



Senior Officer Professional Digest

Selected readings from the world's military journals

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The CA's Introduction

Professional reading is a commitment to our Army's future. The Senior Officer Professional Digest (SOPD) has been designed to assist you to learn more about the issues that will shape the future of warfare. I commend the SOPD to you and ask that you make the time to read the articles and to reflect on their content.



Editor's Note

This year the SOPD will be featuring articles to support the intellectual debate surrounding the 'Hardening the Army' (HTA) process. Along with the usual assortment of articles, readers can expect to find material to that will help fuel discussion on a range of topics related to HTA.

- Article Title** 'Transforming Towards Future Warfighting'
- Author** Admiral Sir Ian Forbes, Deputy SAC
(Transformation), NATO
- Publication Details** *RUSI Journal*, October 2003, Vol. 148, No. 5,
pp. 54–58

Synopsis

The author's discussion of future warfare is limited to looking a decade ahead and restricted to the context of high intensity warfare. Drawing on United States and personal operational experiences, he points out that Effects Based Operations, enabled by networked C4ISTAR capabilities, create fast, battle winning effects with smaller forces, fewer casualties and reduced collateral damage. The ensuing discussion revolves around three key enabling parameters: *jointery*, *interoperability* and *overmatching*.

Forbes believes that C4ISTAR capabilities are the key to battlefield success. They can counter the 'fog of war' and bring victory to the side whose technology, doctrine and training do most to reduce or eliminate the effects of Clausewitzian friction. Such forces, especially fully integrated joint ones, will also have a smaller 'teeth to tail' ratio. Warfare continues to be about enemies attempting to bypass each other's strengths and target their opponent's vulnerabilities. However, in the new model of warfare, the term asymmetry increasingly refers to the use of immense C4ISTAR capabilities to deliver powerful lethal and non-lethal effects with precision and speed.

As recent operations in Afghanistan and Iraq demonstrate, warfare remains a very complex undertaking that occurs across a spectrum of conflicts, from warfighting and peace support to peacekeeping, and sometimes all three will occur simultaneously in the same operation. Such complex environments require technological advantage even more than straightforward high intensity conflicts. Situational awareness, provided by technology, when nuanced with knowledge about local cultural and political conditions, can be a winning edge.

The need for fully integrated jointery, simultaneous action and risk taking requires increased trust between the service components, especially as commanders will have to depend upon assets which they don't control for

the protection and survival of their force. This means that systems from one service must be able to talk to each other, while the services themselves must develop of a shared warfighting culture. There is also the need for an increased emphasis on indirect effects – a shift in the balance between kinetic and non-kinetic attack.

In this context, the term transformation reflects more than just aligning with changing conditions or the simple application of technology. It is also a cultural and intellectual development aimed at allowing the military to harness new ideas, doctrine and technology to gain overwhelming advantage over opponents. In the NATO and UK context, the key concepts being examined are Effects Based Operations and Network Enabled Warfare. The aim is to provide allied forces with a common operating picture that will increase the speed of their decision cycle and give them a significant advantage over their opponents.

The author concludes with a plea for a more philosophical approach to transformation. He re-states his belief that transformational technologies show great promise for the future. However, he emphasises that the importance of human factors and the development of conceptual and intellectual understanding are currently the most significant, but least understood aspects of transformation.

Article Title ‘Digital Battle Command: Baptism by Fire’

Author LTC John W. Charlton, 1st Battalion, 15th Infantry,
3rd Brigade Combat Team, 3rd Infantry Division
(Mechanised)

Publication Details *Armor*, November–December 2003, Vol. 112,
Issue 6, pp. 26–29, 50

Synopsis

This article is a personal account of one commander’s conversion to the United States Army’s new digital C3 system from traditional C2 methods. While a version of the Force XXI Battle Command Brigade and Below (FBCB2), or BLUEFOR tracking system, had been fitted to command vehicles in the 3rd Inf Div, there had been little time for

training. So, like many other commanders, the author had stayed with the old, tired and true systems – paper maps and radio. However, during a sandstorm, in a town where 1:100,000 scale maps gave little detail, he switched to the new system – navigating by GPS and using imagery to provide the topographical details he required. Later, when he had to detach a force beyond the range of FM radio, he used the FBCB2 messaging system to stay in contact with his separated sub-unit.

