

PATHFINDER

AIR POWER DEVELOPMENT CENTRE BULLETIN



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FACETS OF AIR POWER: CONTROL OF THE AIR

The demonstrated impact of airborne intelligence, surveillance and reconnaissance (ISR) on surface battles during World War I, led to control of the air becoming a fundamental requirement to ensure freedom of action. However, the theories developed during the inter-war period concentrated on the offensive strike capabilities of air power to defeat the opposing air force on the ground and thereby gain control of the air rather than having to fight for it in the air. Further, the importance of ensuring that one's own operations could be conducted without enemy interference from the air was diluted in the theories that proposed defeat of the adversary through air attacks aimed at breaking the will of the people.

The practical experience in the beginning of World War II however, demanded a rethink regarding the importance of the freedom of manoeuvre of one's own forces—both in the air and on the surface. This realisation was further advanced by the technology facilitated improvements in aircraft performance and its war making potential. While the concept of control of the air had always been understood, these improvements made it a defining role and a doctrinal tenet for air forces. So what does control of the air entail?

In a very broad manner, control of the air can be defined as the ability to conduct friendly operations in all three dimensions without effective interference from enemy air power. The corollary is that such control must also be able to ensure that one's own air forces must be able to prevent the adversary from undertaking effective operations in any of the three dimensions. This corollary stems from the fact that, in general terms, only an air force can neutralise another air force while air power, under certain conditions, can defeat surface power and can even be used as a substitute.

In the context of joint operations, control of the air provides commanders with the flexibility to exploit the air environment and conduct effective surface operations at a time and place that is optimal to the achievement of campaign objectives. It must be kept in mind that gaining control of the air will not generally be the ultimate objective in a joint campaign and neither does it guarantee the success of other operations. However, it is the primary prerequisite for the success of all other operations to achieve campaign objectives. In situations

where the adversary has even limited credible air power capabilities, this requirement is greatly emphasised and ignored only at the peril to one's own forces. An adversary who can pose a credible air threat that cannot be overcome by friendly air power will almost always be able to preclude the conduct of friendly air and surface activities.

The level of control of the air varies with a number of factors, the main one being the adversary's ability to

contest it. There are five levels in understanding control of the air, three of which indicate positive control. First, air supremacy, which is that degree of control wherein the opposing force is incapable of any interference from the air. Second, air superiority, which is that level of control over the air domain that permits friendly land, sea and air forces to operate without effective interference by the adversary's air power for the required period of time and necessary space. Third, a favourable air situation, which is said to exist when the effort by an enemy's air power is insufficient to prejudice the success of one's own land, sea and air operations for a specified and delineated period of time and demarcated space. The two levels below this do not provide positive control of the air—air parity where either side could potentially gain control of the air and an unfavourable air situation where the adversary has better control than one's own forces. Both



FA-18 firing AIM7F Sparrow missile

these levels could result in the chances of a successful joint campaign being jeopardised.

Control of the air entails air power assets being employed to defeat an adversary's air power capabilities while simultaneously conducting other operations that contribute directly to the surface campaign. For almost 60 years—with the exception of the Falklands conflict and the 1973 Arab-Israeli conflict—Western air forces have not had to conduct a serious campaign to obtain control of the air. In fact, it has been a long time since a Western army has been attacked from the air in any significant way. The trend in contemporary conflicts, wherein the adversary is most likely to be irregular in nature with almost no air power and very limited surface to air capabilities, indicates that this situation is likely to continue. This state of affairs has brought about a sense of complacency—an attitude of taking it for granted—within the Western military forces regarding the need to ensure control of the air. This is a serious flaw in the broader military thinking that can distort not only concepts of operations, but also force structure development.

Air power capability development has brought about a subtle change to the way in which air operations are conducted and the manner in which control of the air can be viewed. Control of the air is the primary prerequisite for all operations—air and surface—to succeed. However, enhanced capabilities in its core and enabling functions now permit air forces to operate mission packages that are capable of fighting their way in to attack targets and then effectively fighting their way out, while limiting attrition to acceptable limits. In other words, capable air forces can now ensure adequate control of the air as and when required to conduct air operations. The success of a joint campaign is still predicated on the ability of the air force to control the air in a sufficiently extended period of time and space and is therefore a critical part of the air campaign. Effective control of the ground is only possible with positive control of the air. In effect, control of the air for a prolonged duration is now perhaps comparatively more important for the success of surface operations.

A nation uses all elements of national power to achieve its national objectives. The efficacy of such employment of national power elements is directly dependent on the environment being safe and secure for them to operate without hindrance. Adequate level of control of the



air is the fundamental requirement for this to happen efficiently. Air forces therefore, must retain the ability to achieve the necessary level of control of the air, failing which the assured achievement of national objectives may be in doubt. Contemporary conflict scenarios—wherein control of the air is not effectively contested—are not fully indicative of the future. A nation will be ill-served by an air force and a defence force that assumes this to be the case. Complacency in military thinking of control of the air being an expected right rather than a privilege that has to be fought for and won does not serve one's own national strategic interests.

- *Control of the air is a prerequisite for the success of all joint operations*
- *For a long period of time Western forces have been assured of adequate control of the air in their operations*
- *Surface forces have to be cognisant of the need to conduct a control of the air campaign within a joint campaign*

"You cannot beat an air force with an army. You can't beat an air force with a navy. But you can beat either of those with an air force. It has to do with physics."

Maj Gen Charles D. 'Chuck' Link
Commandant Air War College,
Vice Commander Air University (1990-99)



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