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Editor's Note

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1. NATIONAL DEFENCE AND AEROSPACE POWER

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The Chief of the Air Staff, Indian Air Force, Air Chief Marshal **Fali H. Major**, PVSM, AVSM, SC, VM, ADC in his Inaugural Address at the 5th "Subroto Mukerji" Seminar on December 3, 2008, under the title of **National Defence and Aerospace Power** emphasised the strong linkage between aerospace power and national defence in the 21st century. He stated that "the fact that aerospace power is the prime element of national defence is not in question. The question is, how well do we truly understand the capabilities and principles of application of air power?"

2. BUILDING AIR DOMINANCE

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Air Marshal **T.M. Asthana**, PVSM AVSM VM (Retd) has addressed the issue of what he terms as having come round a "full circle" from command of the air-to-air superiority to favourable air situation and now air dominance as the prime objective of air forces. This is now increasingly accepted by ground forces as a virtue that air power has to earn if the war is to be won. The challenge now much more is how to build air dominance in relation to hostile air forces that may even possess superior numbers and/or technological advantages.

3. FUTURE SHAPE, SIZE AND ROLE AND SHAPE OF INDIAN AIR FORCE

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The process of assessing the future, shape and role of the Indian Air Force, according to Air Marshal **P. K. Mehra**, PVSM, AVSM VM (Retd), like that of assessing for other air forces, is a complex one, with enormous imponderables and, above all, the challenge of assessing the changes that may come about in the hostile air forces. The long gestation period in making changes itself requires sufficient flexibility to be built into even the most scientific and empirically sound model. Above all, this is a process that has to be adequately addressed by decision-makers in developing democracies who are normally far more deeply focussed on current problems rather than long-term planning and investment of resources in military, especially aerospace, capabilities for defence.

4. ANALYSIS AND ASSESSMENT OF MILITARY OPERATIONAL REQUIREMENT OF AWACS IN IAF

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The military operational requirement of AWACS in the IAF arises from the historically validated criticality of being able to “see the other side of the hill” in order to improve situational awareness and, hence, tactics and strategy for success in war. Wing Commander **A. B. S. Choudhry** argues that a similar imperative has progressively enhanced the value of airborne early warning systems. With technological progress and its proliferation, more and more countries are acquiring such capabilities, mostly referred to as AWACS (airborne warning and control systems) that exploit this progress to overcome the limitations in detecting and managing the battlespace in air warfare. Such capability becomes even more critical for countries like India with long and disputed borders which must be guarded against any sudden adventure.

5. CHINA'S SPACE POWER

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Professor **Srikanth Kondapalli** has argued that “one of the motives behind the development in China’s space programme, albeit generally not mentioned explicitly, is for military usage.” China became the first country in the world to have tested explicitly a land-based missile to destroy a space-based object on January 11, 2007. This ASAT test has led to concerns in Asia, with objections raised by Taiwan, Japan, South Korea, India and by others such as the US, Russia and the EU countries. This has the potential to initiate a further arms race in space and contribute to the destabilisation trends.

6. MISSILE DEFENCE: CONCEPTS AND TECHNOLOGIES

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Wing Commander **Anand Sharma** examines the shift from defence against ballistic missiles by destroying them in fixed silos getting negated by mobile launchers and other steps to direct anti-ballistic missile capabilities. As the research and development of anti-ballistic missile systems continued gaining effectiveness and advance capabilities, counter-measures to missile defence also matured and were outflanking the efforts. This offence-defence play-off brought ballistic missile defence into prominence in security planning. Many technologies have come to the fore to provide defence against the annihilating ballistic missile attack. The ultimate effect appears to be an expansion of the offence-defence competition with many unpredictable developments and effects.

7. THE EVOLUTION OF THE CRUISE MISSILE DISCOURSE: A CONCEPTUAL CONSTRUCT

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In a conceptual construct, **Sitakanta Mishra** argues that cruise missiles have arrived as a weapon of choice rather than a mere supplement in the global inventory of weapons. He concludes

that while overall the cruise is a sober success, discourse of the weapon has got relatively less attention in strategic studies. He believes that this has been more due to the ballistic missile being associated with nuclear weapons. But though the missile discourse is much older than the nuclear discourse, one needs to resort to a comparative study on the psycho-dynamic aspects of weapon systems. In pursuit of this, at the basic, one needs to identify the nuances in the politics and psyche involving 'atom-power' while comparing them with the nuances involving the lesser known, lesser publicised concept of 'air-power' and aerodynamism.

8. TRANSFORMATION IN MILITARY LOGISTICS

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Advances in technology were bound to affect major transformation in all aspects of military sectors and, hence, transformation in military logistics is no exception. Group Captain **J. V. Singh** argues that there is a need for a revolutionary change in the way we support the armed forces. This revolution is about more than providing equipment and supplies better, cheaper and faster although these initiatives are crucial for readiness and modernisation today. It is also about rethinking logistics functions and processes that will enable decisive victories well into the future. This revolution spans the depth and breadth of military logistics. It includes integrating logistics functions, replacing volume with velocity, reducing demand and lightening the logistics load on the ultimate customer— the soldier.