WINNING THE NEXT WAR – JOINTLY

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Regardless of enthusiastic perceptions in some quarters, it has been clear that air power cannot win a war by itself, at least as long as our understanding of war and winning remains rooted in tradition. In fact, neither can the ground forces or the naval forces win wars by themselves, especially where hostile air power exists and is used, however poorly. Such situations do not – and are not likely to – occur in the foreseeable future in our context. Preponderance of force has not produced victories even against sub-conventional wars, whether in Afghanistan in the 1980s or now, in the second Iraq War beginning August 2003, or even in our history. In fact, it has become far more problematic to even define victory and defeat, especially where nuclear weapons are present and/or sub-conventional conflict is prevalent.[1] The difficulty, of course, is that military professional circles worldwide have yet to really come to terms with the nature of changes that have already taken place in military power and its employment for a variety of reasons in conventional wars; and this has taken place because of changes in the capabilities of the various components of military power and their employment. Many more changes are expected in the coming years which would make it even more problematic to adjust to change.

It is against this brief background that we need to note that it is not enough to keep repeating the well established descriptive attributes of air power like speed,

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1. For a recent study, see Jan Angstrom and Isabelle Duyvesteyn, *Understanding Victory and Defeat in Contemporary War* (London: Routledge, 2007). While the authors have focussed on terrorism and insurgencies, the issues raised also have a great bearing on conventional wars.

range, versatility, lethality, heavy load carrying capability, etc. What is important is the answer to the question that must be asked: what can the air force do that will have a *decisive effect* on the outcome of the war in general, and – since land war remains a major yardstick for judging it — the ground war in particular?

EFFECT-BASED WAR-FIGHTING

In recent years we have witnessed focus on "effect-based-operations" (EBO in short) which seek creating the right effect rather than aiming for mere destruction. While this is being advocated at the military combat, mostly tactical, levels, logically this must begin at the highest strategic level itself. In other words, what would be the strategic effect that a country could/should seek with the employment of its military power and waging war? In Clausewitzean terms, war was an extension of politics by other means. Though there have been enormous changes over the past two centuries, conceptually speaking this, principle has not changed. The political aim of wars that Clausewitz rationalised was to defeat and, if possible, destroy the enemy's military forces as a prelude to the capture and occupation of enemy territory for exploiting its material and manpower resources. But capture and occupation of territory as the primary aim of war is no longer a viable objective for a variety of reasons that we need not go into here. The last territorial war for occupation was really the 1990 invasion of Kuwait by Iraq which sought to annex the resources of the former. And, surprisingly, the United States decided to buck the long-term empirical trends by trying to occupy Iraq after the March 2003 War which defeated the Iraqi military. So what aims should we seek for future wars in our context?

Territory may no longer be the prime object of wars now; but this by itself has increased the political-psychological salience of capture of even small quantities of territory as a negotiating chip because of the issues and sensitivities about national sovereignty. This is the reason for the tendency to defend "every inch" of territory as a political goal even though it imposes severe constraints on implementing an effective military strategy. Capture of territory in this context would remain an important goal in wars in the future, though its occupation for any significant period would remain extremely problematic. This assumes even

greater importance where nuclear weapons are held by the contestants, as is the case in our region, since any significant capture, leave alone occupation, of territory would increase incentives toward escalation across nuclear thresholds when it is perceived by the defenders to pose a threat to the survival of the state.

While it is patently clear that the ground forces are crucial to victory in war, we need to recall that air (and space) power, operating as it does in the third dimension, is capable of achieving strategic effect independent of other forms of military power. This is due to the reality that air power inherently possesses the characteristics to exercise influence and control over land and naval forces while it can command its own medium. On the other hand, ground and naval forces can exercise command over their own respective medium, but they cannot exercise influence/control over air power operating in the vertical domain (except in a limited way through localised use of air defence weapons). This factor, along with the actual attributes of air power, points toward the air force as the key element for achieving strategic effect.

