



## ASYMMETRIC AERIAL THREATS PART II: THREATS AND RESPONSES

*'When opponents are fresh, tire them; when satisfied, starve them; when calm, unsettle them. Appear at locations to which they must hasten. Hasten to unexpected locations.'*

Chapter VI, Void and Reality, *The Art of War*, Sun Tzu.

Since the early 1990s, asymmetric threats have become increasingly predominant in the air domain, especially in the regions that are witnessing instability and irregular wars. Further, easy availability of affordable technology has transformed the battlespace into an evolving and complex morass that cannot easily be understood. Irregular adversaries have traditionally relied on sub-conventional threats mainly manifesting in the land domain and to a limited extent encompassing the maritime domain and littoral regions. However, the situation has now changed with even the air domain being subjected to the so-called non-traditional threats.

Air forces are the primary repositories of national air power and therefore have the primary responsibility to protect the nation from aerial threats, ensure the safety and security of its people, and guarantee the sovereignty of the nation. In the face of asymmetric aerial threats, conventional air forces will need to be agile in order to adapt and improvise to provide credible options to the government to neutralise these amorphous threats. From recent statistics, it is apparent that a 'weak' adversary employing asymmetric modus operandi have a slightly more than equal chance of achieving success in irregular conflict against a stronger but conventional force. (See *Pathfinder*, Issue No 343, November 2019.) In fact, the further the irregular force can move away from the conventional, the better their chances of success. Conventional air forces will have to retain and reinforce their ability to create flexible and tailored responses rapidly across a broad spectrum of operations, if they are to be able to contain such threats.

Potentially, any aerial system, inhabited or otherwise, which has a reasonable range and payload carrying capacity, can now be employed as a weapon. The use of uninhabited aerial vehicles (UAVs), or drones, in the recent attack on Saudi Arabian oil production facilities is a stark demonstration of this new reality. Irregular forces have always avoided direct

contact with conventional forces in the battlefield since their superior firepower would lead to unsustainable attrition for the irregular force.

Employment of asymmetry has been the preferred option of irregular forces. However, creating asymmetry in the air domain has so far not been easy for two fundamental reasons. First, aerial assets are resource intensive to acquire and operate and second, they are technologically advanced and therefore require specialised

knowledge and training to operate, especially in a combatant mode against an adversary.

In the past two decades the situation has changed dramatically. UAVs have become affordable and, perhaps more importantly, openly available as commercial-off-the-shelf (COTS) items. Further, the functioning of COTS UAVs have been simplified enough for a person with the rudiments of a technologically-oriented education to operate them effectively. When combined with the open availability of explosive materials, they become attractive assets to implement asymmetric attacks on vital areas while bypassing the conventional fielded forces of a much more potent adversary. It is therefore not surprising that aerial asymmetry is gradually becoming more prevalent.



**General Atomics MQ-9 Reaper armed  
medium-altitude, long-endurance (MALE)  
unmanned aircraft**

Asymmetric aerial threats can be classified as emanating from either COTS devices or improvised weapons mounted on civilian airborne platforms. COTS sensors such as radars, night vision or thermal devices mounted on general aviation platforms have been used in the past by irregular forces for intelligence, surveillance and reconnaissance (ISR). Further, COTS drones have been used to disrupt the flow of normal air traffic, especially in airports with high volume of domestic and international flights, as was seen recently at Gatwick airport in December 2018. What may not be obvious is that such disruption can have cascading effects on the broader concept of national security that reach to the strategic level, which may not be immediately appreciated.

The second threat is the deliberate use of civilian aerial assets to deliver lethal payloads or improvised explosive devices. When this concept is adapted to the use of UAVs in a suicide mode, as a 'poor man's missile', the effect can be catastrophic. The concern for the standard national security forces is the possibility of the employment of UAVs with chemical or biological weapon-grade payloads that could prove to be disastrous against vulnerable and open targets such as large crowds. Considering that the objective of irregular forces is to disrupt the normalcy of life, these activities could not only be devastating, but could also overwhelm the social services of the receiving nation. A combination of COTS drones carrying lethal payloads and being employed in suicidal missions could be considered an extremely high threat. Such a threat could be considered almost impossible to counter before the strike actually takes place, since they can avoid even the most sophisticated air defence systems that are designed to counter conventional aircraft and weapons.

A competent irregular force, faced with the prospect of being targeted by a conventional air force will be able to negate the classic doctrinal roles of air power that underpins its employment. It can be readily seen that control of the air and strike have almost no impact on the functioning of an irregular force and therefore they are not contested. Control of the air is conceded and the effectiveness of aerial strike is almost fully negated by the dispersed operational concepts that do not provide recognisable centres of gravity to target.

The effectiveness of conventional air power in irregular warfare is normally predicated on its ability to leverage off the inherent ISR capabilities and the nuanced use of air mobility. Air power now has the capacity to carry out long term surveillance from UAVs operating in the high altitude long endurance mode. Further, these UAVs are also capable

of carrying out precision strikes almost in real-time. Irregular forces tend to use their capabilities to influence and control 'ground' in an attempt to influence the local population. After all irregular wars are almost all about winning the approval and support of the population, which in turn is essential to winning political legitimacy and control. Conventional forces need to be deployed in order to counter this approach. Air mobility can ensure that a numerically small force is able to control and influence a disproportionately large area by airlifting small or large contingents rapidly to the area of interest.

For conventional air power to succeed in irregular wars, especially when the adversary is adept at asymmetric warfare, it is necessary to establish a doctrinal foundation to its nuanced employment against asymmetry. Asymmetric aerial threats are highly complex and countering them can never be considered a straight forward application of conventional air power at the lower end of the spectrum. It requires doctrinal clarity of a high order to adapt air power effectively to the irregular or sub-conventional level.

Asymmetric threats usually emanate from ideological theories transformed to physical threats with the idea of influencing and controlling the human mind. Irrespective of the technological sophistication of the conventional forces, the foundation for success will have to be laid in influencing the cognitive domain of the adversary. Air power is well suited for such a role, provided its exponents understand the nuances of its application across the spectrum of conflict and are able to scale up or down the capability as required, providing the Joint Force with alternative options. Employed effectively, air power can be a powerful capability enhancer for other domains.

## Key Points

- *Over the last three decades asymmetric aerial threats have become increasingly predominant in the battlespace.*
- *Asymmetric aerial threats can be classified as emanating from COTS devices and improvised weapons mounted on civilian airborne platforms.*
- *For conventional air power to succeed in irregular wars, especially when the adversary is adept at asymmetric warfare, it is necessary to establish a doctrinal foundation to its nuanced employment.*



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