



THE JOINT AIR POWER COMPETENCE CENTRE (JAPCC)

**AIR POWER IN COUNTERING IRREGULAR
WARFARE**



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AIR POWER IN COUNTERING IRREGULAR WARFARE

INTRODUCTION

1. Operations to counter the activity of irregular adversaries, as characterized by NATO's expeditionary security and stability operations in Afghanistan and by coalition operations in Iraq, are a challenging area for Air and Space Power. NATO Air and Space Power theory and doctrine in the main reflects that the history of air warfare is predominantly one of high intensity inter-state warfare.¹ However, conflict against non-state actors, known variously as irregular warfare, small wars, Military Operations Other Than War, Low Intensity Conflict, and including counterinsurgency operations, were the prevalent form of warfare of the Twentieth Century and could remain so for the foreseeable future given the 'Long War' on global terrorism.² Western armed forces, normally configured to regular or conventional warfare, have often struggled to adapt to such operations. Hence the US Army and US Marine Corps in December 2006 issued revised counterinsurgency doctrine and the United States Air Force in August 2007 revised its *Air Force Doctrine for Irregular Warfare*.³ The Allied Joint Operations Working Group has recently agreed that *Allied Joint Doctrine for Crisis Response Operations* (AJP-3.4) should be expanded to include counter irregular operations.⁴ Moreover, irregular warfare operations are typically seen as Land operations, with Air in a supporting role only. Consequently Air may be excluded from early planning and find itself relegated to the role of airborne surveillance or reactive airborne artillery, and not fully exploited to achieve effects beyond the reach of Land.⁵ In such circumstances, Air becomes liable to the brunt of criticism for collateral damage. The paper recognises that much progress has been made within the NATO-led International Stabilisation and Assistance Force (ISAF) Afghanistan to redress such shortfalls.

2. Within a joint Effects Based Approach to Operations (EBAO), and within a Comprehensive Approach, using political, civil, economic and military lines of operation, this paper's thesis is that the military contribution to countering irregular warfare must be joint, and joint commanders and their airmen will need to consider how the Air and Space environment can be best exploited to deliver non-physical or cognitive effects, as well as more traditional physical effects. The purpose of this paper, therefore, is to consider the role of NATO Joint Air and Space Power in countering irregular warfare. The intent is for the paper to inform and shape future development of Joint, and Joint Air and Space concepts, doctrine and capabilities, and to inform the development of *Allied Joint Doctrine for Air and Space Operations* (AJP-3.3) and in particular *Crisis Response Operations* (AJP3.4). The paper is coherent with the JAPCC's recent NATO Future Joint Air and

¹ See for example Phillip S. Meilinger, Phillip S. 'Historiography of Airpower: Theory and Discipline', *The Journal of Military History* 64 (2000), pp. 467-501, and Dennis M. Drew 'US Airpower Theory and the Insurgency Challenge: A Short Journey to Confusion,' *The Journal of Military History*, 62 (1998), pp. 809-32.

² ACT Future Strategic Environment First Edition March 2007.

³ Headquarters Department of the Army and Headquarters Marine Corps Combat Development Command, Department of the Navy (joint publication), Field Manual 3-24 and Marine Corps Warfighting Publication 3-33.5, *Counterinsurgency* (Washington, DC: Headquarters Department of the Army, 15 December 2006) <http://www.fas.org/irp/doddir/army/fm3-24.pdf> [accessed 15 March 2008] and Air Force Doctrine Document 2.3 *Irregular Warfare* dated August 2007 http://www.dtic.mil/doctrine/jel/service_pubs/afdd2_3.pdf [accessed 15 March 2008].

⁴ Allied Joint Operations Working Group dated 30 Apr 08.

⁵ For a case study Richard B Andres and Jeffrey B Hukill, 'Anaconda: A Flawed Joint Planning Process', *Joint Force Quarterly*, 47, (2007), pp. 135-140. http://www.ndu.edu/inss/Press/jfq_pages/editions/i47/30.pdf [accessed 15 March 2008].

Space paper.⁶ The paper starts by defining the characteristics of irregular warfare, and considers the military contribution to countering irregular activity, based on classical counterinsurgency doctrine, and within a Comprehensive Approach and an EBAO. The paper then considers the nature of Air activity, and what Air and Space Power brings to the military contribution to building campaign authority and countering the effects of irregular activity. The final section identifies the implications for Alliance Joint Air and Space Power across the perceptual, moral, physical and doctrinal components of fighting power as defined in *Allied Joint Publication-01(C) Allied Joint Doctrine*.

AIM

3. The aim of this paper is to consider the application of NATO Joint Air and Space Power in countering irregular warfare in order to inform the development of NATO concepts and doctrine.

IRREGULAR WARFARE

4. Much has been written about the nature of war and warfare, and the contemporary security environment, characterised by conflict with non-state actors.⁷ There has been a great deal of debate about defining different forms of warfare and a convenient categorisation is on the one hand regular warfare between the armed forces of states and on the other irregular warfare being everything else. This paper follows the recent United States Air Force *Air Force Doctrine for Irregular Warfare* and the UK *Joint Doctrine for Countering Irregular Activity within a Comprehensive Approach* in addressing how the Alliance's military forces contribute to countering irregular adversary activity.⁸ This irregular activity includes traditional guerrilla (literally small war) warfare, in which the basic tactic is to ambush and raid, to avoid being drawn into action to hold ground – in other words to engage in only tactical operations. The guerrilla depends upon (some of) the people for physical and moral support. Indeed he hides amongst the people. Revolutionaries, such as post-colonial communist movements, added to these basic tactics to achieve political effect by using terrorism to erode the authorities' and population's will, provoking over-reaction, and through the use of propaganda. If, following Clausewitz, a state's power is derived from a trinity of the government, the armed forces and the people, then in guerrilla-type wars the revolutionary or insurgent side gains its strength from their leaders, the terrorist or guerrilla, and the people. Both sides are competing for the will of the same indigenous population.⁹ Irregular activity continues to evolve within the contemporary security environment, and the impact of globalisation, climate change, identity politics, extremist ideologies and technology such as the internet, and contemporary challenges such as the use of cyberspace, networks, and hybrid

⁶ The aim of the JAPCC NATO Future Air and Space Power paper is to describe how NATO Joint Air and Space Power might be best employed in future operations, thereby enabling both the convergence of national efforts and identification of Alliance options for bridging potential capability gaps.

⁷ According to Kilcullen more has been written in the past 4 years than in the previous 4 decades. David Kilcullen, 'Counter-insurgency Redux', *Survival*, 48:4, pp. 111 – 130. For example it has been argued that irregular or unconventional warfare has been and will be the prevalent form of warfare and therefore terminology like unconventional, irregular are inappropriate.

⁸ See AFDD-2.3 and Joint Doctrine Note 02/07 *Joint Doctrine for Countering Irregular Activity within a Comprehensive Approach*. The UK has recently used the term activity, being broader than warfare and defined as *behaviour that attempts to effect or prevent change through the illegal use, or threat, of violence, conducted by ideologically or criminally motivated non-regular forces, groups or individuals, as a challenge to authority*. NATO uses the term guerrilla warfare for military and paramilitary operations conducted in enemy held or hostile territory by irregular, predominantly indigenous forces.

