EXERCISE AGILE WARRIOR AND THE FUTURE DEVELOPMENT OF UK LAND FORCES

Mark Phillips
About Agile Warrior
The army’s Force Development and Training Command started a new annual process of experimentation and operational analysis in October 2010. Exercise Agile Warrior aims to provide an evidence base, drawn from lessons, research and experiments, upon which to base decisions on the future development of land forces. The army recognised the need to expose and test the emerging findings of Agile Warrior and this paper reflects the outcome of that ‘challenge’ function.

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- Contribute to the debate about the way in which land forces are recruited, trained, structured and equipped for roles at home and abroad
- Aid the development of policy, strategy, operational doctrine and concepts
- Improve the planning and execution of cross-government operations

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Introduction

The army’s Force Development and Training Command, which is tasked with leading and driving army learning and adaptation, started a new annual process of experimentation and operational analysis in October 2010. Known as Exercise Agile Warrior, this initiative aims to provide an evidence base, drawn from lessons, research and experiments, upon which to base decisions on the future development of land forces. The intention is to define the army’s view of its future force structure and capability requirements based on the demands of the Future Character of Conflict, to allow the army’s leadership to better inform future planning rounds and defence review activity.

To be authoritative, the recommendations from Exercise Agile Warrior need to be supported by a significant weight of credible evidence. As part of this, Force Development and Training Command recognised the need to expose and test the emerging findings of Agile Warrior. The Royal United Services Institute organised four workshops, supported by General Dynamics UK, between January and February 2011 to fulfil this requirement. Participants were drawn from across Whitehall (including the intelligence community, Departments of State and other services), academia, industry and international partners. They brought alternative strategic, policy, operational and technical expertise, skills and perspectives to bear on a number of key challenges the army will face in the future, including:

- How to achieve sufficient understanding of an operating environment in order to make better decisions about the timing and scale of military engagement and how armed force should be employed on the ground
- How to structure the army to increase its agility and flexibility, enabling it to meet the demands of a wide range of Military Tasks
- Determining the demands that will be placed on commanders and soldiers in the future, and in particular how to manage risk on operations effectively (including through the provision of appropriate medical support).

This Occasional Paper reflects the outcomes of the ‘challenge’ role undertaken by RUSI. Four of the chapters look at:

1. The demands that will be placed on people and force structures by formalising the ‘understand’ requirement for future operations
2. How much fighting capability is required of the army in the future, and if the ‘combined arms manoeuvre’ approach meets this requirement
3. If the level of medical support provided on Operation Herrick should be the new default for any future deployment, or if the army revert to
the medical echelon system

4. Whether the army’s approach to risk management on operations is hindering mission command and the manoeuvrist approach, and if so, what can be done about it and learnt from other sectors.

Some of the findings and recommendations might make uncomfortable reading, but it is a welcome development that the army is willing to have its thinking and ideas exposed to a wider range of people, and in particular its partners across government.

The current resource environment will demand greater inter-agency working and collaboration. As a result of Agile Warrior, the army will hopefully have gained a better understanding of the capabilities of other departments and agencies. Other departments and agencies will also, in turn, hopefully have developed a better understanding of the requirements of the army. As Force Development and Training Command prepares for its next round of experimentation and operational analysis, it should build on this emerging relationship and involve partners from across government should in scoping the work as well as testing its findings.

The final chapter in this Occasional Paper reproduces a speech given to the Military Academy at West Point by the US Defense Secretary, Robert Gates, on 25 February 2011. The speech looked at the future of conflict and its implications for the US Army. Both UK and US land forces have become mission specific and bespoke as a result of operations in Iraq and Afghanistan. They now have to transition to meet future tasks and many of the challenges in doing so are shared. Exercise Agile Warrior is the UK national equivalent of the US Army’s Unified Quest programme and many ideas and concepts on both sides of the Atlantic can and should be shared. The defense secretary’s speech provides an insight into the thinking of a key partner on many of the issues looked at in this paper, particularly on the need to institutionalise diverse capabilities through the ‘combined arms’ approach and change how the Army’s people are recruited, trained and empowered to counter a risk-averse culture. All of this must, of course, be done within affordability constraints. The West Point speech brings together political, strategic and operational perspectives, and will be valuable reading for UK counterparts.

Mark Phillips
February 2011
The ‘Understand’ Demands of Future Land Operations

The National Security Strategy (NSS), Strategic Defence and Security Review (SDSR) and the Ministry of Defence’s (MoD) work on the Future Character of Conflict (FCOC) all imply that ‘Understand’ is a pressing task for the military and other instruments of national power. In outlining a new set of National Security Tasks, the NSS and SDSR identified the need to be able to ‘identify and monitor national security risks and opportunities’ through a co-ordinated approach to early warning and horizon scanning; strategic intelligence on potential threats to national security and opportunities for the UK to act; co-ordinated analysis and assessment of the highest priority risks; and intelligence assets to support the core military, diplomatic and domestic security and resilience requirements and UK economic prosperity.

Furthermore, the FCOC concluded that the ‘congested, cluttered, contested, connected and constrained’ battlespace will require:

- An in-depth knowledge of an adversary’s military capabilities, and also their culture and decision-making
- A shift of emphasis from platforms and command and control nodes towards better human understanding, especially where target signatures are small or ambiguous
- The ability to exploit newer environments such as space and cyberspace.

The need to ‘Understand’ is implicit in every operation, as understanding provides the context for making effective decisions, applying power and managing associated risks and subsequent effects. However, recent operational experience demonstrates that this requirement – to acquire and develop knowledge to such a level that it enables insight (knowing why something has happened or is happening) and foresight (being able to identify and anticipate what may happen) – has tended to be taken for granted. The Development, Concepts and Doctrine Centre’s (DCDC) work on Joint Doctrine Publication (JDP) 4 recognises this gap, but is largely conceptual; the practical implications of the ‘Understand’ function need to be worked out. Key questions include: How does defence fit into cross-government Understanding? How does the ‘Understand’ function apply at the strategic, operational and tactical levels? Following from these points, what demands will be placed on a deployed force by the ‘Understand’ function in different types of operation (continuous engagement versus contingent), and what are the implications for force generation and structure?

This chapter addresses each of these points in turn, and their implications for force development and generation.
The Army’s Relationship with Other Departments and Agencies: Scoping Its Role in the ‘Understand’ Function

At the moment there is inadequate awareness about how defence should or can engage with other departments and agencies to meet its requirements for the adequate understanding of an area of operation. There is little clarity about whether the army should be a contributor to the Understand piece, a user of the understanding created by others, or both. Part of the problem is that the intelligence and wider national security machinery is not well defined. Responsibilities and ownership of functions are not clear, so answering the question of how the military fits into a national effort at each of the strategic, operational and tactical levels is difficult.

Operations in Iraq and Afghanistan identified gaps in relation to the ‘Understand’ demands of land operations which the Army needs to fill: there is a view that the strategic intelligence and understanding developed in Whitehall is insufficient for the requirements of a military deployment, as it lacks the granularity that a force commander requires for theatre entry.

That said, it is possible that the army is unaware of the potential of the capabilities held by other departments and agencies to meet this requirement. For example, it is assumed that the intelligence and security agencies concentrate on contributing to the strategic-level assessments and understanding of the government. But the capabilities and sources that contribute to strategic requirements can also be employed at the tactical level. An example of the capacity and capability of the intelligence community that is not exploited fully by the military is its ability to surge at very short notice (twenty-four hours) in response to a crisis or during the pre-deployment phases of military operations. This can provide the army with at least part of the ‘Understanding’ it requires at much earlier stages, given the longer lead times for deploying military assets. The army itself, of course, might consider deploying intelligence, surveillance, target acquisition and reconnaissance (ISTAR) assets much earlier in the run-up to an operation or in response to a crisis and most fruitfully alongside the intelligence community to ensure there is sufficient mass and coverage. Further, the Foreign Office and Department for International Development should have significant local area knowledge from their in-country footprints and projects, which the military should draw on.

The extent to which the army is capable of exploiting capabilities held by others requires detailed examination. The army needs to scope its role in the ‘Understand’ task properly by:

- Understanding the capabilities of the intelligence agencies and how they can be applied and exploited at different levels
- Understanding the body of knowledge that departments such as
the Foreign Office and DfID already have through the projects they undertake in-country

- Being clearer about its requirements as a customer
- Facilitating opportunities for joint training and education with other organisations
- Undertaking further work to identify if it is possible to translate strategic products into ones which provide the level of granularity the army requires at the tactical level.

Overall, there is also little guidance about how much ‘Understanding’ is enough, which in turn hinders the development of the ‘Understand’ function. A problem of information overload already exists and there is probably a threshold at which no further value is secured by collecting and assessing more information (notwithstanding the ambition for complete understanding of any given situation). Arguably, more should be done to extract value from existing data. Furthermore, a better question for the army to use as a benchmark might be: ‘How little understanding is not enough?’

The Requirements and Opportunities of ‘Continuous Modulated Engagement’

The ‘Understand’ function and demand will vary according to different Military Tasks. The NSS and SDSR placed emphasis on tackling the root causes of instability; exerting influence to exploit opportunities and manage risks; and helping resolve conflicts and contribute to stability. These tasks are encapsulated in the term ‘Continuous Modulated Engagement’ (CME). CME encompasses a range of activities and deployments that can support the UK’s long-term engagement strategy with countries of strategic interest where the government wants to achieve influence and effect, including security sector reform and defence diplomacy. A distinction must be made between developing understanding before a force has been deployed and developing understanding after a force has been deployed: these activities are useful for contributing to long-term UK interests, but also present an opportunity to build up understanding over a sustained period of time, which can be used to inform both training and unexpected contingent operations.\(^5\)

The key challenge in investing in CME is that neither the military nor other departments and agencies will invest sufficiently in low-priority countries and targets. Furthermore, no priority system will be able to cover all things that could go wrong. The military and intelligence community are very good at surging quickly and can learn lessons from Iraq and Afghanistan to improve this capacity. But it takes approximately ten years to build up a proper understanding from which the UK can operate effectively. In other words, no matter how many resources are thrown at an issue at any given time or how quickly the UK is able to surge, this does not change the fact that it does take time to develop proper understanding. This was the case vis-à-
vis the Soviet Union and is arguably the case with Afghanistan, and points to the importance of long-term and ongoing engagement rather than just periodic analysis.

Taken together, these factors point to:

1. The need for greater clarity about priority countries and regions, in line with national interests, of defence and other departments and agencies. The National Security Risk Assessment provides a good starting point, but needs more of a geographical as opposed to just functional focus
2. Linking horizon scanning and intelligence collection priorities together much better than to date
3. Bringing together (and sustaining) knowledge from a range of previous and current deployments and operations. For example, the UK engaged in a range of activities in Iraq from the 1980s onwards, yet it is not clear that defence and wider government drew on this experience sufficiently in planning for Operation Telic in 2003. The value of all-source fusion centres in respect of CME (covering both ‘red’ enemy and ‘white’ population/government/economic activity) is self-evident.

For defence, those mechanisms that have been used to achieve a base-level of knowledge over a lengthy period of time (such as the defence attaché/liaison network and Defence Intelligence Staff) have tended to be underinvested in or cut at the first opportunity. It is worth reinvesting in a proper military liaison network and career structure, not least because it takes on average five years of living in a country to become an expert. Other mechanisms for building and sustaining knowledge over time might include developing ‘foreign area specialists’ within the military, anchoring special forces in areas where there is little diplomatic coverage, and recruiting to ensure that the army is representative of certain communities and therefore already has some understanding and empathy (an approach used by the police service for the purposes of the domestic counter-terrorism PREVENT Strategy).

The types of activities personnel engaged in CME undertake must be refocused: there is a tendency to focus on understanding elites in a country rather than the needs and priorities of communities. The value of community information and intelligence is underestimated at present; lessons can be learnt from the UK’s community policing approach in a domestic context for developing people with the skills to develop community intelligence abroad.