Having thus ‘road tested’ the FBCB2 system in a baptism by fire, the author gives his opinions on what works well – imagery, situational awareness provided by the BLUEFOR tracking system and messaging, as well as what needs fixing – problems with bandwidth, the graphic user interface and the operating system. Overall, however, the author believes that the system was decisive during combat operations in Iraq and that if the problems he noted can be corrected the system will remain the key to success in 21st century warfighting.

Article Title

‘Special Forces: Selecting and Training Officers for Adaptability’

Authors

CPT W. Cotty, US Army, Jat Thompson and Dr Michael Sanders, Army Research Institute, Fort Bragg

Publication Details

Special Warfare, August 2003, Vol. 16, No. 2, pp. 6–11

Synopsis

The authors detail how the training of SF officers focuses on the development of adaptation skills, and hence survival, in almost any environment. The training regime is based on developing nine attributes which help officers adapt to complexity and ambiguity. These attributes stress characteristics such as self-reliance, mental agility, integrity, physical fitness and interpersonal skills capable of spanning cultural divides. The article steps through the nine attributes and how these can be developed within the training regime. In summary, the philosophy behind the regime is ‘train as you intend to fight’. The article concludes by noting that current operations in Afghanistan and Iraq illustrate the

need for flexible and adaptable soldiers as well as providing many useful lessons upon which future SF officer training can be based.

Article Title	‘Doctrine for Asymmetric Warfare’
Authors	COL Clinton Ancker III, US Army, Retd and LTC Michael Burke, US Army, Retd, Combined Arms Doctrine Centre, Fort Leavenworth
Publication Details	<i>Military Review</i> , July-August 2003, Vol. LXXXIII, No. 4, pp. 18–25

Synopsis

Starting with J.F.C. Fuller’s idea that doctrine is ‘action adapted to circumstance’, this article uses examples from military history and discussion of contemporary US operations to illustrate the importance of adaptability as the key factor required by a doctrine for asymmetric warfare. The authors stress that there can be no checklist of tactics in asymmetric warfare, instead tactics, techniques and procedures (TTP) are suited to the type of forces required to counter an asymmetric opponent. Of course, this means that there is a tension between asymmetry and the narrowly defined current conceptions of doctrine. Instead of thinking of doctrine as being prescriptive and predictive, the article suggests that it must now be thought of as providing a body of conceptual knowledge that enables forces to cope with the chaotic environment of asymmetric operations by forecasting likely enemy responses.

The characteristics of effective doctrine outlined in the article are:

- An operational concept that includes more than high-intensity conventional warfare,
- A doctrinal philosophy that can forecast the near term operational environment,
- An emphasis on creativity and adaptation to asymmetrical conditions of warfare,
- Education of the Army about the importance of second and third order effects (most of which are unintended) ie a two-sided appreciation of asymmetry, and
- Rapid feedback from operational units to counter new tactical problems in the field with appropriate TTP. In this feedback

process the Centre for Army Lessons Learned (CALL) is the key Army institution.

Noting the importance of the June 2001 version of FM 3-0, *Operations* as a move in the right direction the authors conclude with a plea for more rapid publication of doctrine via the internet and other electronic methods, combined with a process of education and professional development that will aid the speedy assimilation of new doctrinal concepts into the operations of the Army.

Article Title 'Renaissance of the Attack Helicopter in the Close Fight'

Author MAJ Robert Cassidy, US Army, Europe
Commanding General's Initiatives Group,
Heidelberg, Germany

Publication Details *Military Review*, July-August 2003,
Vol. LXXXIII, No. 4, pp. 38-45

Synopsis

After US Army AH-64 Apache Longbow helicopters undertaking deep-shaping operations on the night of 23 March 2003 were ambushed by Iraqi forces, media reports suggested that the days of the attack helicopter were numbered. Countering such claims the author provides an analysis of the employment of the AH-64s in asymmetric operations following the fall of the Iraqi regime.

The author begins by providing a useful discussion of asymmetry and its characteristics, before discussing how US Army attack aviation adapted to the events of 23 March. The first change was a move to close support operations in the attack on Baghdad. Instead of attacks being phased or massed in these operations, the AH-64s gave continuous in support to the brigade's main effort. With the fall of Baghdad and the move to operations against Iraqi irregulars, the AH-64s provided a variety of support roles including, patrols (in pairs), armed reconnaissance and reaction forces. Working with UAVs, helicopters were effective in blocking and interdicting paramilitary forces fleeing from US ground

operations. During these missions aviation liaison officers have proven a vital link in the integration of attack aviation into ground operations.