⁹ Rupert Smith, *The Utility of Force : the Art of War in the Modern World*. (London: Penguin, 2006).

warfare, where the irregular adversary has access to sophisticated weapons.¹⁰ Not only is the character of adversary activity evolving, for example jihadi rather than communist threats, but contemporary operations are expeditionary in support of sovereign states and not imperial and defensive.¹¹ In essence the irregular adversary exploits the perceptual, physical and moral components of fighting power, as described in NATO doctrine,¹² in the same way that regular forces do. Examples of this include the intellectual understanding of Information Operations and Influence Activity, the physical strength and stamina of cellular networks, and the moral strength gained through ideology, hatred or political or economic gain. In sum, irregular activity is characterised by the challenge to state authority by non-state actors or the inability of states to provide adequate security for their people, which can then be exploited by adversaries. The adversary seeks to create or exploit ungoverned space. A key counter-irregular activity is, therefore, developing the authority of the state. Part of this is building authority of the military lines of operation through the legitimacy and perception of conduct of intervening forces.

THE MILITARY CONTRIBUTION TO A COMPREHENSIVE APPROACH

5. There is general agreement that the broad principles for countering irregular activity developed by the British, French and others in colonial and post-colonial counterinsurgency campaigns have stood the test of time. These are:

- a. The recognition of the political nature and, therefore, civilian primacy of the issue.
- b. The need for long-term and integrated civil and military commitment.
- c. The importance of intelligence and information operations.
- d. The need to separate the insurgent from the mass of the people.
- e. The need to neutralize the insurgent through appropriate and proportionate military responses.
- f. The need for political reform and long-term socio-economic development to remove the cause of the problem.

The recent US Army and US Marine Corps FM-24 *Counterinsurgency* is firmly based on historical lessons from 20th century counterinsurgency campaigns, and follows these principles – albeit, in this 300 page document, the Air Power element of this is limited to a 5-page annex!¹³ The UK *Joint Doctrine for Countering Irregular Activity* focuses on the need to protect, strengthen and restore State authority, and in countering irregular activity, the need to understand the context, such as the character, history, culture institutions, customs and aspirations of the local society, and for a comprehensive response to

¹⁰ Kilcullen, 'Counterinsurgency *Redux*'.

¹¹ Alexander Alderson, 'Revising The British Army's Counter-Insurgency Doctrine', *Journal of the Royal United Services Institute*, 152. 4 (2007), pp. 6-11.

¹² AJP-01 *Allied Joint Doctrine*.

¹³ Nagl, John, 'The Evolution And Importance Of Army/Marine Cors Field Manual FM-24, Counterinsurgency', *Small Wars Journal*, 2007, <http://smallwarsjournal.com/blog/2007/06/the-evolution-and-importance-o/> [accessed 15 March 2008]

irregular activity that addresses the broader causes and conditions underlying the irregular activity.¹⁴

6. NATO has, since 1973, defined counterinsurgency as those military, paramilitary, political, economic, psychological, and civic actions taken to defeat insurgency.¹⁵ Though enduring, these principles must be tailored to the context and circumstance. NATO's definition of counterinsurgency therefore overlaps with, and foretells a Comprehensive Approach and the NATO EBAO, where NATO EBAO is the coherent and comprehensive application of the various instruments of the Alliance, combined with the practical cooperation along with involved non-NATO actors, to create effects necessary to achieve planned objectives and ultimately the NATO end state.¹⁶

7. One feature often overlooked by doctrines that focus exclusively either on regular or irregular warfare is that all warfare is a part of a spectrum. For example in classical revolutionary theory Mao Tse-tung envisaged three phases of revolution, first low profile activity to build a base, then guerrilla activity and finally fielding regular forces for final victory.¹⁷ General Krulak described the spectrum of conflict, from the perspective of simultaneous warfighting, police action and humanitarian assistance, at the tactical level as the 'three block war'.¹⁸ Another way of describing this would be that deep, close and rear operations may be conducted in parallel and within confined time and space. The Joint Air Power Competence Centre (JAPCC) has used three operational themes to describe the spectrum of contemporary and future operations at the strategic and operational levels. The three operational themes are:

- a. The 'Big War' – characterised by state (Alliance) v state level operations, which may involve contested Air and Space.
- b. The 'Long War' – characterised by countering irregular activity (potentially after a Big War) in which ungoverned space is contested.
- c. The 'Contained War' – characterised by a decision not to intervene against either a rogue or ungoverned state, but to contain through *inter alia* denial, blockade, and no-fly zones.

Operations in the Iraq theatre since 1990 have moved through the spectrum of 'big war' in 1991, 'contained war' (1991-2003), 'big war' in 2003, and a 'long war' to date. The differing character of these 'wars' means that the military force will be required to realise differing effects through differing activity. This implies a requirement for different forces for differing 'wars' or an agile force that can adapt to the requirements of different 'wars'.

¹⁴ JDN 2.07 *Countering Irregular Activity*, pp. 2-1 – 2-7.

¹⁵ AAP-6 (2007)

¹⁶ BiSC Pre-Doctrinal Handbook EBAO dated 4 December 2007, p. 1-2.

¹⁷ Mao Tse-tung, *On Guerrilla Warfare*, 1937

¹⁸ Charles C. Krulak (1999). The Strategic Corporal: Leadership in the Three Block War. *Marines Magazine*, 1999 http://www.maxwell.af.mil/au/awc/awcgate/usmc/strategic_corporal.htm [accessed 15 March 2008]

THE NATURE OF AIR ACTIVITY

8. **Joint Manoeuvre and Fires.** Ultimately, whatever the character of the conflict, the Joint Force Commander and his forces must be capable of influencing or attacking the adversary, either directly or indirectly, through actions that realise physical or cognitive effects. The principle method by which these effects are delivered is through the combination of joint manoeuvre and joint fires, in conjunction with other capabilities,¹⁹ such as Information Operations and other influence activity. The principle purpose of manoeuvre is to gain positional advantage in respect to the adversary from which force can be threatened or applied. Manoeuvre seeks to shatter the adversary's cohesion. At the operational level, joint manoeuvre is the means by which a commander sets the terms in time and space, declines or joins combat, or exploits emerging developments. Joint manoeuvre is more than just movement with forces. It is the process by which combat power is focused where it can have decisive effect, to pre-empt, dislocate, or disrupt adversary operations. It involves trade-offs (for example speed verses time, width versus depth, concentration verses dispersion) and thus requires an acceptance of risk.²⁰

9. **Air Manoeuvre and Fires.** It is the ability to manoeuvre in an environment and the opportunities that flow from it that makes each environment unique. All activity through Air and Space is manoeuvring in the Air and Space environment. Therefore, Air to Air is pure Air Manoeuvre. Air Interdiction effect is felt on land, but is coordinated beyond the Fire Support Co-ordination Line and is, therefore, in the Air domain. Close Air Support (CAS), on the other hand, is Air-Land, given that both Air and Land are involved in its coordination. The Land term 'Air Manoeuvre', it could be argued, is actually Air-Land Manoeuvre as it is a sub-set of Air Manoeuvre co-ordinated between the Air and Land Components. The degree to which that manoeuvre is co-ordinated across the environments underpins both its contribution to other environments (and is therefore heavily coordinated) and its unique value (therefore predominately single environment). In the main, countering irregular activity has been seen as a Land activity, with Air and Space Power providing joint enabling support functions, predominantly through mobility, responsive fires, and intelligence, surveillance, target acquisition and reconnaissance (ISTAR).²¹ Countering irregular activity has also been perceived as requiring an attritional approach, depending on numbers of 'boots on the ground' to contain the adversary, rather than a manoeuvrist approach to defeat him. One exception to this was in the period between the two world wars when Britain gave its fledgling Air Force military responsibility for its Middle Eastern mandates and protectorates, mainly in order to avoid army overstretch, and in a period when Britain had yet to develop joint doctrine for joint operations. This Air Control scheme was arguably successful, but used punitive, coercive force in a way that would not be acceptable today.²² The view that counter irregular operations are always Land-led operations presumes that Land holds most of the ground. However, in contemporary operations, this is not always the case and Air might be the only way of reaching areas and achieving effect beyond the reach of Land.