However, developing in-house specialists in addition to the existing military liaison network and deploying individuals or units to engage with communities is resource intensive. From police experience of community engagement
within the UK, it requires resilience in terms of personnel numbers to allow for significant physical presence while catering for training, leave and so on. Even NGOs which operate over longer time frames than government do not invest in developing specialists on a ‘just-in-case’ basis. There are alternative sources to draw on and potential ways of bringing in specialists just-in-time:

- The army can develop relations with NGOs, voluntary groups and journalists abroad to help develop understanding in areas where the UK has a small (or no) footprint. The police partner with voluntary groups and local authorities in a similar way for the purposes of domestic counter-terrorism. The challenge is ensuring the integrity of partners and developing criteria for deciding with whom to engage
- International organisations, particularly the UN, have a wealth of knowledge and understanding, which is not used or tapped into
- ‘Buy-in’ specialists when needed by recruiting foreign nationals (overcoming vetting issues), people who have lived in countries for lengthy periods, and making greater use of academic institutions
- Exploit police knowledge of diaspora communities and recruit sources from within those communities. The Defence Information Requirements are not well-developed or expansive enough in relation to UK communities
- New forms of social media such as Twitter might provide information about communities and potential risks.

These approaches would not negate the need for the army to have a minimum level of knowledge and presence, which it can build upon. But they do mean that CME could be relatively low footprint and low cost, while providing an infrastructure that can be ramped up in a crisis.

**Enduring Lessons from Iraq and Afghanistan for Contingent Operations**

It cannot be assumed that CME will develop a knowledge-base for contingent operations given the challenges with the UK’s priority system. Moreover, even when the UK has a long-term presence, there will still be a need to assess current levels of understanding and develop new understanding rapidly once a decision is made to intervene. As a result of experience in Iraq and Afghanistan, lessons have been learnt about the type of capabilities that should be developed in-theatre for contingent operations and the demands that will be placed on individual soldiers in an area of operation.

The default setting on future contingent operations will be for the majority of capabilities to be decentralised from the division to brigade level (with the ability to re-centralise if necessary). However, it is not clear whether this level of decentralisation will be sufficient. Ongoing operations in Afghanistan have identified problems with the existing relationship between brigades and battalions/companies in relation to capabilities that contribute to the ‘Understand’ requirement. \(^6\)
Companies and battalions have little awareness of the full spectrum of collection and production capabilities/platforms that can be made available to them by brigades, or tasked by brigades on their behalf.

Even when companies and battalions are aware of these capabilities, brigades are sometimes reluctant to task collection and production platforms on their behalf or make them available.

Brigades (and their fusion centres) over-emphasise intelligence and understanding for force protection and strike missions, which drives a focus on ‘red’ activity concerning the enemy at the expense of the collection and analysis of population-centric information. But the latter is more useful at the tactical level. While at the battalion level and below intelligence officers know a great deal about their local area, they are generally too understaffed to gather, store, analyse and disseminate this knowledge.

Existing intelligence set-ups, including company-level intelligence cells and brigade-level fusion centres, are geared towards traditional, classified sources of intelligence rather than non-traditional sources such as NGOs.

Fusion centres struggle to link into decision-making at the tactical level: the value of their product and its timeliness is questionable. An exception to this is the Land Intelligence Fusion Cell (Afghanistan) which has deep expertise and a high standard of connectivity with theatre, providing the link between the strategic and the tactical level. This may not be the case, however, for other fusion centres such as the Geospatial Intelligence Fusion Centre (DGIFC). In structuring fusion centres in the future, the key criterion will be where the fusion of intelligence needs to take place. Some issues will need to be dealt with in a timely way and so should be done in-theatre, at lower formations, whereas some analysis will be of ‘slow-burn’ topics which, with sufficient connectivity and bandwidth, can be done rear based.

Company-level intelligence set-ups are often under resourced, do not have specialist staff and do not have the IT infrastructure for access to top-secret information or networks.

It follows from these points above that battalions and companies would be better supported on future contingent operations if in developing tactical understanding the following principles were adopted:

1. Make every effort to advertise and improve education on intelligence/ISTAR collection and production capabilities, thereby making these available at the tactical level
2. Send additional people who are specialised in collection and analysis down to augment battalion and company-level intelligence teams,
even if only on a rotating basis. This is being done in Operation *Herrick* with COISTs and BGISDs, but the approach needs to be pushed into structures for F/COE operations. The size of the additional collection and analysis capability will depend on the type of operation (combined arms manoeuvre versus continuous engagement) and therefore where fusion is best achieved

3. Increase IM/IX capacity at the battalion and company levels

4. In addition to developing fusion centres in-theatre to co-ordinate human intelligence (HUMINT), signals intelligence (SIGINT) and covert real-time surveillance for strike operations, develop centres to produce products (including from non-traditional sources) that cover the ‘white activity’ of population, economy, development, and government. This is being done in *Herrick* but the approach needs to be pushed into structures for F/COE Operations; how the requirement is met and over what timescales will vary depending on the type of operation (combined arms manoeuvre versus continuous engagement)

5. There is also an argument for resourcing the company level with organic ISTAR capabilities and the ability, therefore, to fuse HUMINT, SIGINT and surveillance assets. One of the biggest advantages the army has on expeditionary operations is technology, but there has tended to be an institutional reluctance to allow this technology to operate at a low level. This is beginning to change and doctrine now needs to make clear where and how these assets sit: for continuous engagement such as COIN the assets need to be pushed down, whereas for combined arms manoeuvre on contingent operations they are best placed higher up a formation. All personnel need to have a better understanding of what technology can do and the opportunity for regular training and exercising with high-end capabilities.

Each of these steps would increase capacity at the tactical level and meet the ‘double burden’ faced by those on the frontline of being, at the same time, the most important customers of information and the most important suppliers of information. This double-burden is faced as much on COIN and other CME operations, where the focus is on the population, as on combined arms manoeuvre where the focus is on the adversary, as the common feature of any future operating environment is the fluidity and decentralised nature of all actors.

As ISTAR and collection systems are both increased in number and devolved, so their (technical) vulnerability to disruption increases. Brigades and lower-level formations will need to develop the following skills to assure the integrity and reliability of these platforms:

- Information Management
- Information Assurance
• Basic network monitoring and defence
• The ability to undertake basic internet operations (through specialist teams).

**Implications for Training and Culture**
The ‘Understand’ requirement has a number of implications for general training and the development of army culture. Recent operations have shown that those on the front line are both the most important customers and suppliers of information. The approach of the police service is relevant here: every police officer has an intelligence function when performing duties such as neighbourhood policing, but is supported by specialists in functions such as counter-terrorism and serious organised crime. The army should take a number of steps, including:

• Joint education and training with a wider range of departments and agencies at all levels. This needs to be resourced properly and there needs to be enough slack in the system to allow this training without it being detrimental to deployed operations
• Clearer direction from the command structure about what units should know
• Regular training and exercising with a full range of ISTAR collection assets and covert capabilities (but this needs to be managed in such a way that it does not prevent a surge in response to a crisis)
• Education and training to allow people to cope with collecting, processing and disseminating significant quantities of information
• The checks and balances of the intelligence community’s assessment process should be taken into general command and staff training
• All soldiers need to be trained and provided with an analytical framework that allows them to instinctively collect and assess information. Techniques such as creative and critical thinking and challenging assumptions should be explored for inclusion in general training
• The army needs to educate its people with a foundation in anthropology. Too much emphasis is placed on history and politics, and not enough on how societies function (that is, a methodology which can be applied in different locations)
• Education and training to allow people to accept a level of risk with the information and understanding they have at any given time. Special forces are more mature and educated about the potential and limitations of ‘Understanding’ than regular forces and there are potential lessons from their experience for training and exercising. Statistical weighting can also be attached to assessments to help commanders understand the level of risk they are accepting from any given product
• The military hierarchy and command structure must accept and encourage alternative views at all levels. There is a tendency for
‘groupthink’ because junior officers and soldiers are not always encouraged or incentivised to challenge or red team conventional thinking and wisdom. Mavericks – that is, those people who will not go in for group or corporate thinking, but have an instinct about doing things differently – must be cherished. Constructive contrarian teams could also be created. The issue for the Army will be doing this in a way which does not destroy discipline.

In relation to developing specialists, it is ultimately a resourcing decision as to whether or not the army invests in foreign area specialists, though it should be noted that there is an institutional and cultural reluctance to develop specialists. The military is starting to identify individuals who are currently serving with the skills and experience necessary for the ‘Understand’ function by developing a competence and training framework that can be applied to the Joint Personnel Administration system, but this is retrospective and ad hoc. There is however also a question about whether military personnel are best suited to this specialist task or more civilians should be recruited for this purpose; there is a growing view based on operational experience that more non-military staff should be put into J2 fusion centres. For example, an after Iraq action report by the US XVIII Airborne Corps noted that:

> Intelligence analytical support to COIN operations requires a higher level of thinking, reasoning, and writing than conventional operations. In general, neither enlisted nor officer personnel were adequately trained to be effective analysts in a COIN environment ... In an overall intelligence staff of 250, CJ2 leadership assessed four or five personnel were capable analysts with an aptitude to put pieces together to form a conclusion.

This review identified how far training for the military in Understand-related functions still had to go; it will require significant investment and changes to career structures and planning to develop a cadre of specialists within military ranks. If the army cannot invest in developing a career stream for specialists, the gap might be mitigated in part by drawing on alternative sources across government (as discussed above, or through mechanisms such as secondments) and areas such as academia, NGOs and journalism.

**Conclusion and Summary**

The need to ‘Understand’ is implicit in every operation. However, recent operational experience demonstrates that this requirement has tended to be taken for granted. In developing this function the army must take into account the below.

There is also little guidance about how much ‘Understanding’ is enough. A better question for the army to use as a benchmark might be: ‘how little Understanding is not enough?’ The army should educate and train people to
accept a level of risk with incomplete Understanding.

The capabilities of the intelligence agencies and other organisations which contribute to strategic understanding in Whitehall can also be exploited at the tactical level. The army needs to scope its role in the ‘Understand’ task by understanding these capabilities better, being clearer about its requirements as a customer by generating CCIR’s and facilitate joint training and education.

A distinction must be made between developing understanding before a force has been deployed and developing understanding after a force has been deployed. As a result of experience in Afghanistan, lessons have been learned about the type of capabilities that should be developed in-theatre for contingent operations and the demands that will be placed on individual soldiers in an area of operation. The military and intelligence and security agencies are good at surging in response to events, but they can do more to develop a joint capability in this respect.

However, the army also needs to get ahead of the game by developing a knowledge base before operations. Understanding at a strategic level can facilitate this by directing investment in particular areas and countries. Lessons can be learned from the continuous engagement of communities by the police and NGOs for CME. This engagement is resource intensive, however, and it is uncertain whether the army will be able to sustain the levels of investment required. Therefore the army must be willing to develop specialists (with implications for career structures and management) and also engage with other, often non-traditional sources of information and organisations, building an infrastructure upon which to surge.

Defence has an ISTAR and fusion capability which until recently has not been exploited at the tactical level as much as it could (and should) be. The fused product from brigade-level assets at least needs to be pushed down to the tactical more efficiently and that is more relevant to the requirements of battalions and companies. The army could also consider developing organic ISTAR capabilities at the tactical level (for example, ISTAR fusion capacity such as ISTAR Tac Groups at BG/Coy level).

The army needs to develop a culture which accepts and encourages alternative views at all levels.

Notes
1. There is some unease across Whitehall about the use of new terminology (‘Understand’), which implies that intelligence assessments are narrow products. Intelligence draws on an increasingly wide range of sources and, when assessed, contributes to understanding. Intelligence is therefore a necessary condition of understanding, but not a sufficient one. People also need to know how to use those assessments.
2. The employment of the capabilities of the intelligence community at the tactical level is growing: agencies are increasingly expected to not just provide intelligence to inform decision-making, but to act upon that intelligence in order to influence events.