The article concludes by stating that the US Army, for so long focussed on conventional warfare, has had to quickly re-learn many lessons from Vietnam. The author believes that the future for Army attack aviation will be the integration of helicopter with small ground manoeuvre elements working in a dispersed area of operations. The key to success will be the ability to develop the mindset, doctrine and techniques that will allow the rapid concentration of lethal fires at the critical time and place.

Article Title 'UAVs and the Dawn of Post-Modern Warfare: A Perspective on Recent Operations'

Author Air Chief Marshal Brian Burridge, RAF, CinC Strike Command, UK

Publication Details *RUSI Journal*, October 2003, Vol. 148, No 5, pp. 18–23

Synopsis

This article begins with a review of the development and use of UAVs in the 1991 Gulf War to their use in Iraq in early 2003. During the 1990s, UAVs were used for BDA, reconnaissance, laser designation of targets and other Information Surveillance Target Acquisition Reconnaissance (ISTAR) functions in a variety of operations. Fitted with Hellfire missiles (asUCAVs the C standing for combat) they were used in Afghanistan and elsewhere in an offensive role.UCAVs patrolling the no-fly zone also fired Stinger missiles at Iraqi MiGs just before the war 2003 started.

Burridge defines post-modern war as having the following characteristics:

- effects based operations using precision weapons that allow forces the ability to do just enough ' - not too little and not too much – in terms of both lethality and accuracy.'
- The use of the Internet to pursue either Network-centric or slightly lower order Network-enabled operations that include modes of

non-kinetic attack such as psychological and information operations, and

- a non-linear battlespace in which the nature of operations may be complex and ambiguous because they involve forces in the full spectrum of conflict from peace support to high tempo conventional actions.

In Iraq UAVs were able to loiter in airspace that was too dangerous for conventional aircraft because of well developed Iraqi anti-aircraft defence systems. Fitted with a range of ISR sensor systems, UAVs were also used in the hunt for Iraqi mobile missile launchers. The UK used their Phoenix UAV to cover the 3 Commando Brigade Area of Operations and search out enemy troop concentrations. The craft was also used for BDA on regime targets and to coordinate CAS. All of these examples demonstrate the flexibility of UAVs as a key asset in joint and coalition operations. UAVs were also useful in force protection, being employed on missions that would have been 'dirty, dangerous or dull' for manned aircraft.

Of course, there were problems as temperatures in Iraq tested the UK UAV's operational limits, ground based air defences were a constant threat and there were also limitations on the type of imagery available, while problems with downloading imagery from the UAV's sensor systems could make it unreliable for time sensitive targeting.

The article concludes with some observations on the human dimension of UAV operations. The first is that UAVs have limited capacity to deal with ambiguity. This is an important consideration under the Law of Armed Conflict. How will forces using UAVs be able to ensure proportionality of response in an ambiguous, non-linear battlespace? The need for the human in the loop will continue for sometime to come. The author's final observation goes deep into the morality and philosophy of war. When unmanned systems can engage and destroy an enemy with impunity, the centuries old equality of moral risk: kill or be killed will disappear. Although UAVs have demonstrated great capability in warfare, it seems that they also present the forces that use them with legal, moral and philosophical questions which have yet to be fully confronted.

- Article Title** 'An Alternative Future Force: Building a Better Army'
- Authors** Peter Wilson, Senior Political Scientist RAND, LTC John Gordon IV, US Army Retd, RAND and COL David Johnson, US Army Retd, Senior Researcher RAND
- Publication Details** *Parameters*, Vol. XXXIII, No. 4, Winter 2003-04, pp. 19–39

Synopsis

The authors begin with the observation that the recent US operations in Iraq highlight the need for the Army's leadership to rethink major assumptions underlying the US Army's transformation strategy. The article examines some of these assumptions in detail and suggests alternative methods for preparing the Army to meet the challenges of future warfare.

The aim of transformation is to create a homogeneous, objective force with the same range of capabilities possessed by the current Army. The key assumptions behind this objective or future force strategy are:

- Substantial land forces will be deployed very early in crisis situations.
- Rapid strategic deployability is a key design requirement for the force.
- Technological enhancements, particularly in situational awareness, can make a medium force as effective as the current heavy forces.
- High levels of situational awareness will be achievable in all terrain types.
- A homogeneous force can be designed in a manner that allows it to span the spectrum of operations from humanitarian assistance to high intensity conventional combat.

