

INCREASING SALIENCE OF AIR POWER

RKS BHADAURIA

ADG CAPS, Air Vice Marshal Manmohan Bahadur, former Chiefs, distinguished speakers, dignitaries and guests, my fellow officers, ladies and gentlemen. At the outset, I would like to thank CAPS for inviting me to be a part of this webinar and deliver the inaugural address.

We are here today to delve on “Increasing Salience of Air Power”, and, considering the prevailing security scenario in our region, there could not have been a more opportune moment for discussing the prominence of Air Power in any future conflict scenario. Even before independence, Late Wing Commander K. K. “Jumbo” Majumdar, while addressing youth in February 1945, had mentioned, and I quote: “if India has ever to become a great nation, we must have air power”, unquote.

The last few years have been challenging for humanity. We are witnessing a fragmented world order, contestations between major powers, interest-based alignments and realignments, increased frictions and weakening of adherence to international norms. With multiple nations jostling for power and influence, I think we are moving towards an era of loose multipolarity embedded with multiple destabilising factors, a few of which may not be easily containable.

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With the reduced footprint of the US forces in Afghanistan, increased Chinese push in Indo-Pacific and realignment of West Asia, the security scenario for us is becoming increasingly complex. With our Northern and Western borders being volatile and active, the possibility of a full-fledged war always exists, and as a nation we need to be prepared and capable of handling any form of conflict.

From the earliest days of organised warfare, controlling the high ground has been vital to successful military operations. Early air-power advocates understood that aircraft can influence events through “the ability to do something in the air”. Given its ability to operate in the third dimension, early proponents of air power like ‘Douhet’ termed its characteristics as inherently offensive and this is something that must not be lost sight of. However, over a period of time, roles of air power evolved significantly and military theorists like Colonels John Boyd and John Warden advocated its usage for generating strategic paralysis and conducting effects-based operations.

As a key component of national power, the purpose of the Air Force is to provide our national leadership with an array of response options to deal with any emergent situation. In these times of uncertainty, the requirements may vary from tackling a terrorist camp across the border like Balakot, or swift operational deployment for offensive posturing, or rapid airlifting of Army combat elements, or for humanitarian relief missions like during the current COVID pandemic. Air power would undoubtedly be the first tool of choice owing to its inherent capabilities of flexibility, reach, versatility and lethality.

In the past, the rise and fall of nations was dictated by the size and prowess of their armies and navies. However, conflicts in the last few decades have clearly established without doubt, the pre-eminence of air power as the instrument of choice for almost all operational contingencies. In fact, we have witnessed a total transformation in the way the third dimension of warfighting has grown and expanded in recent times. Ironically, air power is also being leveraged by non-state actors and terrorists either for guerrilla-like aerial attacks or to produce shock as was clearly seen in the drone attacks on Aramco refinery in Saudi Arabia.

For democracies like India, deterrence and dissuasion assumes a critical dimension in national policy. Besides providing a host of kinetic and non-kinetic response options against an adversary, a strong and capable Air Force plays a much larger role in ensuring deterrence and avoiding conflict in the first place. Air power allows us to maintain a balance of power and, when required, alter it quickly to our advantage. Therefore, air power remains vital for not only ensuring victory in any conflict, but also is most crucial for providing a degree of assurance in strengthening regional peace and security initiatives.

While, traditionally, air power has been termed escalatory, in our context, the air strikes targeting terror infrastructure at Balakot in February 2019 by Indian Air Force clearly demonstrated that air power could be employed within a space for action below the conventional threshold. The freedom of manoeuvre provided by air and space capabilities enables us to exert influence in a sustainable and easily scalable manner, while minimising collateral damage on the ground. Therefore, we must recognise that the importance of air power is only increasing, and it has emerged as the most crucial tool of state policy.

From its inception, air power has been 'technology-enabled' and gradually evolved into becoming 'technology-empowered' with the ability to create effects at a time and place of one's choosing with absolute precision. While technology has been a force multiplier, it has also made air power extremely sensitive to technology. As we speak, new technologies, platforms, weapon systems and forms of warfare are being conceptualised which have the potential of making the existing inventory less relevant and at times redundant. Subversive elements, rogue nations and our adversaries are focusing on inexpensive and readily available technologies that would have maximum effect with minimum investment. Therefore, our aim should be to continuously evolve, in terms of technology, weapons and modes of warfare to retain the edge.

While referring to air power, we normally stress on the importance of 'hardware assets' like combat platforms and weapon systems, etc. However,

over the years, the otherwise 'soft and less tangible factors' like employment doctrine, training, tactics, proficiency, adaptability, leadership, etc., have gained prominence and are as important an ingredient as the hardware itself. In the changing nature of warfare, it is only through amalgam of all the hard and soft factors that we would be able to achieve the desired combat results.