¹⁹ AJP-3(A) para 0126.

²⁰ AJP-3(A) para 0127.

²¹ See for example Philip Anthony Towle, *Pilots and Rebels: the Use of Aircraft in Unconventional Warfare, 1918-1988* (London: Brassey's, 1989) and James S. Corum & Wray R. Johnson, *Airpower in Small Wars: Fighting Insurgents and Terrorists*, (Lawrence, Kan: University Press of Kansas, 2003) for general histories of Air Power in irregular warfare.

²² Peter W. Gray, 'The Myths of Air Control and the Realities of Imperial Policing', *Aerospace Power Journal*, 15 (2001), pp. 21-31.

10. **The Nature of Air and Space Power.** The principle attributes of Air and Space Power – height, speed, reach and ubiquity – underscore the enduring nature of Air and Space Power and should be exploited as part of joint counter irregular operations. The enduring nature of Air and Space Power can be described in three categories based on the degree to which Air and Space activities must be co-ordinated across components. The three layers of Air activities – Deep Persistent Operations, Control of the Air, and Joint Enabling activities - are critical to any joint operation across the spectrum of conflict including countering an irregular adversary. The relationship between these categories, the degree to which the manoeuvre is co-ordinated between components and the strategic, operational and tactical focus for each category is shown at Figure 1.

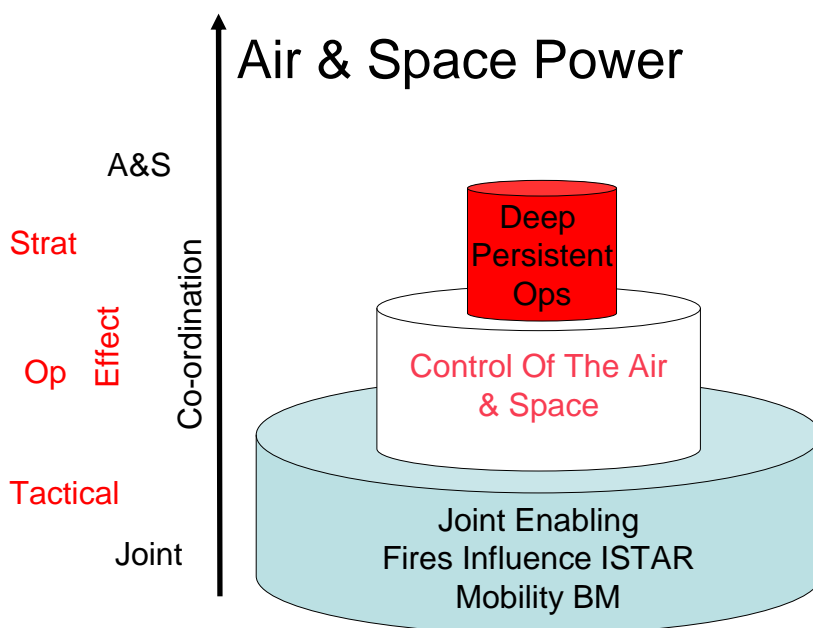


Figure 1 – The Nature of Air and Space Activity

The three layers of activity are:

- a. **Deep Persistent Operations (DPO).** With the exception of Special Forces (with its own limitations and constraints), only Air and Space Power is able to go deep to both build an understanding of an opponent (using ISTAR) and seek effects (including those in cyberspace as part of any influence activity) against any strategic vulnerabilities. Long range effects from other environments may be included here, accepting that they are: manoeuvring in the Air environment and coordinated as part of the wider Joint Air Plan. A traditionally recognized ability of Air Power to strike at the adversary's 'strategic centre of gravity', beyond the reach of the Land Component, is likely to be less relevant when countering irregular activity because of the decentralized and diffuse nature of the adversary. Traditional counter irregular theory states that the centre of gravity is the same for both insurgent and counterinsurgent – it is the will of the population. However, coalition operations in Afghanistan in 2001 and 2002 demonstrated how Air Power,

with special forces and indigenous land forces, could dislocate the adversary through an attack on its command structure – using precision, information and cyber operations, ISTAR, and global mobility. Indeed Air and Space Power has a critical role in inter-agency operations with national intelligence, security and police services, targeting recruitment, training, funding, movement and logistics networks and sanctuaries. As always, targeting must be precise and proportionate to prevent the adversary gaining from adverse public opinion both within the affected population and at home. Air and Space Power should also be used to deny sea, land and air lines of communication to the adversary. Finally, in the context of what are often seen as Land operations, Air and Space Power has the capability to go deep and persistent beyond the influence of Land forces, which in contemporary operations are often constrained by limited numbers of ‘boots on the ground’.

b. **Control of the Air.** Through Control of the Air, Air and Space Power will deny the adversary freedom of manoeuvre while maintaining freedom of action for our own forces. Control of the Air deters the adversary from concentrating and fighting as a regular, thereby forcing him to fight as an irregular. For our own forces when countering irregular activity, the contested airspace will normally be that within man-portable air defence systems (MANPADs) or small arms range in which we need freedom of manoeuvre to conduct Air operations. Of particular importance when countering irregular activity on a non-linear battlefield is the Control of the Air around airfields, airstrips and landing zones, where the predictability of Air activity increases the risk to aircraft. In such circumstances Control of the Air will be achieved by air-minded dominance of the ground around airfields in order to prevent adversary attack. An element of Control of the Air also includes providing access to airspace for civil use, and where necessary reconstructing the structures to enable this. The airspace control structure must be flexible enough to enable the Air equivalent of General Krulak’s ‘three block war’. In Air Power terms, this could be characterised by allowing parallel CAS, air mobility, and ISTAR, providing a structure for commercial or humanitarian air movements elsewhere, whilst rebuilding a control capability for indigenous aviation needs.

c. **Joint Enabling.** This category includes all Air and Space activity in support of Land or Maritime operations, co-ordinated across environmental and multinational seams. The operating environment for security and stability operations will typically be on an ‘empty battlefield’ of the adversary’s choosing, characterised by jungle, mountainous and increasingly urban areas, by large, non-linear areas of operation, with dispersed friendly forces, operating in small units with integral fire support or ISTAR associated with conventional warfare. Traditionally, the role of Air Power in such operations is to provide ISTAR, tactical mobility, precision kinetic activity (including CAS for troops in contact) and this is equally valid in contemporary operations. These contributions are outlined below. The sum of these activities means counter irregular operations may be Air-reliant, notwithstanding the supporting role of Air to Land in such joint enabling activities.