3. However, if the surges are aimed at reinforcing the capability of the intelligence services to feed the UK’s strategic-level requirement, the army could only benefit indirectly as the level of granularity required might not be provided. The intelligence agencies should adopt a more doctrinal approach in supporting the military in future expeditionary operations, as there is a tendency for the level of support it is able and willing to provide to be ill-defined and for the agencies re-invent the wheel every time a deployment occurs.

4. At the moment there is an institutional reluctance to allow certain capabilities (covert and fused) from across government to be used or developed at the tactical level. There are challenges to disseminating classified materiel across the battlespace and to battlegroup level and below, which need to be identified and addressed.

5. This is particularly important if conflict is viewed as ‘cyclical’ rather than linear in nature – in other words, as a continuous process of contest of varying degrees of intensity, which government needs to be aware of and respond to in different ways, depending on the intensity at any given time.


7. Ibid.


9. However, even across government a joint and integrated approach has challenges. Organisations are often reluctant to accept that they cannot develop expertise in-house, or have a cultural bias against other parts of the system. A prominent example of the latter was DfID refusing to accept secondments from the intelligence community when it required the use of rare language skills, even though the agency in question was the only part of government with staff who spoke the language.
How Much Fighting Capability Do We Require of the Army in the Future: Is Combined Arms Manoeuvre the Right Approach?

Enduring operations in Afghanistan and Iraq have dominated the army and its force development over the past decade. The army has become bespoke and specialised through Urgent Operational Requirements, mission-specific training and mission-specific changes in structure and doctrine, all designed to meet the challenges of high intensity counter insurgency campaigns. However, while there are important and enduring lessons from Iraq and Afghanistan, it should not be assumed that these operations are the way future conflict will be manifested: adversaries constantly adapt and it is also likely that the range of adversaries the UK might face will increase.

The army recognises that it is unbalanced as a result of ongoing operations. It also recognises that the way land forces have specialised must not exclusively determine the balance of what will be required in the future. As part of Future Force 2020, the army is therefore structuring and training itself to meet a wider range of potential adversaries and types of activities. It is reverting back to the combined arms manoeuvre approach, embodied practically in the multi-role brigade concept by which the army’s five brigades will be composed of one each of armoured reconnaissance, heavy armour, armour infantry, mechanised infantry and light-role infantry, with permanently affiliated artillery, engineer and logistic regiments.

Combined arms manoeuvre posits, firstly, that the defining feature of successful military operations is the integrated and synchronised use of capabilities to gain advantage over an enemy. Secondly, it posits that the army should maintain a full mix of light, medium and heavy forces, supported by specialist troops and enablers, so that land forces are configured to deliver the full range of military activities from peacekeeping operations to the application of lethal force. The employment of combined arms is, in this sense, an enduring characteristic for any army that needs to manoeuvre to a position of advantage in a range of situations — situations which could increase in tempo (and vice versa) at very short notice. It is based on an operational analysis of a wide range of conflicts, including the 1991 Gulf War, peacekeeping operations in Bosnia and Kosovo, Iraq and Afghanistan.

Critics argue that the combined arms thesis makes certain assumptions about the characteristics of potential adversaries and operating environments, and in particular where and when the UK will intervene, which do not necessarily reflect political or strategic direction and appetite; and ignores the expense involved in maintaining generic capabilities as opposed to adapting to conflicts as required.
It would be difficult for anybody to claim that the army is unaware of the resource challenges facing the Ministry of Defence and armed forces at present. Moreover, it is the army’s professional advice that the Defence Strategic Direction and the Military Tasks that flow from it require an investment in combined arms manoeuvre, if the army is going to be able to meet the full range of tasks government might demand of it in a cost effective and timely way.

However, if the army is to make the argument for combined arms manoeuvre, four gaps in its current thinking need to be filled:

- First, the need for further evidence than that provided by the IDF/Hizbullah conflict
- Secondly, the requirement for the UK to operate in a coalition context, and how a combined arms capability will contribute to or fit within a coalition
- Thirdly, how combined arms manoeuvre can contribute to the homeland security and resilience demands that are likely to be placed on the armed forces in the future
- Fourthly, how to sustain a combined arms force across all the Defence Lines of Development, and in particular in terms of logistics, procurement and joint enablers.

The Future Character of Conflict and the Rationale for Combined Arms Manoeuvre

The army’s planning is currently based on the emergence of ‘hybrid threats’, where states and non-state actors choose to exploit all modes of war simultaneously using advanced conventional weapons, irregular tactics, terrorism and disruptive criminal activity. Two arguments are made in support of this. First: adversaries are capable of significant adaptation. While adaptation itself is not a new feature, the rate of adaptation and the range of capabilities adversaries have access to are. Second: non-state warfare will become characteristic even between states (but states will also maintain high-end capabilities). A case-study often cited in this respect is Hizbullah’s 2006 conflict with the Israeli Defence Forces. It is argued that Hizbullah was able to achieve strategic shock by fielding a range of capabilities previously thought to exist in the state realm only, including networked air defence, communications and electronic warfare. Previously, Hizbullah employed desperate suicide bombings; it acquired more advanced capabilities through the support of North Korea, Iran and Syria.

Further analysis of the Hizbullah/IDF conflict also, it is argued, identifies lessons for how the army is employed on operations. The use of ground forces by the IDF was deemed ineffective due to three primary factors.
1. The adoption of novel planning process (‘systemic operational design’) resulted in orders that were not understood by those who were charged with the execution of the operation.

2. The campaign relied initially on a doctrine of air power that failed to emphasise the importance of air/land integration.

3. Over-specialisation in constabulary and counter-terrorism style operations meant that the IDF were not trained or prepared for joint force and manoeuvre operations, and in particular co-ordinating different capabilities and movements at brigade level and above. Manoeuvre training was isolated to battalions and companies but in the specific context of the Occupied Territories.

Israeli failure must however be considered alongside the success of the Hizbullah defences. Sophisticated weaponry was well sited in firing positions that were concealed from view and protected from the effect of standoff attack. The cellular organisation and decentralised control exhibited by Hizbullah also gave them far greater tactical flexibility than their IDF opponents. Furthermore, it could be argued that Hizbullah had invested more in understanding their enemy than the Israelis had. Observations from operations in the occupied territories allowed Hizbullah to accurately predict the manner in which the IDF would react. Conversely, the IDF should not have been surprised by the range and types of capabilities that Hizbullah brought to bear.

From this analysis the army concludes that IDF failure reflected:

- A lack of understanding of the adversary
- Disinvestment in combined arms manoeuvre training and structures
- Adherence to a discredited ‘Effects Based’ approach to planning and directing operations which ignored the fact that it is the synergy created by effectively synchronising capabilities in time and space and at tempo that is the key to success.

It follows from this the army should:

- Invest in understanding the nature of the problems it will face – not just to have situational awareness, but applied knowledge of social, political and other factors
- Maintain a range of capabilities, including sufficient firepower. Adaptive adversaries mean the UK needs to avoid over-specialisation.

More detailed analysis of potential areas of operation confirms this approach. Future areas of operation are likely to be congested and cluttered environments, characterised by density of obstacles such as improvised explosive devices or structures such as buildings. For example, significant
proportions of the world’s population will live in urban conurbations in the future. Urban operations are therefore increasingly likely and will be a demanding requirement for land forces – not just working in a complex terrain, but needing to understand politics, tribes and communities and to be proportionate and discriminate. Furthermore, operating in cities will pose challenges for the use of enabling assets such as airpower and require authority and key enablers such as ISTAR to be decentralised and dispersed in order to achieve effect with the population and allow all commanders and soldiers to exercise appropriate judgement in complex situations. Arguably the multi-role brigade will allow this while still maintaining a command and control capability at divisional level in order to integrate these tactical activities and integrate with other government departments.

However, the analysis above is incomplete because it does not consider a number of factors that featured in both the Hizbullah/IDF conflict and other recent conflicts:

- Hizbullah’s extensive use of media operations: the army should not fall into the trap of fighting a force-on-force battle when an adversary has decided to conduct an information battle; the UK needs to develop a proper information capability
- Hizbullah’s use of electronic warfare to great effect. Does the army need to develop a similar capability?
- How the army was able to achieve low collateral damage in Basra, which is a dense urban environment. Was it the result of better armour or better use of air power and ISTAR?
- The lessons from the 2008 Russia/Georgia conflict are not included
- It is not clear how the reconstruction capability which has been used extensively in theatres like Afghanistan fits into the combined arms manoeuvre construct
- It is not clear whether the combined arms approach would meet potential threats in regions like Africa, where small arms and other light weapons are predominant.

The army needs to undertake further operational analysis of recent and ongoing conflicts if there is to be a sufficient evidence base – and argument – for combined arms manoeuvre and how multi-role brigades should be structured.

Critics also counter that the combined arms manoeuvre thesis does not reflect: first, the priorities outlined in the National Security Strategy and Strategic Defence and Security Review, such as conflict prevention and homeland security and resilience. The army needs to provide force development advice to government in these areas: how might the combined arms approach and multi-role brigades contribute to both?; second, the clear lack of political
willingness to be committed to protracted, complex and costly intervention operations over the next decade. Some senior figures have said that the type of conflict envisaged in the Future Character of Conflict work is ‘destructive, enduring, urban, and therefore unattractive to decision-makers’; and third, argument that the military should focus on the highest-priority risks/tasks and work with others to fill gaps. Formal international partnerships post-SDSR have greater importance and need to be developed.

There is of course a debate about whether these assume a degree of discretion which is not proven and conflate ‘unattractive’ operations with ‘unlikely’ operations. Clearer political direction on levels of ambition is required. Clearer direction is also needed about what role the government envisages for the UK in coalition and alliance operations. It is not clear why the UK should contribute to these operations through having combined manoeuvre capabilities: will other countries not provide this, and should the army focus on how it links more specialised capabilities with the capabilities of partner countries to develop a combined-arms approach?

The alternative to maintaining a generic range of capabilities (which is expensive and difficult in the current financial situation) would be for the army to rely on the UK’s investment in strategic intelligence to allow it to transform from one major operation to another. However, the armed forces are required to be agile and adaptive by government, which expects timely responses to crises or requests. The 1998 Strategic Defence Review (and arguably also SDSR) missed the extent to which all operations will be enduring and require the significant deployment of forces. Experience has also shown that there is no real clarity about the outcomes needed from operations before deployment, so the military is delivering to different outcomes at different points. In this sense ‘future’ conflict is what the armed forces are doing already and the UK must be able to adapt rapidly. The combined arms approach arguably overcomes challenges to the army’s ability to adapt and be agile.

The Military Role in Homeland Security and Resilience

While the Future Character of Conflict work goes into quite a lot of detail about the characteristics of the future battlespace, it only hints at an increased military role in domestic tasks. Yet the National Security Strategy places significant emphasis on the homeland: homeland security makes up four of the tier one risks in the National Security Risk Assessment and is identified as non-discretionary.

Part of the problem is that homeland security has never been a force driver for the armed forces. The military has never been integrated fully into the National Risk Assessment which identifies gaps in civilian responder capabilities and arguably the Military Assistance to the Civil Authority
framework is too restrictive. The net result is that the military has been neither forward leaning nor reticent in responding to requests for assistance; the armed forces have contributed in a reactionary way to crises which require capabilities that civil responders do not have or cannot deploy adequately (such as the Gloucester floods), or to assist in catastrophic events.

However, recent National Security Council discussions identify an increased willingness for other government departments to consider military options much earlier when threats and hazards arise and the prime minister has already directed the military to increase its contribution in certain areas, accepting the risk that this will have for other operations abroad. More recently the MoD has taken a more positive approach in relation to its contribution to the 2012 Olympic Games; 1,000 personnel will be provided (but no function has yet been defined for them by other departments and agencies), and explosive ordnance disposal and CBRN assets are being earmarked and trained so that any requirement in these areas during the Games does not impact on operations in Afghanistan.

