

AEROSPACE POWER IN A CHANGING NATIONAL SECURITY ENVIRONMENT

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I must acknowledge our gratitude to the founder of the Centre for Advanced Strategic Studies (CASS) and one of the Indian Air Force's (IAF's) illustrious former vice chiefs – Air Marshal Yeshwant Vinayak Malse. For think-tanks and research institutions are so essential to help guide the growth of a nation's organisations, each of which is too preoccupied in its daily duties. It always helps to get views from persons who are not part of the set-up, or those who can provide a fresh perspective, based upon their experiences in other disciplines.

THE CHANGING GEO-POLITICAL AND SECURITY ENVIRONMENT

Global

In the past, it was our circumstances and the non-aligned path we adopted, as well as poverty that kept us practically insular. In recent years, there has been a dramatic increase in international cooperation and contact. The current increasing interaction is a measure of India's growing interests and the broadening and deepening of its international relations. It is also an indication of our relevance in the scheme of things, or of others' interest in us for their own reasons. Indeed, insularity is not an option any longer and has been discarded, in practice, by even the most notoriously isolationist nations. The IAF's current

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outreach is a consequence and reflection of that reality. It is of utmost importance that we keep pace with, and better still, shape, these relationships in ways that suit us. It is now almost universally accepted that economic growth enables growth in most other spheres of national endeavour. Indeed, that is India's "strategic objective" and military might is important, but only because it must enhance our national objectives.

The greater interdependencies in today's world have had a significant impact on the autonomy of nations and have redefined sovereignty for all, at least for the less powerful states. The concept of "neighbourhood" is now more inclusive, bringing with it more opportunities, as also more concerns and external influences. These influences may not always be helpful, but they cannot be wished away. It is, therefore, important to be able to take advantage of opportunities and, indeed, create opportunities. This is possible only in a country with an establishment made

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proactive though institutionalised decision-making and decision-support systems, clear aims and an enlightened leadership. As a consequence, there is a host of vital interests that lie way beyond the homeland and determine what we refer to as our "strategic boundaries." These remote interests must be protected and that is a largely military function. Rivalries among nations are now not merely for power but for interests. "Balance of interests" is a phrase that is often used in place of "balance of power."

The world is not a steady place; there are constant changes and upheavals, as are starkly evident in the changing power equations. The unipolar order is giving way; new power centres are emerging, necessitating realignments and adjustments. New friends and opportunities, new adversaries and altered threat perceptions are the order of the day. If change is the only constant, and it favours those who can anticipate well and act in time –there is a lesson in it for India.

Asia

In the evolving geo-strategic environment of the world today, the centre of power-play is shifting to Asia. It is where the current action is; spurred by booming economies, there, consequently, is rapid development, burgeoning consumer demand and, naturally, growing military capabilities. This region is also one of turmoil and instabilities, as peoples attempt to determine and reshape their destinies. Perhaps all of that is an indicator of the rapid progress being made.

The Middle East is in turmoil, with seemingly insurmountable problems in Iraq and Iran. A number of other oil-rich nations are politically unstable. In our immediate neighbourhood, Pakistan under military rule is afflicted with sectarian violence and now also faces the very real and demonstrated spectre of fundamentalist violence. Afghanistan is nowhere near settled. Nepal is not out of the woods, with the Maoists having more clout than is good. Myanmar continues to be under military rule. Bangladesh has a military-backed temporary government and elections are distant. The age-old ethnic conflict in Sri Lanka continues unabated.

It is also a region of nuclear proliferation and the cradle and playground of terrorism. Consider the Indian Ocean region: every state that has nuclear weapons has an abiding interest and presence in this region. Nuclear China is politically stable, economically strong and is governed by a single party Communist system. Its acquisitions, actions, pronouncements and growing strength cause most neighbours and even the US to be wary.