The bulk of the article is devoted to questioning these assumptions because the authors believe that the configuration of the future force engenders great risk to both the Army and US national interests. They feel that this risk can be mitigated by methods which preserve the flexibility and strategic relevance of the Army as it evolves.

The criticisms of the current transformation strategy begin with a recognition that the global threat is changing and the Army must adapt to new strategic, technological and budgetary realities if it is to remain relevant to US national security requirements. On this basis the authors question the assumed need for rapid deployment of large land forces. As a corollary they also question the need for air mechanisation concepts such as deployment by C-130 type airframes of the Future Combat System and the use of AH-64s in an environment where the ground to air threat is likely to remain high. They also question the survivability of lighter combat vehicles against the increasing threat of RPG-type weapons launched at close ranges, especially in complex terrain. The concept of homogenisation is open to question because, as the recent operations in Iraq demonstrated, there is a need for a range of forces from SOF, to light infantry, to heavy mechanised forces. Finally the cost of the current transformational capability development program is extremely high and probably unsustainable in the longer term.

The alternative approach, suggested in the article, revolves around proposals for a force with:

- A diversified force structure capable of operating in the mid-to-lower end of the spectrum of conflict.
- A Future Combat System designed around light, medium and heavy vehicles that incorporate new, technologies which significantly increase their fuel economy, lethality and survivability.
- Strategic mobility based on pre-positioning of equipment in fast ocean-going vessels, rather than reliance on air transportation.
- Abandonment of air mechanisation and a new appreciation of vertical envelopment that recognises the importance of tactical airlift capabilities, the threat posed by the ground fires and the importance of UAVs for missions such as deep-penetration.
- Advances in air/ground co-operation, and
- The use of new technologies for combat service support.

Rather than being transformational, the strategy proposed is evolutionary based on the assumption that changes in the strategic threat *do not* demand rapid and high-risk total transformation of the Army.

Article Title 'Fist Up! Task Organising Fire Support Teams for Maximum Flexibility in Mechanised Operations'

Author Lt Anthony G. Sousa, Commander 1st Platoon, Company B, 1st Battalion, 5th Marines

Publication *Marine Corps Gazette*, January 2004, Vol. 88, Issue 1, pp. 42–44

Synopsis

This article provides an account of how task organisation of fire support teams in Iraq provided greater flexibility, enhanced situational awareness and responsiveness to mechanised companies involved in a fast flowing close battle. Normally, the company commander and the FiST are collocated in the same assault amphibious vehicle (AAV). This is the standard Combined Arms Exercise (CAX) model used in the USMC. This model has several drawbacks, especially as the FiST leader does not have good access to battalion and company radio nets. Task organisation, in which the FiST leader was mounted in an AAV supporting the company's 60mm mortar section, provides greater flexibility than the CAX model and gives the FiST leader better communications and situational awareness. The FiST leader is also able to manoeuvre for observation and fire positions, while the commander can apply himself to his main effort.

Having stated the advantages of task organisation the author provides two examples of the model in action during the USMC's march on Baghdad in March and April 2003. Diagrams are provided of both actions to illustrate the advantages of task organisation of the FiST and the way in which it enhances the commander's flexibility and his ability to influence the close battle.

- Title** 'Special Operation Forces: Integrating SOF into Joint Warfighting'
- Author** LTCs Mark Jones and Wes Rehorn, US Army
- Publication** *Military Review*, May-June 2003,
Vol. LXXXIII, No. 3, pp. 3–7

Synopsis

Operations in Afghanistan and Iraq have put Special Operation Forces (SOF) in the spotlight. However, as the authors point out SOF are only part of a joint force team. The focus of the article is on gaining greater integration of SOF into the joint team. With this aim in mind the article discusses theatre SOF, the role of a theatre special operation command (SOC), employment options for a joint special operations task force (JSOTF) and how full integration enhances operations.

Using diagrams to explain optimal command structures and with reference to recent operations and exercises, the article outlines methods for gaining the most effective use of SOF in the joint battle. Key aspects of effective use of SOF are the use of liaison officers who work with the supported HQ creating operational synergy and building trust and confidence. The command environment becomes one of collaboration in which the SOF work at the high end of risk performing clearly prioritised missions that support joint objectives. No longer is it necessary for a commander to own a force to get support or achieve unity of command.