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The problem is that if ground forces are likely to be restrained to local-border war due to its prime historical goals having been narrowed by a number of over-riding factors, the best outcome that can be achieved is a limited success which may or may not achieve the requisite strategic effect of influencing the enemy's behaviour to any significant degree. The challenge under these circumstances is: how to apply coercive force leave alone punitive force to achieve the effects necessary to alter the enemy's policy choices? Such coercive force beyond the contact battle, by definition, would have to be undertaken by air power, both the combat component and, in particular circumstances, by special forces relying on the airlift component of air power. Conceptually, the air force would be the appropriate instrument to apply coercive-punitive force, by itself in some cases, but also in concert with ground and naval forces even when their role is

strategically defensive. This fundamental reality has to be taken into account if joint warfare is to succeed in future.

AIR DOMINANCE

But the air force cannot achieve the desired strategic effect unless it possesses in substance the capabilities for what it is conceptually capable of – being able to influence, and if properly configured and employed, to control the employment of land and sea forces below. This unique attribute provides the air force with the quality of being a strategic force, with strategic reach, capable of achieving strategic effect. This is due to the combination of mobility, firepower, reach and flexibility that air power intrinsically possesses. The only serious challenge that air forces have to contend with in the air is that posed by the enemy air forces, which in principle could possess similar or better capabilities. And air dominance cannot be exploited to its intrinsic advantages unless the hostile air force is subdued or, ideally, eliminated from being a factor in war. It needs to be noted here that much of the lessons of recent wars could be misread since the wars took place with a near total dominance by the US (and its allies) in air and space.

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What does air dominance imply? The role and importance of air dominance go beyond the classical concept of air superiority. Douhet's concept of "command of the air" did signify the goal of dominance in and from the air. In the early years, this centred on air-to-ground attacks in the classical "bombing" role. But fighter aircraft carried limited weapon load and possessed limited combat radius and less capabilities for the type of bombing for this purpose. A heavier weapon load to longer distances could be carried only in larger platforms – and the "bomber" was born from transport aircraft. But limitations of technology necessitated use of inaccurate free fall bombs from medium altitudes, mostly employed in area bombing tactics. These inevitably focussed on population centres and industrial complexes; and this limitation, in turn, led to

the concept of strategic bombing. While enormous destruction was rained down from the skies in "city busting" strategic bombing, the dominant effect would be achieved finally only with the atomic bomb in August 1945.

The lesson of history is that dominance in and from the skies is almost invariably hinged on force employment; and this was limited in air-to-ground attacks due to limitations of accuracy of attack and/or range. The bomber had more range and weight of attack, but bombing was not accurate. The fighter (and fighter-bomber) could deliver weapons more accurately, but was limited in range and weapon load. This was particularly so in our case till recent years since the bulk of the combat force of the Indian Air Force (IAF) was composed of Soviet origin aircraft, with limited payloads and radius of action. This, in turn, dictated forward force deployment, forgoing the intrinsic advantage of strategic depth that India possesses.[2]

The consequence of the limitations of air-to-ground strike was that air superiority essentially implied air-to-air dominance (leading many to assume the struggle for air superiority as a private war between air forces) which no doubt permitted extensive freedom of action not only to the air force achieving it but, more importantly, for the surface forces operating below. This, in turn, had led to ground-based air defence systems becoming more lethal and deployed in ever greater density. One consequence was to narrow the impact of air power in the air-to-surface role, while increasing the costs of air support to land forces. The other was to find ways and means of getting out of this constraint through technological advances.