India

Within this tumultuous new Asia, India is situated in perhaps the most turbulent part of the region. South Asia mirrors all the concerns of the continent. India's strategic frontiers are expanding, its regional role is increasing and with it there is a spreading thin of our resources to manage it all. Perhaps encouraged by powers such as the US, we are aspiring for a greater regional / international role. But we need more national power to back it and the gumption, flexibility and speed of decision-making to make that a reality. Our old concerns and issues with Pakistan and China have not diminished, and both of them are more powerful today – the

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latter significantly so. There is considerable increase in Chinese power and influence in the countries surrounding us. This is a matter of serious concern. In addition, the region is also threatened by non-state actors. The problem of terrorism is serious. We also face internal security challenges. India needs steady and concerted initiatives and progress on all fronts to surmount these challenges.

India has all the resources and endowments of a major world power. We have a strategic location in an important part of the world and are progressing rapidly. Our strategic footprint is growing, as the “area of interest” expands; and there are regional responsibilities and roles. We, therefore, have little choice but to follow the globally recognised growth path and, indeed, are doing that. Fortunately for us, we also have considerable in-house talent and infrastructure.

Threats Old and New

We have long-standing disputes with Pakistan and China. In addition, non-state actors also threaten the region. The problem of terrorism is serious. We have in this milieu, a resurgent India, marching on the road to economic prosperity.

The spectrum of threats is also much wider, with a significant increase in the lower-end frictions, asymmetric warfare and *jihadist* activities. The whole spectrum continues to acquire greater technological sophistication.

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What are the new threats? In the context of the new economic factors, our growth depends on sources and resources that lie distant from the homeland and they also become our vital national interests. Naturally, there always is a competition for resources and that, in turn, generates newer threats. Thus, we have a number of newer security considerations, those of trade security and energy security.

Since the bulk of our energy requirements are met through imports, energy security becomes a critical issue, at least until we are able to action our previous President Kalam's advice and achieve "energy independence" – not merely "energy security."

The redrawn strategic boundaries of a resurgent India, therefore, extend from the Persian Gulf to the Straits of Malacca and from the Central Asian Republics to the Indian Ocean. The enlarged strategic dimensions necessitate not only a radical change in our strategic thinking but also accentuate the role of aerospace power in the new security arena.

CHANGING NATURE OF WARFARE

In the old days, operational plans were real-estate oriented, with the land battle as the primary campaign, supported by the air and maritime forces. Well, even if real estate was not the main objective, enemy centres of gravity were difficult to destabilise, for to reach them, one had to wade through a lot of defences in a serial fashion. Though air power did change some of that, it has really begun to make a difference only in recent years, through modern technology. The objectives, patterns and, therefore, even strategies were fairly predictable. The next war may not conform to the familiar patterns of the past and we may not be able to predict with any degree of certainty as to what the new format would be like.

Just as each of the past Indo-Pak Wars has been fought on different scales, levels and for varying objectives, any future war with Pakistan may also be fought at different levels. It may be confined to Jammu and Kashmir (J&K); or fought along the Line of Control (LoC); be a small-scale conflict as in Kargil; or even encompass the entire international border. It may be conventional or nuclear. Each level of war will be different from the others and it would be difficult to predict the nature and scope of any future conflict. Wars will invariably be influenced by

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international equations. We will have to be prepared to fight internal wars against *jihadis* and terrorists. The spectrum of conflict is wide, and the demands on the military in a future war will be far more challenging, requiring responses that are swift and varied.

Wars have always been multi-dimensional and are increasingly so today. Future wars will require much higher levels of synergy between military power and civil authority. A new role for the military will be “military diplomacy.” There will be a need for increased military exchanges and interactions between friendly nations. Organisational changes would be necessary to facilitate both civilian and military establishments to jointly take on both the internal and external security challenges. Moreover, the battlespaces are now transparent to the public, and legalities cannot be ignored.

AEROSPACE POWER

Role of Aerospace Power

Air power played a significant role in World War I and matured by World War II. Thereafter, wars fought in Korea, Vietnam, the Middle East and Indian subcontinent highlighted the growing importance of air power and its impact on the outcome. With the capability of operating in an expanded envelope, the term “air power” was replaced by the more appropriate expression “aerospace power,” with a significantly enhanced role in any future war due to the profound change in its inherent characteristics of speed, reach and flexibility. In our context, there is a firm belief that the next war will be “air led” and that the end result will be contingent on what aerospace power is able to achieve.