(1) **ISTAR.** The contribution of Air and Space Power to counter irregular ISTAR activity has been proven in both past and contemporary operations against irregular adversaries, who seek to hide amongst the people or in challenging terrain. The use of unmanned aircraft systems (UAS) is

overcoming the Air Power's historic lack of persistence. Space systems are playing an increasing role in persistent ISR operations and have the advantages of the high perspective, persistence (always on orbit), and freedom of overflight over deep and denied areas. UAS persistence is so great that we can now maintain overwatch, detect insurgent activities, and then provide the legal chain of custody necessary to prosecute targets at some time in the future. Non-tradition ISTAR, signals intelligence, and measurement and signature intelligence have also been exploited in contemporary operations. ISTAR has a key role to play in measuring effects through Battle Damage Assessment – which NATO defines as the assessment of effects resulting from the application of military action, either lethal or non-lethal, against a military objective.²³ Measuring cognitive effects is likely to require much longer timelines than physical effects. The persistence of Air and Space ISTAR must be exploited to measure cognitive effects, rather than merely fulfilling an immediate tactical need. The local and human nature of irregular warfare mean that military forces need to understand the situation, and in particular the local population, in order to be able to influence them and reduce the support for the irregular adversary. Whereas in conventional warfare situational awareness is required, in irregular warfare the requirement is for situational understanding. Air and Space ISTAR, while critical, must be used alongside other activities such as HUMINT and close ground reconnaissance.

(2) **Tactical Mobility.** The development of the use of helicopters for tactical mobility has been one of the characteristics of post-Second World War counterinsurgency-type operations, which when combined with the greater lift of tactical air transport has greatly increased the mobility of the Land Component. This has facilitated mobility protection from ambush in the usually difficult terrain favoured by irregular adversaries, and enabled small Land units to conduct operations over dispersed areas of operations.

(3) **Precision Kinetic Activity.** Precision air attacks can be of enormous value in counterinsurgency or similar operations. Operations are often characterised by the Land Component operating in small units over large areas of operation without normal scales of ground based fire support or protection, and therefore heavily reliant on reactive CAS as airborne artillery. However, in order to achieve the joint effects outlined above, commanders must exercise exceptional care when using Air Power in the strike role. Kinetic activities, even with the most precise weapons, can cause unintended civilian casualties, which may turn the population against the legitimate use of force.

THE MILITARY CONTRIBUTION TO BUILDING CAMPAIGN AUTHORITY

11. This paper has already emphasised that the adversary seeks to create or exploit ungoverned space. A key counter irregular activity is, therefore, developing the authority of the state. Part of this is building the authority of the military lines of operation through

²³ AAP-6 (2007)

the legitimacy and perception of conduct of intervening forces. A key effect of any counter irregular operation, at all levels, is to build campaign authority – gaining the confidence of both population and wider audiences. This must be done as part of an effects based plan, not as an after thought to military action.²⁴ Air and Space Power has a key role to play.

- a. The operation must be seen as legitimate. Disproportionate or illegal use of force will cause the conduct of operations to be seen as illegitimate (*jus in bello*), notwithstanding the just cause (*jus ad bellum*). Air Power is particularly vulnerable to being portrayed as disproportionate by the adversary, media or both.
- b. Air Power is also vulnerable to being perceived or portrayed as externally imposed authority because of its impersonal nature.

Activity to restore authority will focus on activity to counter the effects of irregular activity. Probably the main method of strengthening a weak or failing state's authority is through security sector reform, the restoration of essential services and protecting authority. Air and Space Power can play an enabling role in all of these activities. However, Air Power can also be used as a show of force in an information operation influence activity, or in contributing to discrete containment or interdiction operations such as Operation ACTIVE ENDEAVOUR.²⁵ Both may be examples of deep operations beyond the reach of Land.

12. Building Host Nation Air Capabilities. The military can help strengthen, restore and protect the authority of the state through security sector reform. When the Rand Corporation considered the role of US Air Power in contemporary counterinsurgencies using a case study of El Salvador's insurgency, the authors' conclusions were that smaller footprints in-theatre and closer contact with the host nation are often preferable to larger units operating independently. It notes that the host nation must win the political as well as the military battle; that military restraint is a virtue, and that Air Power offers significant capabilities. The Rand proposal was therefore to grow the US air advisory units.²⁶ In rebuilding the Iraqi Air Force since 2004, the long-term aim has been to develop an Air Force to protect the sovereignty of Iraq, to defend its territory from external aggression, and to contribute to internal security.²⁷ This has led to the challenge of developing long-term capability in parallel to fighting the insurgency. The development of an Air Force is a long-term process and more equipment and infrastructure dependent than a Land Force.

MILITARY ACTIVITY TO COUNTER THE EFFECTS OF IRREGULAR ACTIVITY

13. Joint military activities, as part of an EBAO, create effects in the cognitive and physical domains, usually through a combination of fires and influence, or kinetic or non-kinetic activity. Traditional, regular or conventional warfare effects include deterrence, defence, coercion, and denial. In irregular warfare, the desired effects will include influencing the will of the population in order to isolate irregular forces from any support.

²⁴ JDN 02/07 p. 3-4.

²⁵ Operation Active Endeavour is NATO's Mediterranean Sea operation to help detect, deter and protect against terrorist activity, http://www.nato.int/issues/active_endeavour/index.html, as updated on 27 March 2008.

²⁶ Vick, Alan J, et al *Air Power in the New Counterinsurgency Era: The Strategic Importance of USAF Advisory and Assistance Missions*, Rand: Washington DC, 2006) http://www.rand.org/pubs/monographs/2006/RAND_MG509.pdf [accessed 1 August 2007].

²⁷ Gp Capt Mike Leaming 'Building an Iraqi Air Force', *Journal of the JAPCC*, 6, (2007), pp. 14-17.

14. **Cognitive Effects – To Influence the Will of the Population and Irregular Forces.** The aim in irregular warfare is to gain support for the legitimate authority, to protect the population through the provision of human security, and to expose the weakness of the irregular's view of the future. This is challenging – requiring understanding of the full context of the situation, and the effects are rarely apparent in the short term. The level of situational understanding required means that Air and Space ISTAR will only be able to provide part of the picture, but even so it needs to be integrated seamlessly with other intelligence and information sources, and controlled as part of a joint ISTAR plan. Air and Space Power can be exploited to deliver an alternative to the irregular's message, through direct psychological operations-type activity, through supporting other agencies, through contributing to the provision of human security, and through assisting development, and through providing incentives. Stabilisation operations must reinforce civilian-based activity to deliver incentives that improve civil life. The military may contribute to incentives through civil-military co-operation and through building legitimate host nation forces. Disincentives or coercion are more difficult to impose. The forms of collective punishment used in colonial times, and often delivered by Air Power, may be illegal in contemporary international law and, given the ubiquitous nature of the world's media, will also be counterproductive in reducing the perceived legitimacy of the military force and turning the population against it. Coercion is therefore delivered through the ability to communicate intent, resolve and legitimacy rather than through the use of force itself. Finally, the effect of irregular warfare on public support at home must be limited. While Air and Space Power may be attractive to reduce risk to friendly forces, it may be seen both in theatre and at home as the symbol of Western technology and repression. Images of the results of air attacks on the local population are emotive, are liable to manipulation, and will reduce public support.