The army therefore needs to think through the (potential) political expectations for it in the homeland. Previous assumptions that it will take a lengthy period for threats and hazards to emerge in the UK or that risks can be prevented or tackled overseas before they reach the UK no longer hold. It is unlikely that providing residue capacity and capability for homeland tasks will be sufficient or acceptable and homeland security and resilience requirements could well become a force driver for the military. The military will be valued for its command and control, situational awareness and lift capabilities in the context of high impact events including: Mumbai-style attacks; bio-terrorism; large-scale flooding; and large-scale disruption to infrastructure. Some of these high impact events should be force drivers (for example, Mumbai-style attacks); others will not be force drivers but the military will be useful during the crisis and expected to contribute (for example, flooding); and there is a choice over what contribution to make to other events.

It is not clear how the combined arms approach and its practical manifestation (multi-role brigades) will contribute to these requirements and the army needs to make this argument. In principle multi-role brigades are agile and adaptable, and therefore should be flexible enough to meet these demands – but the detail needs to be worked out and explained. They potentially also fill the command and control gap created by the decision to remove the army’s regional HQ structure – they are deployable headquarters which could be used in a domestic context.
Sustainability of the Combined Arms Approach: Industry and Jointery

Agility and adaptability ultimately depend on how effectively a brigade is sustained. The combined arms approach needs to be explored across each of the Defence Lines of Development, namely training, equipment, personnel, information, concepts and doctrine, organisation, infrastructure, logistics and interoperability. While the combined arms approach exists in headline and operational analysis has shown its organisation and personnel requirements, work remains to be done to determine if the approach can be resourced at readiness and in a sustainable way.

Agility and adaptability (and therefore the combined arms approach) depend on appropriate and timely procurement, training and doctrine to get the right equipment and force structures in good time and seize the initiative from the enemy.

Although the issues surrounding procurement go wider than the army, the army should place the combined arms proposal in the context of the emerging ‘Total Support Force’ work. The ‘Total Support Force’ includes a presumption of increased contractor support to the military both at home and on operations through a pre-planned mix of civilian and military staff, industry and others; the army needs to consider whether multi-role brigades will only consist of organic assets or whether it is prepared to take the risk of contractors providing certain elements. If it is willing to take this risk, it needs to identify which elements should be ring fenced and whether TSF should allow MRBs to be scaled back up to military only if required by a particular situation. If not all assets are organic, this could reduce costs and make the combined arms approach more feasible and attractive from a budgetary point of view.

The human conceptual and moral component is vital. Combined arms manoeuvre is arguably more dependent on attitude and culture, and therefore training and doctrine, than equipment. People are also relatively cheap to maintain compared to buying a full range of kit. The training and education demands need to be explored in greater detail.

In relation to sustainability, there are two issues:

1. Post-SDSR it is unlikely that the UK will be able to operate at a high intensity. Moreover, whatever the tempo of future operations, it is clear that no single service component will be sufficient to meet operational requirements and demands by itself. The army needs to consider how to manage the loss of joint service enablers which had no single service ‘owner’ during SDSR, including theatre-entry capabilities (as a result of a lack of land-amphibious integration), and it needs to refocus on air-land integration. Rebuilding these joint capa-
bilities will be essential to future operations and should inform the combined arms thinking, so the army should involve other services in its force development work. When these capabilities are rebuilt, much more thought will need to be given to joint spectrum management. Lessons can be learnt from the experience of JTFHQ and Joint Helicopter Command in this respect.

2. Combined arms manoeuvre needs to be defined in terms of support and logistics.

Conclusion
Enduring operations in Afghanistan and Iraq have dominated the army and its force development over the past decade. The army has become bespoke and specialised and therefore unsuitable for the demands of the Future Character of Conflict. Recognising this, the army is reverting back to the combined arms manoeuvre approach. However, if it is to make the argument for combined arms it must:

- Identify how and why it is cost effective and provides value for money;
- Provide further evidence from the operational analysis of a wider range of conflicts;
- Assess how multi-role brigades will contribute to coalition operations;
- Explain how multi-role brigades will contribute to the homeland security and resilience demands that are likely to be placed on the armed forces in the future;
- Explore the thesis across all the Defence Lines of Development, and in particular in terms of logistics, procurement and joint enablers.

Notes
1. See Chapter 1 of this occasional paper.

2. It is worth noting that adversaries are affected by culture and have ‘indigenous characteristics’. This provides an advantage that can be exploited in operations provided the military understands that culture. See also Chapter 1 of this paper.

3. This point about the relative expense of maintaining generic capabilities versus transforming the army according to the requirements of each operation deserves to be explored in greater detail. For example, what is the cost of Urgent Operational Requirements which allow an army to transform to meet the requirements of a particular deployment? What capabilities in addition to those contained in multi-role brigades might be required at short notice to meet the demands of future conflicts, and what is their likely cost?

4. The army should also consider how to integrate the Reserves into command structures and multi-role brigades as part of the ‘Total Support Force’ concept.
Medical Support for Future Operations

Operations in Iraq and Afghanistan have dominated the armed forces for the past decade and driven a number of changes to and innovations in the provision of medical support to deployed personnel. This medical support is widely regarded as excellent; for example, the NHS has learnt extensively from military experience and adopted a number of techniques and procedures used on the frontline in developing its own trauma care systems. Public expectations will be high following the UK’s experience in Afghanistan, though somewhat tempered by their understanding of and support for operations. The expectations of patients regarding standards of care will certainly be high – many have come to expect that the medical support they receive will allow them to continue with their careers – as will the expectations of medical staff who have had access to a wider range and higher standard of equipment in Afghanistan. It will be important to maintain public confidence in the quality of support and care, as this is an enabler of military force and does aid public tolerance of deployments.

Medical support to and on military operations traditionally consists of a number of discrete levels of integrated care delivery, commonly known as the ‘echelon system’. UK military planning is predicated on the 1:2:4 hour ‘rule’ within this echelon – that is, advanced first aid within one hour, resuscitation surgery within two hours and definitive surgery within four hours. However, the environmental conditions in Iraq and Afghanistan meant that it was difficult to move up the echelon system in a timely way. As a result, there was a need to improve pre-hospital care and the timelines for getting casualties into hospitals, and the equipment and capabilities of deployed hospitals.

Helicopter-borne Medical Evacuation Response Teams (MERT) and MERT(enhanced) have attracted significant public attention and praise. However, in deciding the level of military support that should be provided on future operations, it is important to realise that MERT is just one component of a continuum of acute trauma care.¹ It is therefore not as simple as saying that MERT direct to deployed hospitals (such as Bastion) is the answer. The echelon system stills exists, but should be made more flexible where required by operational demands. And, at present, there is also no evidence to prove that MERT(e) increases survivability rates.

Furthermore: while the future character of conflict will have some similarities to current operations, notably the high threat from IEDs, which will continue to drive demand for improved pre-hospital care, the increasing requirement to operate in urban and littoral environments and contested lower airspaces will affect the ability of forces to rely on MERT as currently constituted. Care may have to be delivered through other means in the future, including by sea, on foot or in vehicles; the future character of conflict will also place an
emphasis on medical capabilities being deployed in CBRN risk areas; it is clear that medical support will have to cover not just trauma but a wider range of risks such as disease, non-battle and psychiatric injuries, depending on the type of deployment undertaken; and medical capabilities can and should be used to support conflict prevention, stabilisation and counter insurgency operations, both by assisting with the care of the indigenous population and building up an indigenous capability in the host nation.

It follows from this that:

1. The challenges of the future character of conflict could be a real game changer for current army medical doctrine and structures. Further study is needed to understand what demands (and complications) the future character of conflict will present for medical support to operations. Based on this, a concept of ‘intelligent tasking’ needs to be developed to allow tactical flexibility in the delivery of care
2. There needs to be medical input into the Estimates Process and Operational Analysis. Therefore a new, closer relationship between medical staff and formation commanders must be developed. Medical input must include host nation and enemy casualty demands
3. A more systematic and sophisticated approach must be taken to data collection in relation to the standards and adequacy of medical support
4. Medical support needs to be embedded in each of the Defence Lines of Development. The army could also frame its thinking in relation to future medical support by developing medical lines of development.

An Assessment of MERT and MERTe

*MERT and the Echelon System*
Medical support to and on military operations is traditionally made up of ‘echelons’. Each echelon has the same capabilities as the echelon before it, but adds a new treatment capability that distinguishes it from the previous echelon (see Annex 1):

1. Unit level or immediate life-saving measures. This can be provided by any soldier, as all soldiers are trained to administer immediate first aid including simple airway procedures, fracture immobilisation, analgesia and to keep a casualty warm or cool as required. One in four combat soldiers has enhanced first aid training (Army Team Medic)
2. A medical unit that adds dental, laboratory, x-ray and patient-holding capability
3. Mobile army surgical hospitals and combat support hospitals that add the capability to perform surgery
4. General hospitals and field hospitals that add staffing and equipment
for general and specialised medical and surgical treatment
5. UK-based hospitals that can provide the most specialised and long-term care possible.

A number of conditions in Iraq and Afghanistan, including the difficulty of (timely) ground transportation over hostile and inaccessible and the dispersion of forces throughout extensive areas of operation, drove attempts to improve both pre-hospital care and evacuation timelines. During planning for Operation Herrick 4 by 16 Close Support Medical Regiment, it was further noted that

[T]here would be extended timelines to hospital care even with the use of helicopters. The sustained deployment of forward medical care, such as Field Surgical Teams, to all parts of the province was not possible. Given the restraints on the care that can be administered at point of wounding ... it was decided that it would be desirable to bring critical care forward to the patient.

This resulted in the development of Medical Emergency Response Teams – and later enhanced teams, whereby cadre clinicians with an interest in forward critical care joined Emergency Response Teams – by air assets. The intention was to provide an agile enhanced medical response to replace or complement forward echelons of medical support by providing tactically aware, trained and experienced teams that are deployable by any means and can provide critical care skills, clinical excellence despite environmental austerity and rapid delivery of casualties to the most appropriate location.

MERTe teams in Afghanistan are physician-led and made up of the following personnel:

• Consultant Anaesthetist/Emergency Medicine
• Emergency Department RGN
• ODP
• Paramedic
• Interpreter.

This make-up is designed to prevent physiological deterioration and act as an enabler of later medical support by providing a conduit for information between forward areas and the hospital or medical command.

The Evidence for and against MERT
Despite the high profile of helicopter-borne MERT and MERTe, there is no concrete evidence to suggest that this innovation improves survivability rates and other patient outcomes. This is, however, part of a broader problem of data collection in relation to medical support and its success in reducing
casualty rates. There are no studies directly addressing the issue of what is an acceptable timeline from point of wounding to surgical intervention; the threshold has tended to be determined by personal opinion, tactical and logistical imperatives rather than clinical demands, though some recent work has suggested that this is between two and three hours for all casualties.\textsuperscript{4} Without this evidence, the merits are largely intuitive:

- Reduction in time from point of wounding to advanced/haemostatic resuscitation and provision of in-flight diagnostics. This allows physician-led decision-making on critically unstable casualties and therefore an expedited straight move direct to the operating theatre or direct transfer to a regional centre
- A significant contribution to patient morale.

The army (and other services) need to collect and produce a more definitive data set from existing operations to indentify optimal medical interventions, and might need to employ information specialists for this purpose. The dataset should include data from international partners and civilian organisations to increase the depth and breadth of the evidence-base and therefore act as a benchmark. It would be worth the US and the UK developing common or joint theatre registries.

Is There a Future Requirement for MERT?
In addition to a proper evidence base, in considering whether or not to use MERT as a default for future conflicts, there should be:\textsuperscript{5}

- a pragmatic approach to assessing the need for MERT or MERT-E level of capability. Where there is a high intensity of operations, a substantial population at risk and prolonged timelines then the requirement to project forward ‘advanced resuscitation’ is intuitively justifiable. With short timelines, low intensity operations and a small population at risk then MERT without enhancement is arguably appropriate. This debate is integrally linked with the debate regarding the optimal geographical placement of surgical teams in the Battlespace.