Historically, while air-to-air warfare had become all-weather with beyond-visual-range (BVR) precision strike capabilities even by the 1960s, air-to-surface warfare had remained constrained to line-of-sight (LOS) weapon delivery till recently where the pilot's eye contact with the target became the defining characteristic of strike from the air.[3] The target on the ground had to be visually located, identified and acquired before weapons could be launched

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2. See Jasjit Singh, "Strategic Reach - Strategic Depth, and the Question of the IAF's Strategic Posture," *AIR POWER*, vol. 2, no. 2, Summer 2007 April-June, pp. 11-26.
3. The difference in the proportion of smart weapons used in the 1991 Gulf War and the 2003 Iraq War is sufficient indication of this trend.

with a reasonable possibility of hitting it. At one level, this intensified the aim of air strike in terms of kinetic shock effect (sidelining the crucial impact of psychological shock effect of air attack) and as the criterion of successful attack in relation to destruction of the target. At another level, this brought the attacking aircraft inevitably within the lethal range of air defence weapons, often requiring flying over the target itself, increasing aircraft vulnerability. Almost all our combat losses in the air during the 1971 War were during air-to-ground missions.

Stand-off and BVR air-to-surface precision strike capabilities now not only equip the air forces of the advanced countries, but are increasingly available in our region too. Laser-guided bombs were used to great effect in interdiction missions reshaping the battlefield during the 1999 Kargil War. The issue is not confined to acquisition of precision guided munitions (PGMs) but the total capability for extended range precision strike which requires high quality reconnaissance, surveillance and target acquisition (RSTA) capabilities for precision strikes to be effective. This is an area that requires high priority in building IAF capabilities if the advantages of the air-to-surface dominance are to be optimally used, leave alone fully exploited. In other words, building IAF air dominance capabilities is critical to winning strategies of not only the war in the air, but more significantly, the war on the ground and at sea. IAF strategic reach has been expanding and this naturally implies expansion of the battle space. In turn, this would demand enormously expanded intelligence and RSTA capabilities if the attributes of air dominance are to be effectively exploited.

Logically, air dominance capabilities should be planned for in peace-time since existential air dominance capabilities provide a powerful conventional deterrence capability. They would then confer a definitive competitive advantage in case of deterrence failure, enhancing the credibility of deterrence. Higher credibility of deterrence itself implies reduction of the risks of deterrence failure. But at this point in our history, while we aim for building future

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capabilities, air dominance in our case would have to be contested, perhaps even from a position of disadvantage (if we are unable to restore the air power balance vis-à-vis China). Given the ongoing military modernisation and the unambiguous priority that China and Pakistan (since 1999) are giving to rapidly build their air forces, the decline in the force level would have to be arrested on the highest priority before we can seriously address the issue of optimising air force capabilities.

It needs to be noted that in all the wars after the end of the Cold War (and most before that) the US and its allies enjoyed total air dominance and, hence, air power set the conditions for rapid and less costly success in war. In the 1999 Kargil War, we also enjoyed total air dominance of the battle space with similar effects. Maximising favourable air dominance capability would remain the aim of all modern air forces. And China's own official 2004 Defence White Paper now categorically lays down the contours of its military strategy when it states, "While continuing to attach importance to the building of the Army, the PLA gives priority to the building of the Navy, Air Force and Second Artillery Force to seek balanced development of the combat structure, in order to *strengthen the capabilities for winning both command of the sea and command of the air, and conducting strategic counter-strike.*"[4]

A less asymmetric balance of air power (like that in our region) would naturally absorb a (corresponding?) proportion of air effort in contesting air dominance through air-to-air dominance. This implies that the quality and extent of air dominance of the surface forces would be heavily influenced by the ability of the IAF to fight both battles for air dominance simultaneously and do it rapidly and successfully. In fact, there may be occasions (like the enemy launching a surprise attack) when air-to-ground operations may have to take the lead.[5] This is where force size starts to assume importance in an era where mass in general is replaceable by technology, especially that related to what have come to be termed as "force multipliers."

4. White Paper on China's National Defence, December 2004.
5. This was the case in the 1973 Yon Kippur War when the Arab militaries achieved strategic surprise. This was also the primary option available after the terrorist attack on the Indian Parliament on December 13, 2001, for a prompt response while the Indian Army (like the Israeli Army in 1973) mobilised.