15. **Physical Effects – To Counter the Capability of the Irregular Adversary.** The physical effects of military force may be used to deal with the capability and capacity of the irregular adversary within the population.

a. **Direct Action.** The military priority will be to achieve an acceptable level of security to allow political and military development by neutralising or destroying the irregular adversary. In non-permissive environments, offensive action may be required to clear areas of significant adversary activity and to enable economic, social and political lines of operation to work. However, search and destroy type operations are often counterproductive and precision and restraint more productive. Hence operations may be more productive if performed by small units, such as Special Forces or indigenous forces, whose understanding of the environment allows precise targeting, and whose reach allows them to conduct deep operations, with the support of Air and Space Power. The effectiveness of Air and Space Power is framed by the ability to detect and then target the adversary. As Air and Space ISTAR and precision attack capabilities have increased, so have the sensitivities to the misuse of offensive Air Power.

b. **Indirect Action.** Classical counterinsurgency doctrine emphasises an indirect approach to counter the irregular's capability by physically separating him from his base in the population, by using techniques such as protected villages, as well as removing popular support through cognitive effect. In contemporary urban environments, this is a particular challenge, highlighting the need for persistent

ISTAR and precise kinetic activity to avoid collateral damage and fratricide. The perceived inappropriate use of force will drive the affected population into the arms of the adversary. 'Air presence' or 'demonstrations' may provide a deterrent effect to a irregular activity. However also they can be perceived by the populace in a negative sense as further demonstrations of Western superiority.

16. **Mitigating the Effects of Irregular Activity.** In security and stability operations, armed forces will contribute to the following particular effects:

a. **Stability.** In order to provide continued security throughout the area of operations, stability operations will need to be conducted. In conducting stability operations, military forces may operate in support of the indigenous police or undertake policing tasks themselves, with subsequent command and control, training and legal constraints, in order to reduce disruption to the population at the risk of causing resentment. Although Air and Space Power may provide ISTAR, tactical mobility, precision kinetic activity, and CAS for troops in contact, the use of kinetic activity is likely to be limited.

b. **Institution and Infrastructure Security.** In order to mitigate the effects of irregular activity Air and Space Power should be used to contribute to the physical security of critical institutions and infrastructure. However such activities are resource intensive, reduce freedom of manoeuvre and should be provided through the use of local forces as soon as security sector reform allows. As always, the cultural context must be understood in order to prioritise and also to avoid resentment.

c. **Force Protection.** Air and Space Power must be exploited to protect the force without limiting freedom of manoeuvre. Air and Space Power can contribute to force protection through ISTAR warning of attack, through tactical overwatch, route protection, counter-improvised explosive device, tactical mobility and CAS. Forward air bases are attractive targets for the adversary and require force protection. Air base force protection, including mitigating the MANPAD threat to aircraft taking-off and landing, requires an air-minded dominance of the ground around the base.

IMPLICATIONS FOR AIR POWER

17. Accepting that the nature of Air and Space operations is enduring, its application and operating influences, and its character, will be conditioned by the context of the given scenario. Figure 2 develops some of the implications for the use of Air and Space Power in 'Big', 'Long' and 'Contained' Wars.

Air Power in Thematic Wars Implications

Big War	Long War	Contained War
Air Opponent	Ground Opponent	Air Opponent
Air Control	Airspace Control	Air Control
Space Control	Supporting	Supported/Supporting
Supported/Supporting	X-authority Liaison	Peer CC Liaison
Peer CC Liaison	CAS/AI	AI/AOSE/CAS
AOSE/AI/CAS	SEAD	AEW/SEAD/OCA/DCA
AEW/DCA/OCA/SEAD	TAC/OP/STRAT INT	OP/TAC/STRAT INT
STRAT/OP/TAC INT	Swing Mission	Swing Mission
Single Mission	Up-threat basing	Near-threat basing
Down-threat basing		

Figure 2 – Air and Space Power in the Big, Long and Contained War

Such themes should be seen as part of a continuum, but are useful in understanding the parts the various environments have to play. The role of each component will vary according to the type of ‘war’. This view underscores the value of Air and Space to each, whilst tempering the over-reaction that could emerge from focusing predominately in any single area. The list of Air and Space Power roles highlighted above is not complete, but is used to illustrate how traditional Air and Space Power roles will vary in importance depending on the character of the operation. This paper now considers the implications of irregular warfare for Air and Space Power using the three inter-related components of fighting power – physical, moral and perceptual – based on a fourth, the doctrinal component, as defined in AJP-01 *Allied Joint Doctrine*.²⁸

THE PERCEPTUAL COMPONENT

18. The perceptual component focuses on the observation and perception of the operating environment by an individual, a commander or an organisation. The challenge for the Air Commander is that effective counter irregular warfare is reliant on EBAO within a Comprehensive Approach at all levels of command. Land forces are deployed in small and often isolated units, using mission command, and human interface with other agencies and the local population, and conducting intelligence, often primarily human intelligence, fed operations. This is counterintuitive to airmen taught the mantra of centralised control and decentralised execution.²⁹ We need to avoid unmatched Joint, Air and Land command and control constructs which leave Air as a responsive tactical level activity rather than a key tool in shaping at the strategic and operational levels. The Joint Force Commander will get the full benefit only by including Air and Space in planning, execution

²⁸ AJP-01(C) *Allied Joint Doctrine* pp. 2-26 – 2.28.

²⁹ AJP-3-3 NATO Air and Space Operations.

and post mission assessment. Ideally, therefore, the Air Component Commander should be collocated with the Joint Force and Land Component Commanders in order to provide Air expertise and influence to the Joint operation, and in order to be able to exploit the attributes of Air and Space Power. Joint activity to realise the desired effects must be directed at the operational level, and consider both physical and cognitive effects. As well as cross component integration, in order to implement a Comprehensive Approach, the Joint Force must be integrated with the political, civil and diplomatic lines of operations. Ideally Joint Force activity should be co-ordinated also with international organisations such as the International Committee of the Red Cross, and international and local non-governmental organisations, although these may wish to keep their distance. Air, Space and Land have to be integrated at all levels in order to ensure desired effects from the strategic to the tactical levels. The challenge is to make operations joint all the way down. This implies more than just ensuring Air can respond quickly to a situation not of its making. It means Air teams at all levels must be able to advocate, and be empowered to deliver, Air and Space Power. The challenge is how to achieve this, and balance the traditionally different Land and Air approaches where Land uses 'decentralised planning and execution' and Air 'centralised planning and decentralised execution'.

19. **Air Command and Control.** However, current doctrine is for the ACC, through his Combined Air Operations Centre (CAOC), to exercise command and control over every aspect of air operations, through centralised control and decentralised execution. *AJP-3.3 Allied Joint Doctrine for Air and Space Operations*, for example defines the role of the CAOC planning, directing and executing joint air operations. Control, through the Air Tasking Cycle, and delivered via the ATO and ACO, is the dominant mechanism. This characterisation is shown at Figure 3. The only manifestation of mission command is the individual air sorties represented by the small, subordinate triangles at the bottom.