Future air operations would be conducted simultaneously at all levels with very high intensity, against a variety of objectives using smart weapons delivered through manned or unmanned platforms to achieve the desired effects. These would be centrally controlled, with real-time intelligence from ISR sources available to the aircrew, planners, and to the Commanders. The concerted use of all assets and simultaneous availability of information would result in very compressed decision cycles, resulting in responsive and effective targeting. With contemporary battle being fast-paced and dynamic, there would be a requirement of actionable, pervasive, and persistent ISR. Over and above our space assets, this would necessitate high-endurance airborne platforms armed with wide area surveillance sensors having the capability to collaborate with manned and unmanned platforms of the future.

Modern-day threat scenario can exist at many thresholds from conventional hand-to-hand combat like Galwan, to a swift cyber-cum-drone attack that can paralyse a city without any warning. In order to be effective, the future combat force has to identify and assess the threat quickly, and respond instantly, precisely and effectively. In the physical domain, the instrument of choice that allows one to place precise effects on target, at range and on time is air power. These effects can range from a bomb through the roof of a terrorist facility before he moves out or delivery of relief material to the victims of an earthquake or a disaster within hours after it occurs. Air will dictate rapidity of response, and after cyber, I think will be the first responder to any crisis.

Considering the multidimensional threat scenario in the region, we need to have robust capability to effectively handle the evolving threats and cater for rapid reaction and effective response capability against sub-con threats. For air power, this translates to building technological capability and a focused approach with respect to our adversaries.

In the long run, the ability to attain and maintain a technological edge or develop asymmetric capability, particularly against China, should be our focus area. This is only possible when we have indigenous equipment and home-grown technology. Because of the extended timelines in procurement of imported technology or systems, by the time they fructify, our adversaries who have invested heavily into R&D and indigenous manufacturing, would have raced miles ahead. Therefore, the most important and critical aspect for future capability building for us is indigenous R&D and indigenous equipment—be it platforms, sensors, weapons of all forms, including hypersonic weapons, networking or data handling.

The Azerbaijani-Armenian clashes and the Libyan conflict have brought to the fore the vulnerability of fielded forces and assets in the face of a simple disruptive development like drone warfare. The lessons for our air power development is that the future wars would see enhanced weapon technology driven by networked sensors, which is low cost and can target efficiently. The contours of recent conflicts and attacks reflect future wars and bring out the biggest lesson that the military strategy of today cannot be based on erstwhile theories of 'mass manoeuvre', 'holding ground', etc., and we need to continuously evolve to stay contemporary.

So, the most important question today is how to refine our build-up plans to factor in the changes in threats and technologies and robustly enhance our salience.

The IAF is completely mindful of the changing nature of warfare and we have incorporated many of these things in our planning and already reoriented our capability requirements for the future wars. This is a continuously ongoing process and we are actively pursuing anti-drone, swarm drone and stealth drone technologies as well as Manned-Unmanned Teaming (MUM-T) concept involving teaming of manned aircraft with UCAVs in a highly networked air battle scenario. We are actively pursuing niche technologies in the field of space-based capabilities, Data Link, EW, AI enabled quick data analysis and Big Data Handling in order to shorten the sensor to shooter loop and for making the targeting cycle highly responsive.

We are not only inducting platforms or absorbing new technologies; we are also evaluating and refining our operational training philosophy against future wars. We have renewed our focus on attaining self-reliance in defence manufacturing and are helping the industry in building indigenous systems. Towards this, as part of *Atmanirbhar Bharat*, we are vigorously pursuing indigenous production of fighters, transport and trainer aircraft along with helicopters and UAV. We are also committed towards additional home-grown AWACS & AEW&C, radars and ISR options along with a host of air-to-air and air-to-ground long-range precision weapons. We have also launched a major indigenisation drive for sustenance of all our aircraft fleets and we have automated our entire work flow indigenously. This, coupled with other perspective plans, forms the most comprehensive indigenisation roadmap laid out by the IAF.

To conclude, the 'strategic effects' of air power would continue to remain with changing nature of warfare, both in peace as well as in crisis situations. While the geopolitical compulsions, economic and political realities, technology, foreign policy and 'national will', all these will dictate the shape of things to come, I believe that 'aerospace power' will always attempt to enhance its fundamentals to extend its reach, persistence, accuracy, lethality, transportability and survivability. With respect to the IAF, we will continue to upgrade our capabilities and improve the quality of training, so that we are able to deliver precise and calibrated effect throughout our Area of Responsibility, and touch anywhere in our extended neighbourhood to deliver assistance to our friends.

Thus, air power would continue to become increasingly crucial to protect our sovereignty across the board and enhance our nation's ability to provide stability and security in the region and on the world stage. All proponents of air power need to understand this and let me assure you that the IAF is building to deliver on this count.

I wish CAPS the very best for a successful conference.

Jai Hind!