

CONFLICTS AND AEROSPACE POWER IN 21ST CENTURY

ADDRESS BY THE CHIEF OF THE AIR STAFF AT
JUMBO MAJUMDAR SEMINAR,
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INTRODUCTION

Good Morning, Ladies and Gentlemen. My special greetings to the Director General, Centre for Air Power Studies (DG CAPS) Air Mshl Vinod Patney, former air chiefs and other distinguished guests present here. It is always an honour and a privilege to come to CAPS and interact with so many senior stalwarts of the Indian Air Force (IAF) as well as experts from the aerospace fraternity with exceptional domain knowledge. At the very outset, my compliments to CAPS for regularly organising such thought provoking seminars which involve many of our esteemed veterans, thus, ensuring that we continue to interact and benefit from their immense experience.

The 'Jumbo Majumdar Seminar', in addition to paying a grateful tribute to a true air force legend, is also reputed for deliberating on many air power issues of contemporary relevance. This year's topic "Conflict and Aerospace Power in the 21st Century" is highly relevant, especially as we are currently witnessing a significant process of evolution in the nature of conflicts as well as in the expanding capabilities of aerospace power.

Air Chief Marshal **Arup Raha** PVSM, AVSM, VM, ADC, Chief of the Air Staff, addressing the Jumbo Majumdar Seminar.

ABOUT JUMBO MAJUMDAR

Jumbo Majumdar was the IAF's first World War II hero and, in fact, the only IAF pilot to be decorated with a bar to the DFC. He was one of the pioneers of the IAF's operational experience as it was under his command as a young 28-year-old squadron commander of No. 1 Squadron, that the IAF operationally cut its teeth. Barely had his squadron of 12 Lysander Army Cooperation aircraft deployed at Tungoo in erstwhile Burma, when the Japanese bombers operating out of the occupied aerodrome at Mac Haungsaun in Thailand carried out a large force raid. Fortunately, all the Lysanders were well dispersed and there was no damage either to the men or the aircraft.

Notwithstanding the fact that Lysanders were basically reconnaissance aircraft, Jumbo Majumdar had made up his mind to reciprocate in equal measure to this Japanese provocation and he earnestly got on to the task of improvising the Lysander for the bombing role. A bomb rack was improvised and 2 x 250 lb bombs were fitted on it. So impressed were the New Zealanders deployed there with Jumbo Majumdar's courageous spirit that they sent their Buffalo aircraft as escorts. Jumbo Majumdar flew over dense forests and jungles of the intervening mountain ranges and struck the Japanese aircraft hangar and wireless station with deadly precision, causing extensive damage to the hangar and the aircraft. After such an audacious display of the 'never say die' spirit of the IAF, Jumbo Majumdar promptly declared that his squadron would henceforth also function as a bomber squadron.

INCREASING RELEVANCE OF AEROSPACE POWER

Ladies and Gentlemen, the IAF is proud of such a legacy of visionary leadership, innovation and pioneering spirit and it is this inheritance which has helped us in weathering many of the past and present day transformational challenges. The IAF is in the midst of a comprehensive modernisation plan, which will enable us to acquire niche operational capabilities essential for handling our future national security contingencies.

History has proved that as conflicts continue to evolve, correspondingly we have also seen aerospace power rising up to each and every emerging challenge in equal measure. I firmly believe that the future will witness the continued preeminence of aerospace power as the primary instrument of choice for almost all operational contingencies. Aerospace power is only 110 years old and despite being the youngest of the three elements of military power, it provides immense relief/freedom from surface friction which is inherent in any army/naval operation. So while the 20th century belonged to air power, the 21st century certainly belongs to aerospace power.

The history of nations/world clearly highlights the fact that for a state to become a great power, it is imperative that it demonstrate mastery over the creation, deployment and use of military power towards achieving national objectives. And amongst the three Services, it will always be the air force which will afford prompt multiple response options to the political leadership in times of national security crises.