The UK can arguably learn lessons from the Israeli zero-echelon approach for low-intensity operating environments with air superiority. However, the more fundamental point remains that the level and type of medical support will differ according to the nature of the operation and deployment. In future conflicts:

- There are likely to be fewer air assets (an implication of the SDSR)\textsuperscript{6}
- Even where air assets are in place, using aircraft in contested airspaces could be difficult
- Air superiority cannot be assumed in the future
The army is increasingly likely to operate in urban and littoral areas, which means that new means of delivering medical support and evacuating casualties should be developed. Pre-hospital care may have to be delivered through other means in the future, including by sea, on foot or in vehicles.

Deployment of MERT puts valuable assets at risk which could be a limiting factor from strategic-level commands in the future (see the chapter in this paper on countering risk aversion at the tactical level. It is also worth noting in relation to risk aversion on the part of individuals, that personnel have become accustomed to high-readiness medical support as a result of service in Afghanistan, which might not be available in the future).

The ‘MERT’ concept therefore has to become much more flexible. The army (and other services) need to develop a process of ‘intelligent tasking’, whereby quick assessments are made between both medics and operators as to the most appropriate assets and components that should make up the evacuation route. This process, which would introduce clinical elements to a previously operational-only decision, should be embedded in doctrine. Moreover, the army needs to undertake a more detailed study to determine what challenges the future character of conflict will pose for the delivery of medical support to operations.

The Future of the Echelon System
There is an argument for having Role-3 facilities as the default for trauma care, as evidence shows that survival is better in hospitals that are fully resourced and specialised for the treatment of the injured in terms of infrastructure, blood, climate control, knowledge and staffing levels. Indeed, some have gone so far as to suggest that stopping elsewhere en-route to these larger centres (a key element of the echelon system) is of uncertain benefit.

However, resource constraints could limit this approach, which is more applicable to a large force with high expectations of casualty rates. The requirement might be met by tailored Role-2 enhanced facilities – that is, a field hospital with the physical infrastructure of a Role-3 facility, including CT scanner, but with a reduced capacity and limited surgical disciplines. The key would be to ensure that the surgical disciplines meet the operational requirement. This points to the requirement for better casualty estimation before a deployment. Given the wide range of tasks the army can expect to undertake as a result of Defence Strategic Guidance and the Military Tasks outlined in the Strategic Defence and Security Review, including conflict prevention, stabilisation, counter-insurgency (COIN) and a military role in homeland security and resilience (see the chapter in this volume on the specific requirement for military support in the homeland), this must include:
• Estimates of the demand for medical support from the host nation, particularly as medical forces can (and should) contribute to conflict prevention, stabilisation and COIN tasks both by winning hearts and minds by providing medical support and building an indigenous medical capability in host-nation forces. This utility of medical staff has been neglected to date – medical support to COIN and stabilisation is not included in existing doctrine, and there is no specific medical doctrine for COIN and stabilisation – but needs to be included in army doctrine, training and operational plans

• Estimates of the demand for medical support as a result of enemy casualties

• Estimates of support will have to cover not just trauma, but, depending on the type of deployment undertaken, a wider range of risks, such as disease, non-battle and psychiatric injuries

• Guidance on what demands are likely to be placed on the military in the homeland context from a health perspective, notably in relation to risks such as CBRN attack for which the Olympic Games in 2012 are arguably already a driver (Note that the capability to deploy in and deal with CBRN affected areas is also likely to be a requirement abroad.)

• The need to deal with disease, non-battle and psychiatric injuries as well as trauma.

This all needs to be formally input into the Army’s Estimates Process and Operational Analysis. A related issue is the need for a better (and more formal linkage and relationship) between medical advisers, commanders and operations and planning staff: poor relationships have tended to be a stumbling block in the past, to the extent that commanders have reduced the pace of operations because they do not feel they have adequate estimations. In turn this points to a requirement for the army to assess whether medical staff should train within their professional community or with the formation they deploy with. Arguably, more training should be done with formations, as this allows medical staff to understand their requirements, select the right tools and influence the perceptions of soldiers.

Having Role 3 as the default should only be constrained by tactical demands. However, given that this is likely in future conflict, all elements of the echelon system (including MERT) will still have a role. Lessons from the deployed UK and US military and civilian medicine, for example, have shown far forward interventions to be effective. As part of developing the echelon system the army should therefore consider specialising pre-hospital care by undertaking further work on the pay-off between the requirement for units to remain light, with a small logistic footprint, and the desire to maximise treatment capacity and capability at unit-level, which will in turn define the make-up and requirement for Forward Surgical Teams; and also investing high-
end medical skills sets in a wider number of soldiers. This might also help overcome the significant demands of medical force protection.

Overall, it is clear that the level of medical support provided needs to be flexible enough to meet the requirements of different types of deployment and the demands of different stages of operations (in terms of tempo and tactical obstructions). This flexibility should be the value of a well-constructed echelon system and better casualty estimation enables a tailored approach. It might, however, be better termed a ‘hub and spoke’ approach as individuals need not progress through the entire echelon.

Medical Support and the Defence Lines of Development
The analysis above suggests that medical support needs to be considered (if not embedded) across each of the Defence Lines of Development, namely training, equipment, personnel, information, concepts and doctrine, organisation, infrastructure and logistics. This has been neglected to date: medicine is not seen as a core enabler. The army should also question whether the current division/groupings of Combat Support and Combat Service Support are adequate to encapsulate and incorporate the medical function.

Post-Afghanistan there will be some particular challenges in relation to infrastructure and training lines of development which the army will need to manage.

Most equipment has been introduced through Urgent Operational Requirements. The medical profession need to know whether they will have access to (and be able to train with) large-scale transfusion, CT scanners, ITU support and so on. The army should develop a ‘compendium’ that informs policy-makers of the level of support provided by different capabilities (and the training requirements for those capabilities), to ensure informed decisions are made in planning rounds.

It is easy to maintain the skills of medical staff in the high operational tempo of Operation Herrick, but how will they be maintained afterwards? At the moment there are seven operations a day for two to three surgeons in Afghanistan, with multiple surgeons (up to five) operating on one casualty in Afghanistan. And how will the army develop the skills set to deal with a wider range of people (for example, in host-nation countries)? There are opportunities for joint training with organisations like the London Ambulance Service, which should be explored.

Maintaining skills and experience is important also in relation to critical care, as decisions and diagnoses pre-hospital have to be made on the basis of incomplete information. It is therefore a mixture of knowledge, experience and intuition that matters.
Also important is specialising pre-hospital care by identifying the skills set for all pre-hospital clinicians and ensuring that pre-hospital care is considered a ‘mainstream’ speciality.

At the moment there are Single Service training programmes and pre-deployment pathways, with different tour lengths. There need to be standard approaches, ensuring consistency across the three services given that hospitals are tri-service.

Improve baseline knowledge of the echelon system, and in particular approaches to medical evacuations, by all soldiers. There have been instances where battlegroup commanders are distracted by directing MERT rather than reconfiguring their manoeuvre campaign; company commanders and even corporals should be able to focus on the former.

**Conclusion**
The analysis above suggests that medical support to future operations needs to be tailored through adequate understanding of the demands of the future character of conflict, improved estimates processes and by developing ‘intelligent tasking’. The analysis also suggests that medicine needs to be viewed as a core enabler by the Army and embedded across the Defence Lines of Development. In developing a flexible echelon system, the Army might also find it useful to develop medical-specific lines of development to frame its thinking and analyse how FCOC affects each component of medical doctrine and structures, including:

1. Force health protection
2. Pre-hospital
3. Hospital on deployment
4. Medical evacuation
5. Medical C3
6. Medical logistics
7. Medical training
8. Host-nation development

These lines of development should be considered across the range of tasks the Army is likely to undertake in the future, including stabilisation, conflict prevention and homeland security requirements.
Appendix 1: The Military Medical System

| Pre-hospital resuscitation | First aid  
|                           | Army Team Medic  
|                           | Professional Medic  
|                           | Battlefield ATS  
|                           | MERT  
| ED resuscitation          |  
| Priority Surgery          |  
| Field intensive care      | Field Hospital  
|                           | CAAST  
| Definitive care           | Surgery  
|                           | Critical Care  
|                           | Ward Care  
| Rehabilitation            |  

Each echelon is enabled by appropriate training, and the entire echelon is enabled through a coherent governance system.

Notes

2. D O’Reilly, T König and N Tai, ‘Field Trauma Care in the 21st Century’, *Journal of the Army Medical Corps* (Vol. 154, No. 4), p. 260. Current tactics and procedures support delivery of a stepwise clinical interventional capability, which is inversely related to the level of threat.


6. It is worth asking whether the UK can or should dual-role aircraft for medical support, as the US did with search and rescue aircraft in Afghanistan under PEDRO due to a lack of air assets. Note, however, that the US is moving away from this approach due to
problems with the quality of support this approach provides.

7. There is certainly a question over whether or not this is sustainable. It is driven by the complex amputations that need to take place and, if this risk will be a feature of future conflict, the Army must take this into account in its resourcing decisions.

8. Adapted from Hodgetts and Mahoney, op. cit., p. 6.
The Army’s Approach to Risk Management on Operations

The Army Doctrine Publication (ADP) on Operations, which was published in November 2010, raised the issue of risk prominently and for the first time in higher level doctrine. ADP explored the nature of risk, the place of risk within operations and how commanders and individuals should deal with risk. Based on ADP it is clear, firstly, that risk is neutral and acceptance of it can present both real opportunities and the potential for grave consequences. Secondly, that it is necessary to take calculated risk (by balancing a range of different factors) in order to exploit opportunities and achieve success in the field.

Research by the army suggests that despite this emphasis on the military necessity of taking calculated risk, tactical commanders have become increasingly risk averse. The army is worried that risk aversion is hindering its underlying philosophy and approach to operations, namely the philosophy of ‘mission command’, which advocates centralised, clear intent from commanders, but decentralised execution with significant freedom of action to meet that intent. It also threatens the ‘manoeuvrist approach’, which emphasises understanding and targeting the conceptual and moral components of an adversary’s fighting power as well as attacking the physical component, and is dependent on seizing the initiative, organisational agility, the ability to identify threats and vulnerability, and being prepared to decentralise and take risks to achieve objectives in the most efficient and timely way.

It is argued that a number of factors are contributing to risk aversion. In particular: a feeling that the weight of regulation is growing, including the range of inquests and inquiries that individuals might be subject to as a result of mistakes during training, exercises and on operations; freedom of action being reduced as a result of changes in chain of command ‘ownership’ of operations, and in particular a tendency for strategic-level headquarters to interfere with tactical decisions because of the strategic impact frontline actions can have; and UK-based in-barracks and training procedures which have become unnecessarily bureaucratic and stifle risk-taking judgement, not least as a result of the loss of Crown Immunity within health and safety legislation.

However, there is only anecdotal evidence to suggest that this is the case. These views are not universal, and the anecdotes relate to the balance of force protection, rather than problems with gallantry and cowardice. The army should collect evidence of risk-averse behaviour to determine if there is actually a problem.
There are a number of external factors that affect the cost/benefit analysis of individuals and organisations – factors which the army command needs to be aware of – but these do not indicate risk aversion per se, and can be addressed through effective training, education and the existing Orders and Estimate processes. Further risk-assessment processes are not needed.

The real issue lies not with people on the frontline but how the strategic, operational and tactical levels of decision-making interact, and in particular how the strategic level interferes with frontline decisions. Commanders need to develop a better understanding of how risk at the political strategic level interacts with decisions taken at the tactical level (and vice versa). The army needs to push for absolute clarity about responsibilities and accountabilities within chains of command.

Taking these steps is vital, because future adversaries will make an estimate of the risk appetite of deployed forces, from the strategic through to the tactical levels, and this presents a potential vulnerability unless ‘risk’ is adequately understood.