And the reason is that there has always been a need for the transportability of national power. From the expeditionary armies of Hannibal and Alexander, merchant ships and men ‘o’ war, to the expeditionary forces of today. These were all examples of power projection and had diplomatic, economic, political or military overtones and objectives. Aerospace power is an ideal means to impart this “mobility” to national power to be able to project it, or protect and assist anywhere in the world and, most importantly, at short notice.

The Indian Air Force

The IAF was established in 1932 to support the British Army, which was fighting to subdue the Afghans. Over the years, the IAF retained the mindset that its primary task was to support the land battle. During World War II, the British imperial authority considered it unwise to allow the Royal Indian Air Force (RIAF) to develop a strategic capability. This is ample proof of the significance of strategic air power. That mindset continued in the post-independence era and the IAF remained a tactical air force. Now that India is emerging as a global economic power, there is an imperative need to change this historical perception and shift to strategic thought.

Considering the expanding strategic boundaries, aerospace power can no longer remain tactical and, by definition, it is not. Of course, the criterion for a force to be strategic or tactical is the end result. We now have the capability by way of hardware and we need to sustain the transition from the tactical to the strategic and be able to effectively influence events within our strategic boundaries. The IAF in its 75th year has effectively demonstrated its strategic capabilities. We need to look beyond our boundaries, beyond Jammu and Kashmir (J&K) and China. There is no denying the fact that problems in J&K will continue. Nevertheless, we must also focus on the newly emerging security concerns, as well as the internal security challenges and the changing nature of warfare.

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ENHANCED CAPABILITIES, APPLICATIONS AND AEROSPACE POWER STRATEGIES FOR INDIA

Enhanced Capabilities

Aerospace power, as we well know, is premised on cutting-edge technology; in fact, it even determines the direction of technological advancement. Recent developments have endowed aerospace power with unprecedented force

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enhancement, be it in reach, accuracy, carrying capacity or precision. As a result, aerospace power is astonishingly reliable, effective, clean and responsive. It enables effect-based operations, makes simpler parallel operations and can create strategic effects. It offers a solution in almost any situation, in peace, or in the many shades of conflict. Aerospace power has become an “instrument of choice.” The IAF is among the leading air forces of the world and has such capabilities, with the right infusion of technology and training, to achieve such results.

Applications

Countries need the sum of their national power to progress. Military power is a critical component of that national power, without which, as history bears out, progress is possible only upto the point where it clashes with the interests of another stronger nation. Aerospace power is an increasingly vital part of that military strength. Modern aerospace capabilities have as much, or even greater, impact than what maritime power did for colonising nations in the past. It is an important index of national power.

Unlike maritime power, whose applicability is determined by a country's geographic location, and the land forces, whose shape and size are determined by relations with neighbours, the size of the country and internal security compulsions, aerospace power has a more universal applicability. Even the army and navy need air power.

Aerospace Power Strategies for India

Clearly, given our situation, concerns and aspirations, a strong and comprehensive aerospace capability is inescapable. Aerospace power has classic roles, which have been described variously. The roles could be referred to as deterrence, punishment, protection, projection and peace-time roles

(D4P). It will be readily apparent, that India needs its air force to have all of these. The IAF must be a strong “deterrent” in a tough neighbourhood. Implicit in the deterrence is the ability for swift, calibrated, but effective “punishment.” Our deterrence includes the nuclear dimension, at least until the triad is complete. Also, the longer our effective reach, the more credible will our deterrence be.

The IAF’s primary traditional role is “protection.” “Protection” has now expanded beyond the homeland and island territories, to the sea lines of communication (SLOCs), energy and trade interests, in a steadily increasing circle of influence. Essential for this role are, of course, long-range electronic warfare (EW) sensors, airborne warning and control system (AWACS), networked command, control, communications, computers, intelligence, surveillance, reconnaissance (C4ISR), multi-tiered surface and airborne weapon systems, etc.