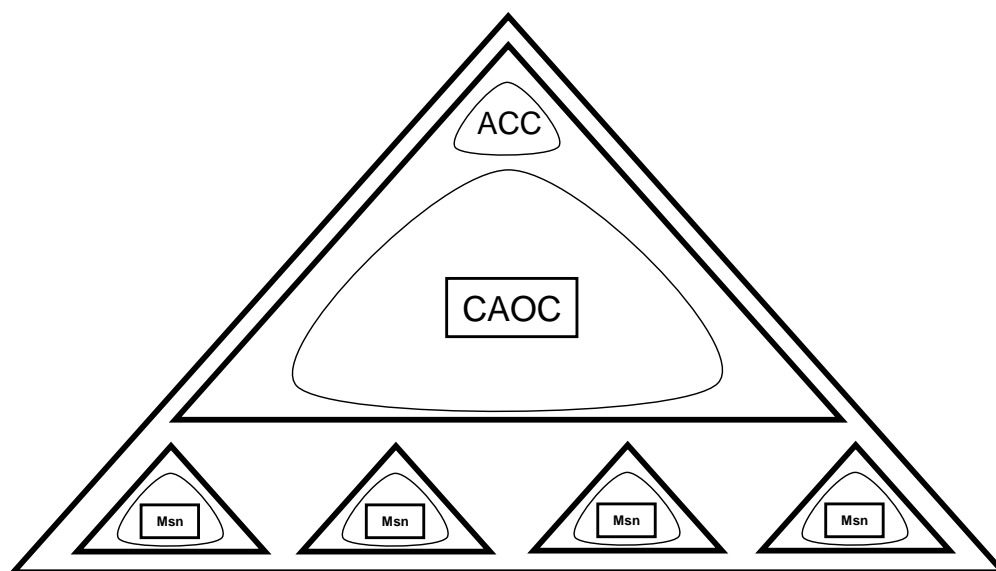


Figure 3 – Air Command Today

The ACC/CAOC construct was developed as being the best suited for conventional operations, allowing centralised control and decentralised execution in order to enable Air

to realise strategic and operational effect through tactical action, and given our hitherto limited ability to provide subordinate commanders with the degree of situational awareness and understanding necessary for a greater degree of mission delegation. Nevertheless, just like any monolithic structure, and notwithstanding everybody's best efforts, it struggles by its very nature to be particularly agile or responsive. Moreover, whilst such a system accurately reflects the Commanders Intent, the distance of the staff from the action can desensitise them to the granularity and atmospherics of the battle and undermine our ability to avoid, in effects based terms, any emerging unintended consequences. It is also inherently difficult for this centralised structure to co-operate efficiently across the environmental seams, where planning and execution are carried out at a variety of command levels.

20. **A Changing Model of Command.** A Comprehensive Approach and effects based thinking will condition what Air will have to do, and network enabling has the potential to profoundly affect how it is done. In order for Air to make an optimal contribution within a Joint and, within a Comprehensive Approach, a growing Interagency construct, the Air Commander will need to increasingly concern himself with influencing the setting of conditions and effects at the Joint level and above. He will then need to ensure that his component's activities and their contribution to realising such goals are understood and blended across the Joint battlespace. Network Enabling provides an opportunity to allow shared awareness and understanding to allow decentralised planning and execution. These changes both demand and allow Air to apply the decentralised planning required in irregular warfare. In addition to Command being the authority vested in an individual by the Alliance to direct, coordinate or control armed forces, AJP-01 describes command as the process by which a commander impresses his/her will and intentions on subordinates to achieve particular objectives. Control, on the other hand, can be described (but not defined) as the process through which a commander, assisted by the staff, organizes, directs and coordinates the activities of the forces assigned to implement orders and directives.³⁰ Based on this one way of describing the construct required for Air Command is as follows. Command needs a fusion of Information and Intelligence (I2). Information and intelligence is in turn reliant on surveillance and reconnaissance. Based on this process, the Commander's plan is executed through Battle or Battlespace Management (BSM). BSM is then enabled by a combination of Control – the regulation of activity – and self-synchronising activities for effect. Shared situational awareness is the fluid in which command and other Air 'C2' activities swim. This command model is shown at Figure 4 below.

³⁰ AJP-01(C), p. 5-1.

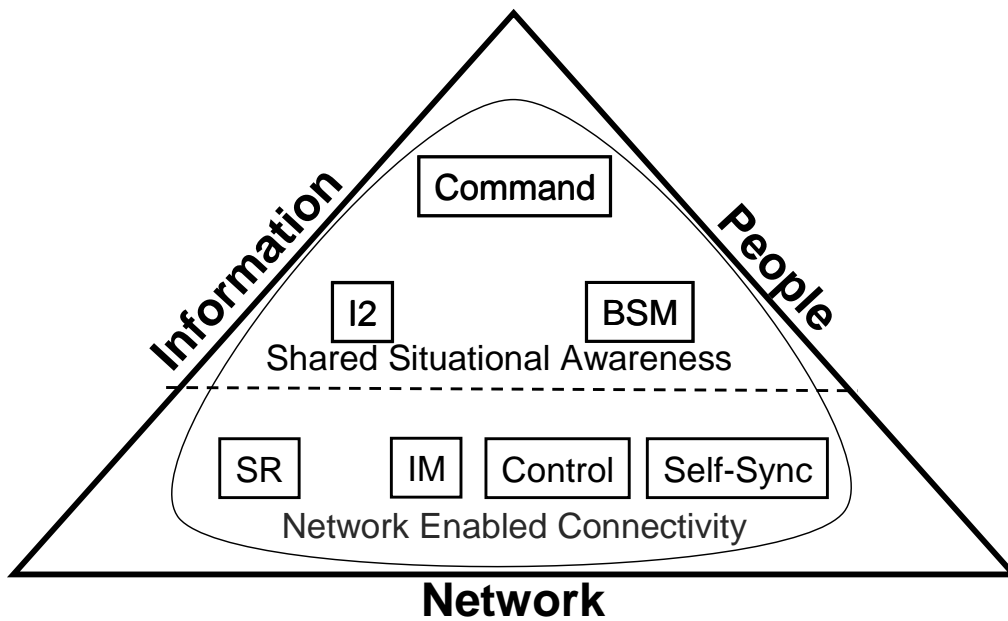


Figure 4 – Model for Command, BSM and I2

SSA and the self synchronisation it enables, allows subordinates to creatively add value to the task at hand; in short, it can significantly enable Mission Command, played out as a series of similar, subordinate triangles, as shown below in Figure 5. This is all increasingly underpinned by Network Enabling, which moves the data around to allow all the actors to play their part.