TRINITY OF MILITARY POWER

There is a natural tendency in modern militaries to focus on technology, especially superior technology (in particular those that come under the rubric of "force multiplication") as the key to favourable competitive advantage in war-fighting. This is one reason for the rush toward ownership and control of new systems and technology which then become a handicap for jointness and building mutual trust. The debate about utilisation of space for our defence (which hardly evoked any interest in the armed forces a decade ago when the political leadership of the country was pressing for it) suddenly erupted into criticism and opposition when the Indian Air Force sought to establish an Aerospace Command for its own needs is a case in point![6]

Conceptual Consensus

A commonly accepted conceptual foundation covering military power as the ultimate instrument of the state is critical to bring everyone onto a common professional grid in respect of our strategic priorities and where the role of (military) force fits into this. This requires much deeper understanding of the theory of warfare and application of military power, including its limits and

Conceptual Foundations

Enemy

Force Planning ←——————→ **Force Employment**
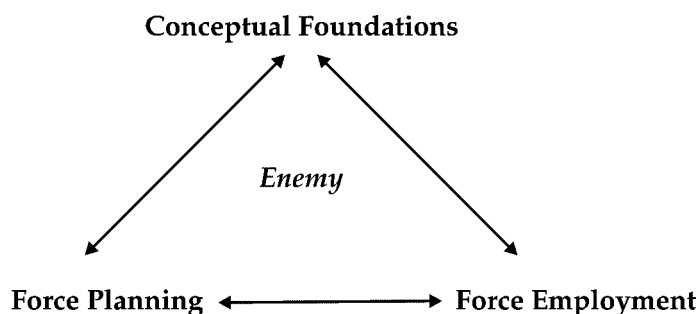
capabilities (well beyond mere "principles of war," many of which are getting superseded by advances in technology, etc.), the driving urges, politico-military

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6. The bipartisan Standing Committee of Defence of the Lok Sabha has been pressing the Ministry of Defence since 1998 to set up an Aerospace Command in the IAF to access capabilities for national defence. See successive reports of the committee over the years indicating that little or no action was taken on a strategic defence issue in spite of the political leadership of the country pressing hard for it.

goals and strategies of potential adversaries, our own cultural correlates, the history of wars and weapons in general and that of our own and those of the likely adversaries, the political system, the dynamics of the international system, military technology, and the conflict environment (especially, the impact of nuclear weapons), etc.

This is a vast and varied area which is covered only partially in the normal course of command and staff appointments; and much of this keeps changing. And what is more, each of these has varied dynamics, affecting different components of military power (with their unique institutional cultures) differently. It would be unrealistic to expect that we can craft a joint approach, leave alone meaningful integrated operations, without a conceptual consensus – or at least a common understanding – of these areas. Our difficulties are compounded by lack of agreement and understanding of the vocabulary related to these issues.[7]

On the other hand, it is only when common understanding and agreement have been reached on the nature of the war (for example, a local/border war, a full-scale war, or a war under the nuclear overhang seeking "decisive military victory" or a limited war with limited objectives of raising the cost to the enemy for some of its policies, and so on) and how its outcome (decisive military victory, successful application of punitive military force to alter/influence enemy policies, etc.) would be shaped to achieve our national interests that we can move onto the next step of deciding the capabilities (single Service as well as joint Service) that would be needed and could be created, given the usual constraints of technological and fiscal resources. Such conceptual foundations are built up through rigorous studies, debates and discussions broadening the participation at every opportunity.

Force planning obviously is all about creating future (relevant for the next 3-30 years, allowing for the time taken for decision-making and the life of equipment in active service) capabilities and capacity. This is not an easy task since the technological and operational environments would keep changing.

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7. The foreign secretary of India, in a recent address, highlighted the serious deficit in understanding our future challenges because of the lack of our own vocabulary dealing with national security issues. See Shivshankar Menon, "Challenges to Indian Foreign Policy," *AIR POWER*, vol.2, no.2, Summer 2007, April-June.

