World's population is predicted to rise to over 8.3 billion by 2029, driving increased demands for resources, with 60% urbanised and six billion living within 100 km of the coast. The UK's population will grow to 70 million, and its demographic balance is changing with growing ethnic communities and large British diasporas overseas. Within UK, a changing demographic balance towards a more multi-ethnic society means that some conflicts will create risks, including extremism, within our own communities. There will be an imperative to tackle threats at source, and the military instrument must be sufficiently flexible to provide choice. The global environment will be characterised by congested and constrained communication routes, environmental stress, inequality, governance problems and crime, thus leading to increased tensions, especially across culturally and



ethnically artificial or contested borders. Access to food and water will become increasingly challenging, and regions with acute shortages are likely to feel increasingly vulnerable. Some states will regard the security of their food and water supplies as issues of national survival and will act accordingly: a fight for survival may be visceral and unconstrained.

4. **Globalisation and its Impact.** The UK relies on globalisation for its prosperity.¹ Globalisation is both a positive process and an idea, which is driven by the requirements of the developed world. It necessitates co-operation, but it also creates tension and backlash and in some cases at least will be a key driver of instability and conflict, at increasing tempo. These tensions are exacerbated by the media revolution which has made the inequalities of wealth and well-being globally transparent. For example, improvements in communications now allow extremists to spread their ideology and share their evolving asymmetric military edge, with which to strike at our interests. Globalisation is about the spread of capital, trade, intellectual property, economic activity, wealth and resources. It also encompasses the guaranteed access to and exploitation of these resources in developing states. The global network which supports this transmission is enabled by shared international communication paths comprising road and rail; sea and air routes; space; cyberspace; and the electromagnetic spectrum, and is referred to as the global commons. For globalisation to work there must not be significant interruptions to flows along these transmission routes; yet all of these paths have chokepoints and vulnerabilities. In the UK, because of our economic interests, our citizens, and our cultural and familial connections with other countries which are spread throughout many parts of the World, we have interests that are genuinely worldwide rather than local or regional. Wherever major conflict occurs, there are likely to be security consequences. Domestic security cannot be separated from overseas security issues.

5. **Energy Resources.** By 2029 there is expected to be a considerable increase in demand for energy. In particular gas will be of increasing importance as states struggle to maintain energy supplies. The majority of this gas will probably come from a few regions, namely the Arctic, Central Asia, the Persian Gulf (especially Qatar and potentially Iran), Russia and Africa. Many boundary disputes, such as those in the Arctic, Gulf of Guinea and the South Atlantic will become inextricably linked to the securing of energy supplies. The UK will be critically dependent upon energy imports. This will demand strong regional influence – including supporting our European partners and – if necessary, the ability to project and maintain military power in the context of



regional security that creates a favourable balance of power, at range and at the European margins.

6. **Failed and Failing States.** States will remain the predominant organising principle for a stable rules-based international system on which UK prosperity is based. States that cannot withstand the influences of the changing global context will risk collapse. Poor governance, economic deprivation and inequality, already prevalent in parts of Africa, Central Asia and Central America, are likely to spread further.² Many failures will be accompanied by substantial outbreaks of violence. The UK will not need nor wish to intervene militarily in all cases of state failure. However, the UK may feel compelled to act decisively to restore stability, contain the impact of instability, or evacuate UK nationals. Operations in failed and failing states have additional challenges including, hostage taking, heavily armed civilians, and humanitarian crises. The poor level of security also means that civilians may be unable to deploy and the military may have to take on additional tasks for which they are neither trained nor equipped.

7. **Ideology.** Ideological movements, based on religion and identity, will remain a significant factor. Religiously-based political groupings, radical environmentalists and extreme nationalists will all be features of global politics, as will states motivated by ideology. People will fight for their beliefs and these beliefs may not be geographically bounded.

Endnotes:

¹ The UK's economy will remain in the top 6 globally, and will continue to host many leading multinational corporations, retain leadership in some areas of science and technology and maintain its role in the international financial system.

² United Nations Development Programme, World Bank and International Monetary Fund predictions.





Abbreviations

C2	Command and Control
CB	Chemical and Biological
CBRN	Chemical Biological Radiological Nuclear
CNO	Computer Network Operations
DCDC	Development Concepts and Doctrine Centre
DEW	Directed Energy Weapons
DFID	Department for International Development
EU	European Union
IDF	Israeli Defence Forces
IED	Improvised Explosive Device
IMF	International Monetary Fund
IRA	Irish Republican Army
NATO	North Atlantic Treaty Organization
NEC	Networked Enabled Capability
NSS	National Security Strategy
R&D	Research and Development
RMA	Revolution in Military Affairs
RUSI	Royal United Services Institute
SIPRI	Stockholm International Peace Research Institute
UAV	Unmanned Aerial Vehicle
UN	United Nations
UNDP	United Nations Development Programme
UNSC	United Nations Security Council
US JFCOM	United States Joint Forces Command
USN	United States Navy
WMD	Weapons of Mass Destruction