Next, a term gradually becoming more applicable is the newer (for us) role of “projection” of Indian interests. This requires long-range presence, persistence, and “forward basing arrangements” at other than on our island territories. The projection we envisage would be no more than in the form of a benign presence and assistance to friendly nations in their contingencies. Such initiatives would have to be backed by diplomacy.

Peace-time applications, the 4thP of aerospace power is growing and is perhaps the most visible demonstration and utility – both internal and external, from airlift and surveillance, to possible offensive action. Military diplomacy is yet another application that has increased in recent years and has yielded handsome friendship dividends; generating a bonhomie and bonding that amazingly rub off even at the highest levels. Well, this too is a form of projection and of taking stock of one’s capabilities and a measure of the other’s.

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OPERATIONALISING THE STRATEGY

If aerospace power can do all that and we need it in all its capabilities, it is obvious that we must possess the necessary tools. Our long-term perspective plans for modernisation must reflect our requirements and our environment, so that at each point in time, we have appropriate and adequate capability vis-à-vis possible adversaries. We need a time-based capability creation plan.

If we are to protect and project remote or distant interests, along with FRA, AAR, AWACS, etc, we must also network all our assets and nodes for effective command and control (C2). That, in turn, will depend upon how much we can exploit “space”. Perhaps more than any other, it is air power that is most significantly enhanced by the integration of space-enabled capabilities in its operations. There are, in essence, significant doctrinal similarities between “air” and “space” such as long reach, flexibility of response in any situation, over-the-hill vision, etc. Indeed, and irrefutably, the accepted logical progression for any modern air force the world over is to evolve into an aerospace force.

A comprehensive modernisation must have a fair indigenous content, else it may be neither feasible nor competitive in the long run. Technology acquisition must be energetically pursued and that requires a “whole of government “ effort. That indigenisation is not at the cost of our operational

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potential is a continuous process of evaluation, follow-up and also a bit of a gamble. In fact, even in low intensity conflict (LIC) and internal security (IS) situations, where we face agencies with faint footprints, a technology-based response would be needed, at least by the air force.

All of what is mentioned above, requires funding, which, in turn, requires convincing the government, because some of those capabilities could be idle for long periods.

Our endeavour must be to aim for a “right-sized” force with “appropriate” capabilities, with reference to time and the anticipated rise in capabilities that surround us. We cannot merely plan an incremental build-up.

It is also a good strategy to develop synergy, cooperation and interoperability with civil aviation. This would enhance efficiency, reduce costs and save time. That is quite a task, but we are at it and hope that civil aviation will match our initiatives.

All changes, additions and technology infusion would impact our personnel. In fact, our air warriors are, and will remain, our greatest assets. But we must be able to select the best and train them right. At the same time, we must also have the courage to change our organisational structures and processes to reflect new capabilities and changed doctrines. Keeping up with changes requires a lot of forward planning, vision and anticipation. It is here that such seminars and the thinking they generate can help.

There is one other strategy and that is maximising what we have, to preserve our assets, institutions and processes and prevent neglect. There is a need to pay attention to all aspects and not merely the new and the sensational.

CONCLUSION

For our new role, we need new organisations, new structures and a new level of synergy amongst civil authority, military establishments, defence production agencies, research and development (R&D) organisations and the academic community. As a nation, we are moving along the right path, not only with regard to economic growth, but also to find our rightful place in the comity of nations. We as a nation have the strengths to meet the challenges, whether in the field of science and technology, R&D, production or warfighting. Aerospace power must grow along with the nation; otherwise, there would be neither national security nor economic growth.

To sum up, aerospace power is futuristic and increasingly utilitarian. India requires it in all its capabilities. The IAF has demonstrated its operational professionalism and the world has taken notice. It is our duty to grow in step with the nation to provide it the necessary capabilities and security that it

would need. We must be able to provide all options and be able to execute them once selected.

In the end, I thank you for your attention and patience and wish the CASS good luck and hope to hear of thought-provoking new ideas from this eminent think-tank.