Is There a Growing Risk-Averse Culture in the Army?

When looking at the issue of ‘risk’, it is important to distinguish between how (and why) organisations manage risks on the one hand, and whether and how individuals take risks on the other. Much discussion tends to focus on how organisations manage risk. This is certainly an important component, and in turn has a bearing on how individuals behave, but the army leadership must also be aware of the factors that affect individual cost-benefit analysis and decision-making.

*Individual Decision-Making and Cost-Benefit Analysis*

There is little evidence of risk aversion on the part of individual soldiers, as demonstrated by the significant number of gallantry honours and citations that are awarded. There is a suggestion, however, that the majority of gallantry awards have been made to individuals who have ‘reacted’ well, or extremely well, to dangerous situations in which they found themselves as opposed to individuals decorated for ‘proactive’ gallantry (with several significant exceptions). However, there are a number of external factors which are known to influence decision-making. These factors reflect the prevailing social and strategic context (of which ‘risk’ is a function) and include the fact that we live in:

- An instant media age, with 24/7 coverage
- An age of public scepticism about military deployments. A notable example is the public attitude towards ongoing operations in Afghanistan: political debates will increasingly influence the decisions individual soldiers make, as they will be told by families and friends that
the operation is only discretionary and that forces will be withdrawn from 2014. This reduces an individual’s appetite for calculated risk-taking. In this context it is also important to note that the level of risk the public, politicians and soldiers themselves are willing to accept and take will depend on whether operations are discretionary or non-discretionary, with greater levels of risk acceptance and taking for the latter; and vary according to the type of operation undertaken, for example conflict prevention versus expeditionary interventions. The army needs to explore the implications of these points
  • A litigious age, with burgeoning rights and multi-party litigation
  • An age with a wider range of inquiries and inquests that can be applied to any event, whether during training, exercising or on operation, even years later when different norms and frameworks will be retrospectively applied.

These developments affect the willingness of individuals to make decisions. They do not indicate (nor are they evidence for) the development of a risk-averse culture, but rather indicate that the process of decision-making incorporates a wider range of factors than it did previously.

There is, for example, anecdotal evidence in relation to body armour and electronic countermeasures (ECM) to suggest that some commanders and soldiers are unwilling to make decisions about the balance between force protection and agility, and instead delegate them upwards. The reasons for this unwillingness should be explored further, but arguably include a combination of reliance on others to make decisions being embedded in culture and training; training which encourages people to follow procedures rather than make decisions in specific contexts (for example, training creates an assumption that there is no IED risk provided the taught procedures in relation to ECM are always followed on deployment); fear that the system will not protect them and back-up their decisions; unfounded fears about coronial inquests; personal fear of or unwillingness to deal with bereaved families; and a blame culture in which individuals who took the last action are criticised and held to account. The army needs to understand these factors, many of which are due to incorrect perceptions and assumptions, and address them through effective training, education and leadership.

Organisational Approaches to Decision-Making and Risk Management
It is arguable that individual unwillingness to make decisions is addressed by organisations through regulation and management, and in particular the over-specification of requirements and functions. This creates a vicious circle because people in turn come to expect the protection provided by procedure, which further dilutes responsibility and the ownership of both challenges and decisions. It is also arguable that those on the front line are often ill-equipped to make decisions because they do not have sufficient
understanding or guidance from a political level on the aims and objectives of an operation.³

What is clear, however, is that the same factors which affect individual decision-making and cost/benefit analysis also affect higher levels of command – but in different ways. Headquarters formations increasingly interfere at the operational and tactical levels because actions on the front line now have disproportionate effects at the strategic and political levels. The army needs a better understanding of how the importance attached to risk at these levels impacts on the tactical level – and how risk is defined at these levels. Often risk is managed and ruled on by people who do not have operational or frontline experience, and therefore who do not understand the nature of military operations or the context for frontline decision-making; the army needs to educate these individuals (and the wider public) about the demands of operations and also influence them.⁴

One example is provided by the Permanent Joint Headquarters (PJHQ) making decisions about the level of armour individuals are required to wear versus the requirement for agility, probably because of the strategic effect of fatalities and even casualties – even though it cannot, as a headquarters, own that risk.

**What Should the Army Do?**

There are two broad approaches to managing risk. The first is to apply a process of risk assessment, and, if necessary, improve it. The second is to identify who owns different levels of risk.

**Does the Army Need a Risk Assessment-Process?**

A number of mechanisms for assessing risk already exist, including:

- Rules of engagement that balance risk to individuals with the wider risks to operational success (for example, placing emphasis on minimising civilian casualties in a counter-insurgency campaign, limiting the use of air power)
- The Estimate Process which itself represents a risk assessment
- The Combat Estimate, which has been updated recently to include consideration of risk as part of Mission Analysis.

These processes include different levels of command, from the political to the tactical, and also the opportunity to secure waivers to certain restrictions. However, risk assessment is largely implicit within them: there is nothing explicit to force a commander or his staff through assessing risk and mitigating its effects. A key question is whether or not this is adequate – should it be kept as an intuitive process, or become formalised, or recognised that the whole process contributes to this?
One proposal to counter the fear that a culture of tactical risk aversion is developing in the army is to develop an auditable trail of risk consideration during tactical planning, and an assurance that risk was taken for compelling operational reasons. However, this would go against the spirit of ADP Operations, which notes that ‘risk analysis and management are essentially defensive techniques, used to adjust or limit plans. This distinguishes them from the more positive treatment of risks as opportunities. They are too often the default setting, but should be regarded as a complementary or supporting activity rather than drivers’.

Moreover, the Haddon-Cave Report into the loss of the RAF Nimrod MR2 aircraft XV230 in Afghanistan in 2006 found that there is little value in expanding existing processes (or developing new ones) to meet the requirements of ‘risk assessment’. In his report, Haddon-Cave rejected calls for an expansion of ‘Operational Safety Cases’. The parallels with between safety cases and risk assessment processes at the tactical level are self-evident; Haddon-Cave noted the:

[False] sense of security that a Safety Case is some sort of paper ‘vault’ into which risks may be safely deposited and forgotten about. There is a pervading sense that the mere fact of a Safety Case means the platform is safe. I am concerned that the exponential growth of the ‘Safety Case industry’ has led to a culture of ‘paper safety’ at the expense of real safety. I am concerned that the growth of Safety cases has led to a significant diversion of resources and reasoning away from the platform or equipment itself: time, money and manpower which would be better spent on more hands-on attention, maintenance, checks and/or upgrades for the platform itself.

Haddon-Cave went on to list a number of shortcoming with Safety Cases (see Box 1).

In other words, risk assessment processes risk ignoring operational elements; becoming paperwork and ‘tick box’ exercises; and falling short of their ambition of stimulating thought and action and encouraging people to think as actively as they can to either exploit or manage risks. Haddon-Cave called for ‘pragmatic’ and ‘sensible’ exercises when new operational challenges present themselves, which is largely what those on the front line do already. The counter argument is that the public and families have now come to expect a significant ‘risk assessment’ process and audit trail. The public and the media therefore need to be better educated about the nature and demands of operations.

The real issue is one of empowering individuals to make calculated decisions. Much of this is dependent on developing a culture to (re)enable mission
command and the manoeuvrist approach. In part this is dependent on better guidance from the strategic level; while at the tactical level extending or developing new processes will have no benefit, arguably more should be done at a strategic level to understand risk before forces deploy (to national interests, costly platforms and so on) — in other words, when campaign activity is being designed — if this results in a better expression of command intent to forces on the ground. Where adequate direction and guidance is lacking, the military leadership should push government to provide it.

The army also needs to take steps to develop a culture in line with its mission command philosophy and manoeuvrist approach, including:

**Box 1:** Haddon-Cave comments on Safety Cases.

- Bureaucratic length: Safety Cases and Reports are too long, bureaucratic, repetitive and comprise impenetrable detail and documentation
- Obscure language: Safety Case language is obscure, inaccessible and difficult to understand
- Wood-for-the-trees: Safety Cases do not see the wood for the trees, giving equal attention and treatment to minor irrelevant hazards as to major catastrophic hazards, and failing to highlight, and concentrate on the principal hazards
- Lack of vital operator input: Safety Cases lack any, or any sufficient, input from operators and maintainers who have the most knowledge and experience about the platform
- Disproportionate: Safety Cases are drawn up at a cost which is simply out of proportion to the issues, risks or modifications with which they are dealing
- Compliance only: Safety Cases are drawn up for compliance reasons only, and tend to follow the same, repetitive, mechanical format which amounts to no more than a secretarial exercise.
- Audits: Safety Case audits tend to look at the process rather than the substance of Safety Cases
- Self-fulfilling prophesies: Safety Cases argue that a platform is ‘safe’ rather than examining why hazards might render a platform unsafe, and tend to be no more than self-fulfilling prophesies
- Not living documents: Safety Cases languish on shelves once drawn up and are in no real sense ‘living’ documents or a tool for keeping abreast of hazards. This is particularly true of Safety Cases that are stored in places or databases which are not readily accessible to those on Front Line who might usefully benefit from access to them.
Restoring Responsibility

1. It is critical to have a clear and simple chain of command and duty holders
2. Duty-holders must be re-established in operational contexts where real decision-making should take place and be controlled
3. Duty holders must have a clear idea of what their responsibilities are and what ‘envelope’ they are operating in
4. Defined duty holders need support and resources to be able to exercise their responsibilities
   - A culture which allows open and honest reporting, and which is therefore based on trust, fair treatment and integrity, needs to be developed. Deepcut is an example of the army successfully changing culture to one that encourages people to admit and acknowledge mistakes and errors. It is interesting to note that Deepcut was not a long inquiry – people and institutions do not really learn from long, onerous processes.

This clarity, rather than a mass of process which obfuscates, will go a long way towards achieving behavioural and attitudinal change. GCHQ, for example, has developed an organisational culture in which staff are absolutely empowered to say Yes and only have to push decisions up when they want to say No; staff have a clear framework within which they operate, developed through leadership, guidance and training. There might be a danger that if training has another end – for example to select units for tasks – then the ‘mission-specific imperative’ drives the exercise impacting upon the ostensible end result, namely the ‘learning experience’.

Effective Training and Rewarding Risk Taking
The effect of training in helping to reinforce behavioural and attitudinal change must not be underestimated. Over-training and mission-specific training can lead to the removal of initiative; the army must be clear about what it wants the end results of training to be.

- Learning from mistakes is the best way to learn and to prevent bigger errors. However, history has shown that organisations only tend to learn from big mistakes. Research identifies that there are many ‘low-level’ errors and near misses which are precursors (and hence warnings) of impending accidents; the key point is to capture and understand these low-level errors before they build up. The army must create time for this in training
- The army must not lose sight of the fact that training and education should aim to develop people who can think and make judgements in difficult circumstances. The value of complex scenarios and case studies in achieving this should not be underestimated. The use of ‘training passports’ in some instances, which suggested that if an in-
individual had completed all training they would face no risk or make decisions about risk, is a bad example. Complexity must be brought into the culture of the army: individuals need to be able to deal with ambiguity and complexity, particularly given the characteristics of the future battle space as outlined in the FCOC work.

- Mission-specific training for Afghanistan is very reliant on air dominance and rotary support. Thus the risk to forces is minimised which is probably unsustainable. Training needs to be realistic and take into account the limitations on future support assets.
- If the Army accepts that calculated risk-taking (sometimes equivalent to cunning and cheating!) is vital to success on operations, it must reward this behaviour. There is an argument for reviewing the criteria by which honours and promotions are awarded. Anecdotal evidence suggests that the majority of gallantry/bravery awards are given for extremely brave actions taken in reaction to a predicament rather than for proactive activity – though there are also a number of significant exceptions to this statement.