Recent conflicts have clearly demonstrated the resounding success of aerospace power because of its ability to simultaneously interface as well as influence land/sea operations. The relevance of aerospace power, in fact, has increased manifold over the years – it is like the ultimate weapon for assured victory in a conflict. And it is for this reason, therefore, that there is a clamour for an enhanced ‘air wing’ by the army and navy, as well as by the paramilitary forces. It is due to this realisation of the paramount importance of aerospace power that nations have treated their air forces as their best form of defence and deterrence.

OVERVIEW

To this learned audience, I do not wish to talk about the positive attributes of employing aerospace power. Therefore, I will briefly touch upon the nature of conflicts as we see them and look at the evolution of aerospace power, particularly in our context. Then I will spend some time on tracing the future contours of the growth of aerospace power, where I will talk about some of the associated challenges. I will also put forward some

future propositions on the employment of air power – which may also be deliberated upon during the course of this seminar.

THE NATURE OF CONFLICT

When we talk about conflicts, we find that very often, war and armed conflicts are treated as near synonymous terms. With the blurring of boundaries among peace, war, armed conflict, conflict and terrorism, the transition from one to another is increasingly becoming less and less well marked. Armed conflicts embrace a wide range of conflict situations in which the armed forces may be required to operate and may encompass the entire spectrum. The dimensions and character of any particular conflict would, however, depend on a variety of factors ranging from the degree of national interest involved; the nature and the extent of limitations imposed; the character of forces engaged as also the level of intensity; and the duration.

CONFLICTS IN THE 21ST CENTURY : THE CAUSES

The 21st century geopolitical environment will continue to be characterised by constant changes and upheavals. Despite the existing unipolar world order, new power centres will continue to constantly emerge and these, in turn, will necessitate realignments. To my mind, there are several predisposing factors which will govern the changing nature of future conflicts.

- Firstly, there would be an ever increasing contest over the limited resources, be it energy, food or water.
- Secondly, notwithstanding the increased cooperation which is dictated by the nature of the globalisation process, there would still be certain conflict points arising out of comparative asymmetry amongst the stakeholders. This asymmetry would be based on economic strength and vulnerabilities, technological or scientific growth with mastery over critical technologies like metallurgy, engine-propulsion, space and cyber applications, Electronic Warfare (EW), nuclear, etc; and, more importantly, the differential in the capabilities of the defence forces of the stakeholders.

- Thirdly, there would be the ever present threat posed by the extremist non-state actors, quite similar to what we have been witnessing in our neighbourhood, resulting from perceived or real grievances.
- Fourthly, all future conflicts, be they inter-state or intra-state, are likely to involve ethnic, religious or cultural issues individually or in a combination of factors. In this respect, lack of economic growth or inadequate development of human resources, and deprivation and exploitation of economically weaker sections would result in social unrest, upheaval, insurgency and conflicts, into which the armed forces may get drawn, for maintaining law and order, peace and tranquillity.
- And lastly, cyber security or the cyber domain is the new dimension of conflicts between nations. Cyber war could cripple a nation's functioning and bring it to its knees without the use of arms or violence. So, with such an abundance of predisposing factors, it would be safe to assume that conflicts will continue to arise in the future.

ROLE OF THE ARMED FORCES?

The question, therefore, is that, given the present dynamic conflict environment, what will be the role of the armed forces? Although the probability of full scale mobilisation and total wars is diminishing, the armed forces will certainly need to remain prepared for addressing asymmetric conflicts and terrorist threats. With demarcations blurring, there will be a need to address each new conflict on its own specific merits. But despite these new demands, the armed forces would still be expected to meet the classic objectives which will include deterrence, coercion, denial, destruction and disruption. Hence, the armed forces need to continuously and proactively monitor the security environment and remain prepared to tackle the contingencies, as and when they arise.