And making joint long-term plans gets even more complex for a variety of reasons. This makes it essential to define a clear vision to provide the necessary guidance and keep it under regular review to incorporate changes that might be necessary in the joint doctrine that should flow from the vision. Paradoxically, it also implies a degree of flexibility to make changes while providing the vision and doctrine with a high degree of sanctity without which it would rapidly lose its very purpose. The force planning process must start on the basis of the professional grid of conceptual foundations.

Force employment has not received the attention it deserves as the key to winning wars. Superior technology and/or mass (the size and concentration of military force) have been perceived in the past as the critical drivers of war winning. Hence, the focus of military planners and commanders has inevitably been placed heavily on military technology and its acquisition to build future capabilities. Rapid advances in military technology have further boosted the role and dependence on technology, leading to doctrinal emphasis on "high-technology" warfare since the 1991 Gulf War. China even modified its doctrine from people's war to one of fighting a "modern war under high-tech conditions." Technology was seen to have engineered a revolution in military affairs (an RMA, though the term is hardly heard a decade later).

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But the weight of empirical evidence in military history over the centuries points to a fundamental consistency, that military force employment (and the principles on which it is based) has been the single most dominant factor leading to victory in wars. This, *prima facie*, appears to be in contradiction to the role of modern technology and capabilities built on its strengths. Technology, especially in the shape of weapons and military systems, is certainly a critical component employed in force employment besides the factor of force size and mass. Modern military forces naturally place great store by the technological capabilities they can acquire and field. The issue of mass and size of forces naturally gets

relegated in this process to the impact of technology. The dynamics of technology and war inevitably tends to place great emphasis on "capabilities" in terms of weapons, equipment and structures. But that leaves a question often unasked: how do we build capabilities for superior force employment?

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The principles of force employment exist essentially in the conceptual domain and are subject to enormous uncertainties and ambiguities, not the least being how the enemy wishes to fight and what he fights with. To be effective and successful, these principles should be based on historical experiences, cultural correlates (especially strategic culture), the theory of use of force, available technology, political and psychological dimensions of war and war aims in a given strategic environment, and so on. Above all, force employment must be able to maximise the attributes of technology, manpower, and organisation in the context of the specific operational environment to achieve the desired effects. In other words, force employment emerges from the intellectual capability to synergise various elements of war-fighting means in relation to those of the enemy.

Military thinking tends to focus a great deal on capabilities, both our own and these of the potential adversary. Intelligence assessments tend to be influenced more by the bean count approach to capabilities. But capabilities by themselves do not result in winning wars; their optimum exploitation does. And this requires that the focus on capabilities should not become absolutist and the "enemy" be brought into the picture and its examination at every step. Competitive advantages in force

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employment in war start with planning in peace-time through rigorous analyses of the likely operational-technological environment, the likely enemy strategies, our own capabilities (in terms of technology and force size) and options to achieve favourable asymmetry that force employment could exploit with benefit. Deficit in

capabilities can be compensated by force employment, but only within limits; and surplus capability does not automatically translate into victory. The greatest challenge in peace-time force planning for war winning is to acquire appropriate capabilities for force employment in war. In other words, creating optimum synergy between concept (and doctrine) and capability in an interactive process is central to winning future wars.

WINNING WARS JOINTLY

Two basic factors must be kept in mind when addressing the issues of jointmanship: first, that even military systems (like that of the United States) that have achieved extensive joint thinking, planning and employment of military power, continue to be stymied by differences among different components of military power, often leading to acrimony and sub-optimal performance. And, second, increasing specialisation in military forces makes it far more difficult to achieve in practice what in theory may look attractive. In the former case, the dissonance could be due to honest professional differences as is the experience in the bulk of the cases,[8] or due to institutional biases/loyalties (which military forces have to foster and guard jealously in order to build and exploit them to enhance combat effectiveness), the lack of mutual confidence and trust among individuals and different components of military power (hence, the desire to keep capabilities and forces "under command") often arising from a lack of understanding of the role, limits and capabilities of each other, problems of institutional and individual egos, and so on.