Establishing Effective Accountability

The effect of the changes outlined above will be to restore responsibility to the right level and also engrain the idea that responsibility is a privilege. Accountability is, of course, the reciprocal of responsibility. However, the balance of accountability must be right in relation to the wide range of inquiries and inquests that can now take place.

1. The ‘long screwdriver’ does not need to exist: Commanders-in-Chief are force generators and should not have a role in operational risk. Recognising this should limit the frequency of single-service boards of inquiry.
2. Personnel must have the confidence that they will be given the opportunity to explain the context of their decisions. If decisions are made based on the best level of available information they have at the time, their judgement cannot be questioned and should be backed up by the chain of command.
3. Explanation of the system of coronial inquests is required and demonstrate that decisions made on operations are respected when subjected to external scrutiny; previous inquests have been critical of the levels of protection provided by vehicles and technical failings of equipment, but cannot make adverse comment on tactical decisions taken by commanders. In the Supreme Court judgement in the case of Smith, Lord Phillips stated that ‘if the article 2 obligation extends to considering the competence with which military manoeuvres have been executed, a coroner’s inquest cannot be the appropriate medium for the inquiry’.
4. There needs to be greater emphasis on lessons learned in the range of inquiries and inquests that can take place.
5. The inquest and inquiries system does not adequately distinguish between mistakes and gross misconduct at present. The responses to all mistakes are the extremes of ‘nothing’ or ‘maximum charge’: new options should be developed.

Conclusion and Summary
The Army Doctrine Publication on operations published in November 2010 raised the issue of risk prominently and for the first time in higher-level doctrine. It is an issue that therefore needs to be explored and understood in greater detail.

Research by the army suggests that despite this emphasis on the military necessity of taking calculated risk, tactical commanders have become increasingly risk averse. The army is worried that aversion to risk is hindering its underlying philosophy and approach to operations. It is also the case that future adversaries will make an estimate of the risk appetite (even if based on perception rather than evidence), from the strategic to the tactical levels, and this is an issue that therefore needs to be gripped. This chapter concludes that:

- There is no real evidence base for this, only anecdotal evidence concerning force protection issues. The army should collect evidence of risk-averse behaviour to determine if there is actually a problem
- There are a number of external factors which affect the cost/benefit analysis of individuals and organisations – factors which the army command needs to be aware of – but these can be addressed through effective education, training (time to make and learn from mistakes) and the existing Orders and Estimate processes
- Further risk-assessment processes are not needed, but greater clarity about responsibility and accountability within chains of command is urgently required
- Some changes need to be made to the use of inquiries and misperceptions about the purposes of coronial inquests need to be addressed. Greater emphasis on lessons learned, personnel must have the confidence that they will be given the opportunity to explain the context of their decisions and they must be backed up if decisions were made on the best level of available information at the time
- The real issue is how the strategic, operational and tactical levels of decision-making interact, and in particular how the strategic level interferes with front line decisions. Commanders need to develop a better understanding of how risk at the political strategic level interacts with decisions taken at the tactical level (and vice versa) and educate politicians, the media and public about the nature and demands of operations.
Notes

1. In a policing context, the issuing of body armour by some police forces created the perception that the job was dangerous and led to other police forces having to issue body armour for no operational reasons, but because a culture of risk aversion developed.

2. Coroners do not have the power to make recommendations relative to Rule 43 (reports to prevent future deaths). If arising out of the evidence a coroner has concerns and believes that action should be taken with a view to the prevention of future fatalities, then he is under a duty to consider making a report under Rule 43. The report is then sent to an individual or body, which then has the power to make any changes that it considers are needed. Any changes, or reasons as to why no changes have been made, are detailed in the response.

3. Clear aims and objectives are unlikely to be forthcoming as any government favours the flexibility that ambiguity provides for them.

4. The influence task is vital. A prominent example of successful influence of politicians comes from the Iraq campaign: commanders framed or balanced the choice as one of accepting the likelihood of a small number of casualties or fatalities on every attempt to resupply Basra Palace, versus the reputational risk of pulling out with wider consequences for British strategy and involvement in Iraq.

5. Although the ADP then goes on to say that ‘risk analysis is a two-part process used to identify activities and events that may give rise to significant risk. Risk identification helps identify what could go wrong and how; whilst risk assessment judges the likelihood of those risks occurring, estimates their potential impact and identifies who should be responsible for taking them. Risk management reduces the possibility of unwanted events occurring, mitigating their consequences and exploiting the opportunities they may present.’ This suggests more of a focus on process than is perhaps included in the estimate processes.


7. A Safety Case is defined in the military context as ‘a structured argument, supported by a body of evidence, that provides a compelling, comprehensible and valid case that a system is safe for a given application in a given environment’.

8. Haddon-Cave *op. cit.*, paras 22.1–22.6.


10. This is where organisations like the MoD Main Building and PJHQ should focus their efforts. These organisations cannot understand or contemplate ‘cumulative risk’ – in
other words, the total of all individual actions on the ground such as using equipment in unexpected ways to innovate in response to enemy tactics, techniques and procedures. Therefore mission command, exercised appropriately, is the only way to deal with the challenge of risk at a tactical level.

11. ADP Operations stresses the need for sufficient resources and speed of response to problems and crises if individuals and formations are to take calculated risks.

12. This is in contrast to the tendency to blame individuals who took the last action, rather than looking at all organisational aspects which led up to an incident.

13. Future conflicts will be more, not less, congested, cluttered, contested, connected and constrained.

14. ADP Operations notes that risk-taking is supported by timely and accurate information; this does not necessarily reflect the subtlety of making decisions based on the best available information at the time. See also Work Package 4 of Exercise Agile Warrior on the ‘understand’ demands of future operations.
The US Army and Future Conflict: Preparing for a Complex and Uncertain Future

This chapter reproduces a speech given to the Military Academy at West Point by US Defense Secretary, Robert Gates, on 25 February 2011. The speech covered many of the themes and topics which are discussed (from a UK perspective) in other chapters of this occasional paper. It provides a useful insight on the emerging thinking of a key international partner.¹

Thank you General, for that introduction. It’s a pleasure to be back here at West Point, although as I often say, it’s always a pleasure to be away from Washington, DC.

One of the greatest privileges of serving as Secretary of Defense over the last 4-plus years is the opportunity to visit the service academies – to speak to and hear from the future leadership of the finest military in the world. This will be the fourth – and final – time that I address the cadets of the US Military Academy as Secretary of Defense. The last time I spoke to the entire corps of cadets in 2008, it was an evening lecture on strategy and leadership that ran to nearly 50 minutes. Rumor has it that there were a few stalwart cadets still awake at the end. Knowing most of you have been up since dawn, and knowing that the Firsties get to start their 100th Day weekend celebrations when I’m done here, I’ve decided to make this presentation much shorter.

 Nonetheless, I did want to take this last opportunity to share some thoughts with you, and through you to the Army as a whole, about the institution you will someday lead – the United States Army – and how it can better prepare itself, and in particular its leaders, for a complex and uncertain future. No doubt the Army’s challenges are daunting and diverse – supporting families, caring for wounded warriors, dealing with post-traumatic stress, doing right by soldiers, strengthening the NCO corps, training and equipping for the future, and finding a way to pay for it all. Today, I’d like to focus on three interrelated issues:

• The future of conflict, and the implications for the Army;
• How best to institutionalize the diverse capabilities that will be required; and
• The kinds of officers the Army will need for the 21st Century, and how the service must change to retain and empower those leaders.

When you receive your commission and walk off the parade field for the last time, you will join an Army that, more than any other part of America’s military, is an institution transformed by war. The change has been wrenching for a service that a decade ago was essentially a garrison army, a smaller version of the Cold War force that faced down the Soviets in Europe and routed Saddam’s divisions from Kuwait – a force mainly organized, trained, and equipped to defeat another large modern army.

The Army’s ability to learn and adapt in recent years allowed us to pull Iraq back from the brink of chaos in 2007 and, over the past year, to roll back the Taliban from their strongholds in Afghanistan. As one of your former professors from the SOSH department, now the Army’s vice chief of staff, General Pete Chiarelli, once said it is important that the hard fought lessons of Iraq and Afghanistan are not merely ‘observed’ but truly ‘learned’ – incorporated into the service’s DNA and institutional memory.

Which leads to the first major challenge I see facing the Army: How will it structure itself – how will it train and equip – for the extraordinarily diverse range of missions it will face in the future? There has been an overwhelming tendency of our defense bureaucracy to focus on preparing for future high-end conflicts – priorities often based, ironically, on what transpired in the last century – as opposed to the messy fights in Iraq and Afghanistan. But without succumbing to what I once called ‘next-war-itis,’ I do think it important to think about what the Army will look like and must be able to do after large US combat units are substantially drawn down in Afghanistan – and what that means for young leaders entering the force.

We can’t know with absolute certainty what the future of warfare will hold, but we do know it will be exceedingly complex, unpredictable, and – as they say in the staff colleges – ‘unstructured.’ Just think about the range of security challenges we face right now beyond Iraq and Afghanistan: terrorism and terrorists in search of weapons of mass destruction, Iran, North Korea, military modernization programs in Russia and China, failed and failing states, revolution in the Middle East, cyber, piracy, proliferation, natural and man-made disasters, and more. And I must tell you, when it comes to predicting the nature and location of our next military engagements, since Vietnam, our record has been perfect. We have never once gotten it right, from the Mayaguez to Grenada, Panama, Somalia, the Balkans, Haiti, Kuwait, Iraq, and more – we had no idea a year before any of these missions that we would be so engaged.

The need for heavy armor and firepower to survive, close with, and destroy the enemy will always be there, as veterans of Sadr City and Fallujah can no doubt attest. And one of the benefits of the drawdown in Iraq is the opportunity to conduct the kind of full-spectrum training – including mechanized combined
arms exercises – that was neglected to meet the demands of the current wars. Looking ahead, though, in the competition for tight defense dollars within and between the services, the Army also must confront the reality that the most plausible, high-end scenarios for the US military are primarily naval and air engagements – whether in Asia, the Persian Gulf, or elsewhere. The strategic rationale for swift-moving expeditionary forces, be they Army or Marines, airborne infantry or special operations, is self-evident given the likelihood of counterterrorism, rapid reaction, disaster response, or stability or security force assistance missions. But in my opinion, any future defense secretary who advises the president to again send a big American land army into Asia or into the Middle East or Africa should ‘have his head examined,’ as General MacArthur so delicately put it.

By no means am I suggesting that the US Army will – or should – turn into a Victorian nation-building constabulary – designed to chase guerrillas, build schools, or sip tea. But as the prospects for another head-on clash of large mechanized land armies seem less likely, the Army will be increasingly challenged to justify the number, size, and cost of its heavy formations to those in the leadership of the Pentagon, and on both ends of Pennsylvania Avenue, who ultimately make policy and set budgets.

What we can expect in the future is that potential adversaries – be they terrorists, insurgents, militia groups, rogue states, or emerging powers – will seek to frustrate America’s traditional advantages, in particular our ability to shoot, move and communicate with speed and precision. From the look of things, the Army will not repeat the mistakes of the past, where irregular warfare was shunted to the side after Vietnam. The odds of repeating another Afghanistan or Iraq – invading, pacifying, and administering a large third world country – may be low. But in what General Casey has called ‘an era of persistent conflict,’ those unconventional capabilities will still be needed at various levels and in various locations. Most critically to prevent festering problems from growing into full-blown crises which require costly – and controversial – large-scale American military intervention.

A second challenge that I believe faces today’s and tomorrow’s Army – your Army – is whether and how the Army can adapt its practices and culture to these strategic realities. From the beginning of the wars in Iraq and Afghanistan, our soldiers and junior- and mid-level leaders down range have been adjusting and improvising to the complex and evolving challenges on the ground – in many cases using the Internet, especially tools of social media, to share tactical lessons learned in real time with their colleagues at the front or preparing to deploy back here in the United States.