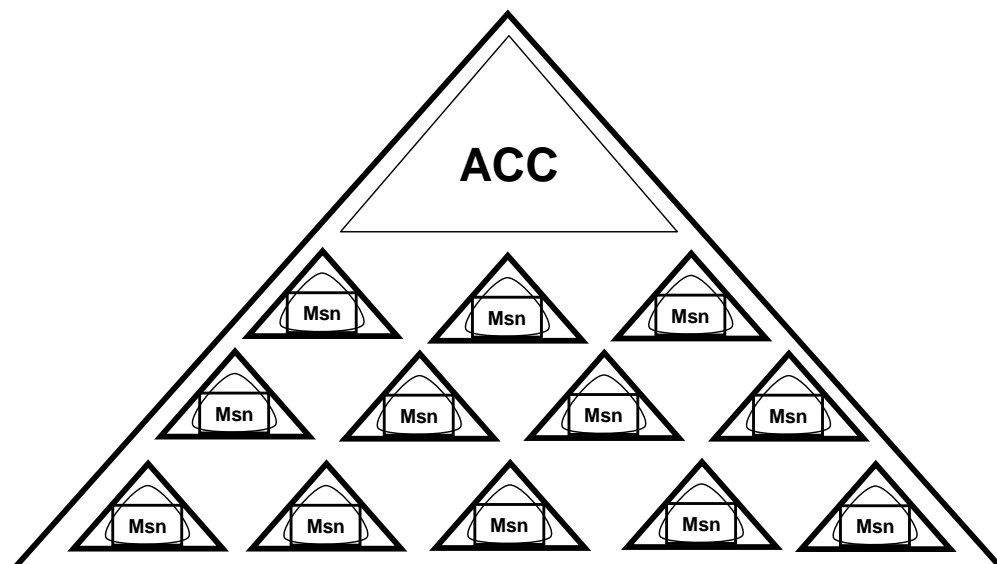


Figure 5 – Mission Command

21. **Air Command in Irregular Warfare.** Developments in a Comprehensive Approach, effects based thinking, and network enabling therefore provide options for the exercise of Air Command in Irregular Warfare. Network enabling could be used simply to increase the speed of the Air Tasking Cycle on a faster and faster spin. While Time Sensitive Targeting is important, it must not be at the expense of shortcuts with regard to the *observe* and *orientate* parts of the cycle, which may, through hurried *decide* and *act*, result in counterproductive kinetic activity and unwanted effects. Thomas X Hammes has argued that Air's emphasis on Time Sensitive Targeting and desire to shave seconds of response times has over centralised command and control, and instead what is needed is 'Mission Sensitive Targeting'.³¹ A better solution would be to use enhanced SSA and understanding to embrace a greater degree of Mission Command. Options include the ACC nominating responsible commanders for either functional or regional responsibilities, with further layers of subordinates as either effects or the plans of other components demanded, as shown in Figures 6 and 7 below. It may well be that the ideal number of layers is determined by the level of cross-component co-ordination he needs to achieve to plan and execute his roles. But regardless, the ACC would hold a prime responsibility for ensuring his subordinate commanders were mindful of his and the Joint Force Commander's intent and priorities.

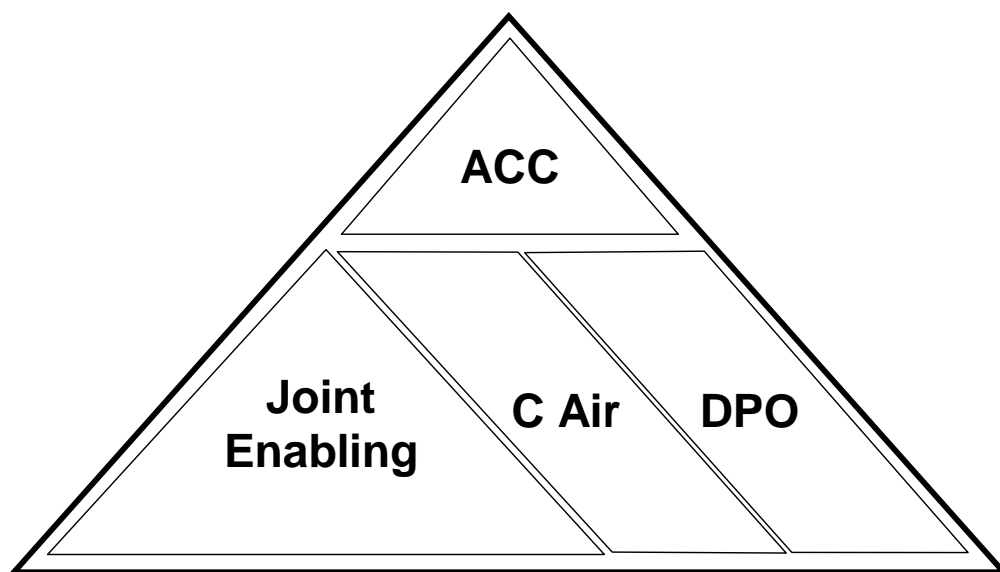


Figure 6 – Functional Command

³¹ Thomas X Hammes, 'Time Sensitive Targeting: Irrelevant To Today's Fights', *RUSI Defence Systems* (2006), pp. 119-120

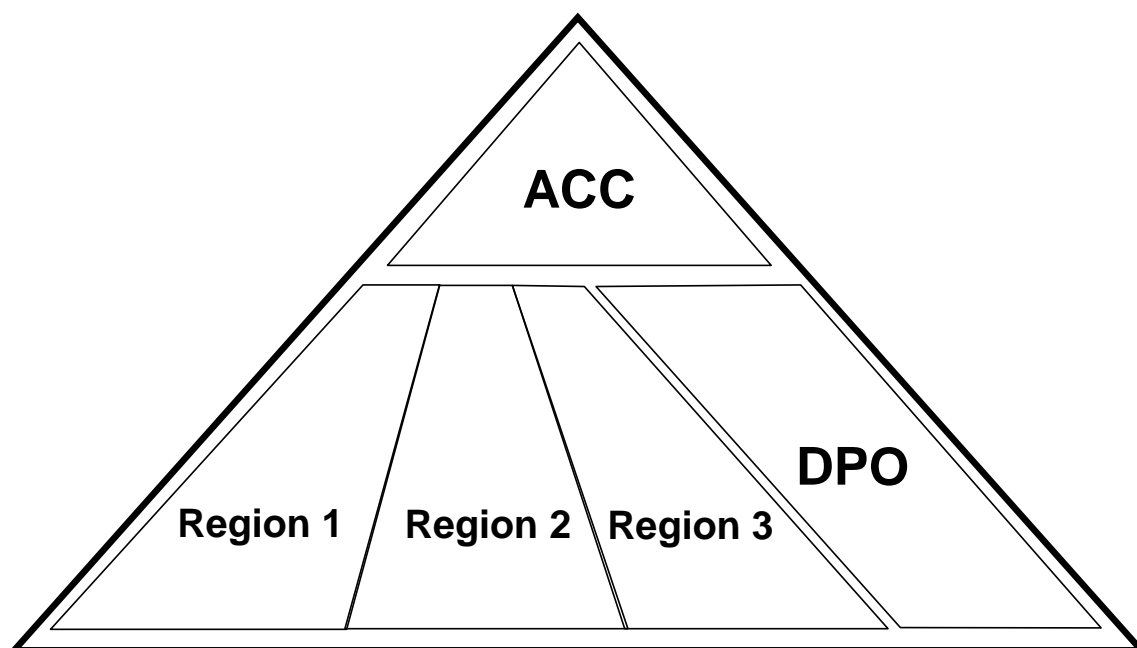


Figure 7 – Regional Command

Of course, this model is not particularly new – it bears a striking resemblance to the functional commands (for example RAF Fighter and Bomber Command and USAF Strategic Air Command) and the (Allied) Tactical Air Forces of history. The ISAF solution has been to empower the Regional Air Operations Centres and to provide deployable air integration teams to the provinces in order to integrate Air Land operations. The difference is that, in a network enabled future we should be able, with assurance, to extend mission command down through the layers thus seeking agility and creative input at every turn. This layered command construct requires empowered commanders, or at the very least liaison officers, capable of implementing mission command at every level. One option to meet this demand is to use officers already in place, such as liaison officers in Land formations, or Air base or squadron commanders. Providing the desired effects and objectives were adequately identified and sufficient networking was generated to deliver SSA, these commanders could be allocated responsibility for effects aligned to their unit's tasks. The pay back would be their close examination of the detail and an approach better tuned to the developments of battle. The requirement for a CAOC would remain, but in more of a co-ordinating role. The emphasis, however, would be on the ACC to ensure the structure met his needs and reflected the level of SSA he could genuinely generate. He would also need to take account of context. So in a conflict like Afghanistan, we would not necessarily have all the categories in place, given that apart from some low level activity, Air is not contested. An example is at Figure 7 above. The important point is that keeping the categories in mind would ensure we had the right structure in place to focus on all of Air's roles, thereby ensuring Air's contribution to effects was optimal.