Lack of trust is another factor that creates problems for joint operations. Armies, influenced as they are by the emotions of close combat, have little faith in air force operations beyond their visual horizon; and air forces have traditionally suspected the armies of trying to control and/or nibble at their existence partly because all but a few air forces grew from being integral components of the armies (the IAF being one of the few exceptions through the past 75 years). But "professional trust is necessary between the Services so that

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8. The current disagreement between the US Army and the USAF about air space management above the very small zone of around 30 sq. km. in size in Baghdad is symptomatic.

each is not pursuing its own self-fulfilling aims but competently employing its combat power for the benefit of the joint force as a whole."[9] Gen. Charles A. Horner wrote about Operation Desert Storm:[10]

> Trust was the key factor. Land, sea, air and space were all sub-elements of the overall campaign: *there was no room for prima donnas. You need people schooled in their own type of warfare, and then you need trust in each other.* (Emphasis added.)

But we need to take note that even in the United States, "Service ways of doing things" have persisted for nearly two decades since the passage of the much admired Goldwater-Nichols Defence Reorganisation Act of 1986, indicating that the deep-rooted nature of Service cultures and bureaucracies continues to affect jointness. The most crucial underpinning of jointmanship lies in joint concepts of war-fighting that can then be used to develop capabilities to undertake joint operations. But there are many studies indicating that even the US joint system continues to produce "concepts that are amalgamation of Service doctrines and capabilities rather than demanding that the Service develop capabilities specifically designed to support joint doctrines." If this is the situation in the US military which at least is integrated vertically in the Ministry of Defence (unlike ours) and mostly unified horizontally, we would need to examine very carefully how to achieve the requisite level of "jointness" which serves the common purpose of preparing for, and winning, a war instead of relying on *mantras*.

Reducing Inter-Service Tensions

Winning the next war jointly requires that we identify at least the major areas of professionally divergent thinking and inter-Service tensions. Three are examined here to illustrate the principles on which to deal with them. The (US) Army and Air Force experience the greatest inter-Service tension over the relative roles and limits of the boundaries of ground and air power in war-fighting. This tension largely results from how joint doctrine designates areas of operation (AOs) and how the

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9. Lt. Col. Terry L. New, USAF, "Where to Draw the Line Between Air and Land Battle" *Air Power Journal*, (Maxwell, USA), Fall 1996, p. 47.
10. Joint Publication 1, p. 89, cited by New, Ibid., p. 47.

army views deep operations. This, in turn, raises the conceptual issues regarding coordination boundaries between air and ground forces.

Land forces have tended to acquire weapons with increasing ranges and lethality and acquire a justifiable interest in what happens over the horizon and what has come to be known as the "deep battle" in hostile territory well beyond the traditional "bomb line" of the ground battle which normally coincided with the range of artillery guns, that is, out to about 25-odd km from the contact line.[11] But by their very nature ground, forces are far less effective as a force to conduct military operations well beyond the contact battle as compared to air forces. The experience of recent wars indicates that a shift has taken place in the relative war-fighting roles of ground and air power and this was most visible in the 2003 Iraq War. A recent RAND study on the evolving roles or ground and air power indicating the deficit in US joint doctrines concluded from the assessment of the Iraq War that:[12]

- The strategic and operational levels of war-fighting against large conventional forces were dominated by flexible, all weather, precision-strike air power, enabled by intelligence, surveillance, and reconnaissance (ISR).
- The tactical level of war and the exploitation of the operational effects of air power were the primary domains of ground power.

This is because surface forces now possess overwhelming tactical dominance capabilities and the optimum role for their employment in a local border war would be to force the enemy to react at the operational level by either concentrating forces or moving the reserves, thus, making them vulnerable to air attack with the air-to-surface dominance of the air force. The principles apply in respect of the naval environment possibly with greater effect since the protection provided by camouflage, dispersal and other survival strategies is not available at sea, making naval assets more vulnerable to hostile air power.