As one would expect, it took some time for the bureaucracies here at home – an Army and a Defense Department structured primarily to prepare for war,
not to wage war – to respond with remotely similar agility. But with inspired leadership and creative thinking the progress has been real. For example, the doctrine for the new Advise and Assist Brigades was developed and fielded in a couple of months, and over the past two years these reconfigured units have played a key role in the successful transition to full Iraqi security responsibility.

But the important question then is: how can the Army prepare, train, and retain officers with the necessary multifaceted experience to take on a broad range of missions and roles? Where there is not one, but many doctrines in play, often simultaneously. For example, given the ongoing and prospective requirements to train, equip and advise foreign armies and police, how do we institutionalize security force assistance into the Army’s regular force structure, and make the related experience and skill set a career enhancing pursuit?

I hope you take some instruction and inspiration from the career of Russell Volckmann, Class of 1934. At the outbreak of World War II Volckmann was serving as a full-time embed in the Philippine army. After the Japanese invasion, Volckmann fought alongside his Philippine unit, and rather than surrender, he disappeared into the jungles and raised a guerrilla army of more than 22,000 men that fought the Japanese for the next three years. When the Japanese commander finally decided to surrender, he made the initial overtures not to General MacArthur, but to Volckmann, who went on after the war to help create the Green Berets. My point: if you chart a different path, there’s no telling the impact you could have – on the Army, and on history.

Indeed, the Army has always needed entrepreneurial leaders with a broad perspective and a diverse range of skills. As President Kennedy put it, speaking on these grounds half a century ago, ‘your military responsibilities will require a versatility and an adaptability never before required in war or in peace.’ And for an era of full spectrum conflict, when we confront security dilemmas that Kennedy called ‘new in intensity, ancient in origin,’ America can succeed only with leaders who are themselves full-spectrum in their thinking. The military will not be able to train or educate you to have all the right answers – as you might find in a manual – but you should look for those experiences and pursuits in your career that will help you at least ask the right questions.

Maxwell Taylor, class of ’22, was an Asia foreign area specialist in the 1930s before becoming the famed commander of the 101st airborne, superintendent of West Point, and later Army Chief of Staff and Chairman of the Joint Chiefs. He once observed of his fellow academy grads that, ‘the goats of my acquaintance who have leapfrogged their classmates are men who continue their intellectual growth after graduation.’
So in addition to the essential troop command and staff assignments, you should look for opportunities that in the past were off the beaten path, if not a career dead end – and the institutional Army should not only tolerate, but encourage you in the effort. Such opportunities might include further study at grad school, teaching at this or another-first rate university, spending time at a think tank, being a congressional fellow, working in a different government agency, or becoming a foreign area specialist. On that last note, I would encourage you to become a master of other languages and cultures, a priority of mine since taking this post. A pilot program begun in 2008 to incentivize ROTC cadets to learn foreign languages has grown from a couple dozen participants to some 1,800 today.

It is incumbent on the Army to promote – in every sense of the word – these choices and experiences for its next generation of leaders – the junior- and mid-grade officers in Army ranks who represent the most battle-tested group in its history. More so, in fact, than many of the superiors they might report to. The US military has always distinguished itself from other countries by the degree of trust and responsibility placed on its small unit leaders. But Iraq and Afghanistan – called the ‘captains’ wars’ – have taken this trend to a new level, where officers of lower and lower rank were put in the position of making decisions of higher and higher degrees of consequence and complexity. Officers now poised to take what they’ve learned to shape the institution to which they’ve given so much – as some are now doing as your instructors here at West Point. The diversity of experiences and essential adaptability of this generation are crucial to dealing the complexity of conflict in this century.

Which brings me to the third and greatest challenge facing your Army, and frankly, my main worry. How can the Army can break-up the institutional concrete, its bureaucratic rigidity in its assignments and promotion processes, in order to retain, challenge, and inspire its best, brightest, and most-battled tested young officers to lead the service in the future? After the major Afghan troop deployments end in 2014, how do we keep you and those 5 or 10 years older than you in our Army? This is something I’ve discussed many times with the current service leadership and with General Dempsey, the TRADOC commander, before recommending him to the President as the next Army Chief of Staff.

The context for this discussion is that the institutional Army, for the better part of the past decade has understandably, and appropriately, been consumed by ‘force generation’ – manning units for deployment to Iraq and Afghanistan in response to the orders of America’s civilian leadership. I will never forget one of my first decisions as Secretary of Defense in early 2007, which was to extend Army combat tours from twelve to fifteen months, including for units that had spent less than a year at home. This was perhaps my most
difficult decision over the past four years because I knew the hardship this would place on those who had already borne so much for this country. But the alternative was a disaster for our country and for Iraq. And the Army did as ordered and much more. One result is that you will be joining a force that has been decisively engaged for nearly a decade. And while it is resilient, it is also stressed and tired.

The effect of the Army’s necessary focus on preparing and manning units for Iraq or Afghanistan has provided younger officers, especially those in high demand combat and support specialties, little opportunity to do more than catch their breath and then get ready for the next deployment. And on top of the repeat deployments, there is the garrison mindset and personnel bureaucracy that awaits them back home – often cited as primary factors causing promising officers to leave the Army just as they are best positioned to have a positive impact on the institution.

Consider that, in theater, junior leaders are given extraordinary opportunities to be innovative, take risks, and be responsible and recognized for the consequences. The opposite is too often true in the rear-echelon headquarters and stateside bureaucracies in which so many of our mid-level officers are warehoused. Men and women in the prime of their professional lives, who may have been responsible for the lives of scores or hundreds of troops, or millions of dollars in assistance, or engaging in reconciling warring tribes, they may find themselves in a cube all day re-formatting power point slides, preparing quarterly training briefs, or assigned an ever expanding array of clerical duties. The consequences of this terrify me.

Furthermore, the creation and increasing number of autonomous Brigade Combat Teams, the substantive growth of other agencies, headquarters and support bureaucracies, and simply meeting the needs of a bigger Army at war have created a voracious demand for mid-level staff officers. The result of meeting these shortfalls has been essentially automatic promotion for elevation to Major and Lieutenant Colonel.

A few years ago a brigade commander in Baghdad – Colonel, now Brigadier General, J.B. Burton – wrote a memo reflecting on the feedback he was getting from some of his officers about the factors that influenced them to stay in or leave. They talked about finding respite from the deployment treadmill, getting an opportunity to start or re-acquaint themselves with their families, to develop themselves intellectually through graduate education or other non-conventional assignments. One of the chief complaints was that the personnel system was, ‘Numb to individual performance and [had] begun to see every officer as equal.’
One thing I have learned from decades of leading large public organizations is that it is important to really focus on the top 20 per cent of your people and, though it may be politically incorrect to say so, the bottom 20 per cent as well. The former to elevate and give more responsibility and opportunity, the latter to transition out, albeit with consideration and respect for the service they have rendered. Failure to do this risks frustrating, demoralizing and ultimately losing the leaders we will most need for the future.

The promotion rates have started to decrease and, as a matter of course, will decrease further as overseas deployments wind down. I’ve tried to do my small part to alleviate this situation by ordering the military to pare down the size and number of its headquarters along with reducing the number of general and admirals by nearly 100 – and twice as many civilian executives. One hoped for effect of these reforms is to reduce the number of personal staff and support positions, and in turn alleviate somewhat the demand on the military services to produce the field grade officers to fill those billets. This is an effort I’ve encouraged the services to continue, including the Army, in the years ahead.

A more merit-based, more individualized approach to officer evaluations could also do much to combat the risk-averse, zero-defect culture that can take over any large, hierarchical organization. One that too often incentivizes officers to keep their head down, avoid making waves, or disagree with superiors. The Army has been fortunate throughout its history to have officers who, at critical times, exercise respectful, principled dissent. Men like General George Marshall, who rose to high rank and greatness even as he told blunt truths to superiors ranging from Blackjack Pershing to Franklin D. Roosevelt. But no doubt that takes courage, and entails real risk, especially given the current system. In an article for Military Review following his tenure as a corps commander in Iraq, General Chiarelli suggested that, while the opinions of an officer’s superiors should hold the most sway, it’s time that the Army’s officer evaluations also consider input from peers and, yes, subordinates – in my view the people hardest to fool by posturing, BS and flattery. And as two Iraq veterans, then-Lieutenant Colonels John Nagl and Paul Yingling, wrote in a professional journal some years ago, ‘the best way to change the organizational culture of the Army is to change the pathways for professional advancement within the officer corps. The army will become more adaptive only when being adaptive offers the surest path to promotion.’

Several years ago, it caused something of a stir when we brought General Petraeus back from Iraq to chair a promotion board, to make sure that those colonels who had distinguished themselves in war – including those who advised Iraqi and Afghan forces – got due consideration for elevation to brigadier general. And since then, due to statutory changes and cultural shifts, officers who don’t have cookie-cutter backgrounds, who may not have
punched all the traditional tickets, have more of an opportunity to reach higher rank. But the tendency of any big bureaucracy is to revert to business as usual at the first opportunity – and for the military, that opportunity is, if not peacetime, then the unwinding of sustained combat.

There have been a variety of suggestions and ideas put on the table in various venues and publications to give officers – after their initial platoon, company or battalion-level tours – greater voice in their assignments and flexibility to develop themselves personally and professionally in a way that enhances their career and promotion prospects. For example, instead of being assigned to new positions every two or three years, officers would be able to apply for job openings in a competitive system more akin to what happens in large organizations in the private sector. The former commander of US forces in Afghanistan, Lieutenant General David Barno, class of ‘76, has written that, ‘in a smaller professional force competing for talent with the Gogles of the world,’ reforming this system is a ‘must do’ for the Army to keep its best and brightest leaders.

Having said that, when all is said and done, this is the United States Army. It’s not Apple. It’s not General Electric. And it’s not the Red Cross. Taking that oath and accepting that commission means doing what you are told and going where you are needed. And as practical matter, one cannot manage tens of thousands of officers based on ‘What color is your parachute?’ But just as the Army has reset and reformed itself when it comes to doctrine, equipment, and training, it must use the eventual slackening of overseas deployments as an opportunity to attack the institutional and bureaucratic constipation of Big Army, and re-think the way it deals with the outstanding young leaders in its lower- and middle-ranks.

I have spent the last few minutes addressing some of the real challenges facing the Army, and discussed some of the frustrations experienced by bright young leaders working in any large bureaucracy. But I would like to close by telling you why I believe you made the right choice, and indeed are fortunate, to have chosen this path. Because beyond the hardship, heartbreak, and the sacrifice – and they are very real – there is another side to military service. You have an extraordinary opportunity – not just to protect the lives of your fellow soldiers, but for missions and decisions that may change the course of history. You will be challenged to go outside your comfort zone and take a risk in every sense of the word. To expand what you thought you were capable of doing when it comes to leadership, friendship, responsibility, agility, selflessness, and above all, courage. And you will be doing all of this at an age when many of your peers are reading spreadsheets and making photocopies.
One of my favorite quotes from the Revolutionary War era is from a letter Abigail Adams wrote to her son, John Quincy Adams. She wrote him, ‘these are times in which a genius would wish to live. It is not in the still calm of life or [in] the repose of a pacific station that great characters are formed. ... great necessities call out great virtues.’

I typically use that quote in commencement addresses encouraging public service at civilian universities, but those words apply most of all to you, on whose brave and broad young shoulders this era’s ‘great necessities’ will be borne. Each of you – with your talents, your intelligence, your record of accomplishments – could have chosen something easier or safer and of course better-paid. But you took on the mantle of duty, honor and country; you passed down the Long Gray Line of men and women who have walked these halls and strode these grounds before you – more than 80 of whom have fallen in battle since 9/11. For that, you have the profound gratitude and eternal admiration of the American people.

As some of you have heard me say before, you need to know that I feel personally responsible for each and every one of you, as if you were my own sons and daughters, for as long as I am Secretary of Defense that will remain true. My only prayer is that you serve with honor and return home safely. I personally thank you for your service from the bottom of my heart, I bid you farewell and ask God to bless every one of you.
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