22. In sum, such a construct would enable Air to regain its ability to shape operations at the strategic and operational levels, rather than provide tactical response in the form of airborne surveillance and artillery.

THE MORAL COMPONENT

23. According to AJP-01, the moral component of fighting power depends on good morale, and the conviction that the Alliance's purpose is morally and ethically sound. The moral component is based on leadership, motivation and management. Airmen need to consider the whole spectrum of conflict, including lengthy, and often messy, irregular warfare. Irregular warfare is not just a Land Component responsibility. Contemporary operations in Afghanistan demonstrate the critical importance of Air and Space. It is Allied dominance, including Air and Space dominance, which forces the adversary to fight as an irregular. Operations must be Joint Air Surface. The subjective nature of counter irregular operations may be different from 'conventional' warfare, but it is not a lesser form of warfare. A belief that Air and Space Power competence for 'big' wars will ensure the same for 'long' wars, characterised by ISAF's security and stability operations, overlooks the complexities of the latter. Finally, over reliance or misuse of kinetic activity may undermine the legitimacy of the operation. The use of Air and Space must be legitimate and therefore not undermine campaign authority

THE PHYSICAL COMPONENT

24. **Manpower.** Whilst airmen have traditionally focused on high intensity warfare, they will require the skills and knowledge, gained from formal education and training, to conduct operations across the spectrum of conflict. Indeed, countering irregular activity has been described as graduate level warfare.³² Also, a greater understanding of non-kinetic activity will need to be developed. For example, some Allies have used Air Force personnel to man Provincial Reconstruction Teams in Afghanistan. Manning regimes will need to be robust enough to allow sustained long term operations. The human perspective, underpinned by continuity, is particularly important in irregular warfare. Tour lengths need to be long enough to achieve the required levels of understanding. Activity to build host nation capabilities will be most effective if individuals grow training and mentoring experience over successive or long tours, if trainers have indigenous language skills, and if trainers and mentors have long enough in theatre to gain the trust of the host nation. Similarly air forces need to grow forward air controllers (FAC) and Air Land teams as the 'The Air Liaison Officer's ability to advocate [Air] makes or breaks airpower's contribution'.³³ Armies routinely do not do this – often employing a soldier as a FAC for one tour. Similarly, Air Force officers will need the ability to man Air Land teams, and be able to credibly advocate and provide expert advice on the use of Air Power. Probably the most important physical component issue is the ability to train and equip the indigenous Air Force to provide its own Air Power.³⁴ ISAF Operational Mentoring and Liaison Teams (OMLTs), for example, include FACs in each fielded OMLT. The lack of space expertise is

³² Wing Command David Haines 'British Airpower and Counterinsurgency – Learning from the past, fighting today and preparing for tomorrow', USAF ACSC Thesis, (Air University, Maxwell AL, 2007), p. 22.

³³ Colonel Howard D. Belote, 'Counterinsurgency Airpower: Air-Ground Integration for the Long War', *Air And Space Power Journal*, XX. 3 (2006), pp. 55-68.

³⁴ James C. Corum, 'On Airpower, Land Power, and Counterinsurgency: Getting the Doctrine Right', *Joint Force Quarterly*, 49, 2 (2008) pp. 93-97.

alarming. As the Alliance becomes more reliant upon space capabilities, it is critical that staffs have personnel trained in the planning, integration and use of Space Power.

25. **Commanders.** The implications of the changes in the perceptual component of fighting power would affect commanders. First, through the roll-out of Mission Command, Commanders would be faced with more opportunity to prove their mettle. Second, in a 'long war' countering irregular activity there is a need for operational continuity, especially of commanders. Nations will need to identify the line of succession for command appointments early and ensure those commanders are in associated posts prior to deployment so that they arrive prepared, with an already well developed understanding of the situation. Ideally joint, component and formation commanders will have trained together previously in order to have developed mutual understanding. With both these measures in place, our Commanders should develop a better instinct for Effects both planned and unintended. And, finally, commanders should be in no doubt that success or failure depends on them taking responsibility for judging and setting the balance between Control and Mission Command and ensuring the environmental seams are properly worked – once more, with the emphasis being on truly Joint operations that reflect Joint input and the optimal realisation of environmental effect.

26. **Equipment.** While technology is critical – and it is the Alliance's superior conventional warfighting capabilities that forces the adversary to fight as an irregular – we should not rely on technology alone. Allied force structures and capabilities have to be balanced across the spectrum of conflict. Traditionally, and for good reason, they have been configured for the 'big' war and adapted to other operations. The ability to innovate and adapt are therefore critical. Irregular warfare places particularly high demand on persistence and precision in ISTAR, air transport and CAS roles. In terms of find, fix and strike functions, in irregular warfare the balance of operational requirement is to find rather than fix or strike, and any strike must be precise. The benefits of UAVs are well known. Simple, cost effective, low technology solutions may have their place, for example piston-engined aircraft in CAS, ISR and transport roles, and in particular for building up indigenous Air Forces. Low collateral damage weapons will increase targeting options and the utility of Air Power.

27. **Sustainability.** For the Alliance such operations are likely to be expeditionary, and therefore reliant on joint deployment and containment capabilities. The use of common logistics rather than duplicating national effort will reduce the cost and footprint when sustaining Air operations.

THE DOCTRINAL COMPONENT

28 The binding factor of the three components above is doctrine. NATO doctrine should reflect lessons from the past and thinking about how the Alliance armed forces can best operate today and in the immediate future. NATO doctrine is that 'Operations are Operations'. That is all operations can fundamentally be approached in the same manner because NATO forces must expect to perform a wide range of potentially simultaneous activities across a spectrum of conflict, from combat action to humanitarian aid, within short timeframes and in close proximity.³⁵ However this paper argues that NATO doctrine

³⁵ AJP-01(C) Allied Joint Doctrine, p. x.

should be adapted to reflect considerations for irregular warfare and the development of NATO joint irregular warfare doctrine should refer to the use of Air and Space Power.

29. **Learning through Doctrine, Training and Education.** Air and Space doctrine must cover the spectrum of conflict. In order to be adaptive we must use doctrine not dogma, and accept that in such operations Air may be the supporting component to Land. In irregular warfare it is the side that adapts fastest that wins.³⁶ While it is possible to train for the expected, education allows adaptation for the unexpected. Irregular warfare doctrine should be taught as part of formal military education.

RECOMMENDATIONS

30. The JAPCC recommends:

- a. ACT experiments the practicalities/feasibilities of introducing greater levels of mission command into Air (and Space) operations (para 18-21).
- b. NATO continues to ensure commander's operational tour lengths are appropriate for the nature of the operations, that nations identify the line of succession early in order that commanders can be prepared, and joint, component and formation commanders, including Air commanders have trained together (para 25)
- c. NATO Air Power capability requirements reflect the need for capabilities for the full spectrum of conflict, the importance of Air ISTAR, CAS – especially low collateral damage weapons - and air mobility when countering irregular warfare, and the benefits of persistence provided by UAVs (para 26)
- d. ACT includes the contribution of Air Power in countering irregular warfare for NATO formal education where appropriate (para 24 and 29).
- e. JAPCC uses this paper to inform the agreed review of the *AJP-3.4 Crisis Response Operations* series, in order to ensure the contribution of Air Power in countering irregular warfare is included (para 28).

³⁶ FM-24 p. 9.