AEROSPACE POWER: ITS SUITABILITY IN THE PRESENT CONTEXT

Amongst all the other elements of military power, aerospace power is perfectly suited to handle this dynamic requirement as its inherent flexibility allows it to capitalise on the often narrow response timeframes. Air and space

capabilities afford us the much needed political freedom of manoeuvre by enabling us to exert influence in a sustainable and easily scalable manner, while, at the same time, limiting our own political liability by reducing our footprint on the ground. This, Ladies and Gentlemen, to my mind is the primary attribute which will ensure the continued primacy of aerospace power amongst the range of available sovereign options. It is also my belief that it will be air power's ability to maximise its comparative advantage in the third and the fourth dimensions and to dominate the information space that will underwrite its future utility as a useful, credible, viable and essential tool in both the influence any nation can exert in international arena as well as the hard elements of national power.

AEROSPACE POWER AND AFFORDABILITY

Let me now address the commonly held perception that in the present era of austerity and ever tightening purses, aerospace power will be an expensive capability to maintain and this characteristic will, in turn, prevent its continued growth. Yes, the upfront cost of an aerial platform may be higher as compared to other combat elements, but this, when set against the value brought throughout its effective lifespan, certainly makes it a wiser option.

FORCE STRUCTURE

Ladies and Gentlemen, while addressing our modernisation requirements, when we deliberate on the right force structure, we need to understand our priorities clearly, so that we can wisely allocate our scarce resources. At the same time, it must also be understood that resource availability alone should not be allowed to dictate our force structure to such an extent that we lose the capability to dominate the air, as this would certainly prove to be much more costly in the long run. The force structure, thus, arrived at, therefore, must provide the best value for money. With the future being as unpredictable as it is – we need to remain prepared for a full spectrum response and, hence, the IAF needs to ensure that we build as much adaptability and multi-role capability into our force structure as possible. Our focus must rightly shift away to delivery of capability rather than individual platforms.

QUALITY

Another important point about affordability concerns the question of quality. We must understand that the aspect of quality, especially in the realm of aerospace power, can never be compromised – not only in our equipment which has to be state-of-the-art but, most importantly, in our people and their training. Our training domain is an important Key Result Area (KRA) for us and we have instituted many long-term initiatives to streamline it even further.

IMPORTANCE OF INFORMATION WARFARE

Information has for long been recognised as a key to warfare. Developing space and cyber warfare capabilities will require a well thought out and a time-bound implementation plan. The IAF will remain at the vanguard of development of India's space and cyber space, and, hence, it is best suited to steer the future exploitation of our joint capabilities. As an organisation, in addition to focussing on platforms and weapons, we also need to address the information domain as a key force multiplier.

EMPLOYMENT OF AEROSPACE POWER IN 21ST CENTURY : SOME FUTURE PROPOSITIONS

In the end, let me now put forward some future propositions about aerospace power and its continued relevance in the 21st century. To all the air power enthusiasts present here, I can confidently say that despite the constraining resources, there is no need to unduly worry about the future growth of aerospace power. I do not foresee any future operational contingency where aerospace power will not be employed, be it for control of the air, situational awareness, advanced Intelligence, Surveillance, Reconnaissance (ISR) and precision strike capability or in other cases even for supporting any surface-based operation by providing tactical and strategic transport support.

My second proposition concerns the scenario often painted by some experts outside the aerospace fraternity that we are presently witnessing the last of manned aviation and here onwards, unmanned platforms would rule the skies. Let's assume for a moment that we fully automate the air transport

role as these are in any case being flown virtually autonomously for most part of their mission. The big question, of course, is regarding how many people would prefer to entrust their safety entirely to machines. Similarly, if we look at automating the combat platforms, we will need to be clear in our minds whether we are ready to devolve life and death decision-making authority entirely to machines. It will be wrong to take the human element totally out of the loop and rely only on data-links and satellites. Ladies and Gentlemen, it is precisely these factors which will ensure that manned aircraft will continue to operate for a very, very long time in the future.

So with this thought, I thank CAPS once again for this opportunity to share some of my views. I wish the participants of the seminar fruitful deliberations and the very best of wishes.

Jai Hind !