A second area of tension between ground and air forces is that concerning management of the air space, especially in tactical battlefield areas. And the armies

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11. This, incidentally, was the agreed dividing line of Service responsibilities between the Indian Army and IAF in the early 1980s.
12. David E. Johnson, *Learning Large Lessons: The Evolving Roles of Ground Power and Air Power in the Post-Cold War Era* (Santa Monica: RAND, 2007), p. 140.

are constantly expanding this area. In spite of enormous investment in "jointness," the US Army and Air Force have serious differences, among other areas, in the management and control of air space in the battle zone. In recent times, this erupted poignantly in Iraq where at least five collisions have recently taken place between UAVs and combat aircraft/helicopters within a small area of 30-odd sq km above Baghdad where close to 100 aircraft (including UAVs) are operating on a typical day.[13] The disagreements are not about ownership, but actually about the "fundamental philosophies of command and control" of the two Services in spite of decades-old foundations of joint operations and a unified joint command. The US Army "uses procedural control – essentially setting up cylinders in the sky where certain units are allowed to operate, and then trusting everyone to follow the rules" while the "air force uses positive control in which air traffic controllers keep tabs on everything aloft."[14] Resolution of this source of tension requires greater understanding of the basic parameters of air defence and air space management.

The third is another perennial issue: the over-riding need for the air force to dominate hostile air forces. The war in the vertical dimension has to be fought and won by the air force by its own means, and air dominance would remain its preeminent role and mission to provide the environment for war winning. But air dominance, in both air-to-air as well air-to-surface superiority roles, would provide enormous freedom of action for ground and naval forces to conduct operations they are best suited for while undertaking (strategic and operational level) air strikes and support missions contributing to the war-fighting capabilities of surface forces. The primary role of the air force in respect of the *joint war-fighting* would be to shape the battle space at the operational and strategic level, besides providing

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13. Gayle S. Putrich, "Unmanned and Dangerous: How UAV-Plane Collisions Are Changing US Air Control," *Defense News*, June 11, 2007, pp. 7-8.
14. Putrich, Ibid., p.8.

close air support and performing other roles like ISR, airlift, etc.

The crux of success of joint war-fighting is that both the land force commander and the air force commander must accept that the roles and effects created by each component lead to maximising war-fighting effects within the bounds of land and air power capabilities. A recent seminal study by RAND concluded that the principal role of the land forces would be to employ their overwhelming tactical dominance to:[15]

- "force enemy reaction at the operational and strategic levels by forcing concentration and/or movement, thus, making them vulnerable to air attack;
- "close with and finish enemy tactical remnants, exploit success and seize and hold ground;
- "deal with the post-conflict security environment until the desired strategic political end state is achieved."
  Air power's role, according to this study, argues the author, should be to:
- "shape the theatre at the operational and strategic levels;
- "provide close air support (CAS), intelligence, surveillance, and reconnaissance (ISR), and lift to support ground combat operations;
- "provide CAS, ISR, and lift for ground-force operations to secure and stabilise the theatre."

However, we must note a caveat here. The study and experience of the US military in war-fighting since the end of Cold War (Gulf War 1991, Bosnia 1995, Kosovo 1999, Afghanistan 2001, Iraq 2003-) has been against enemies that did not possess air power, except for Iraq in 1991, which was rapidly neutralised by the far superior US air power. The clear lesson is that the above recommendations assume total command of the air.[16] In our case, this is not likely to be so and the command would have to be contested. Hence, the role of seeking and achieving "air dominance" would be a prerequisite to the ground and air power roles outlined above.

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15. David E. Johnson, *Learning Large Lessons: The Evolving Roles of Ground Power and Air Power in the Post-Cold War Era* (Santa Monica: RAND, 2007), pp. 193-194.
16. Incidentally, winning a war through "command of the air" is now the official policy and strategy of China as per the White Paper on National Defence 2004.