# CONCEPTUAL FRAMEWORK FOR AIRPOWER TO COUNTER NON-TRADITIONAL SECURITY THREATS

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## *Abstract*

*The early theorists had conceived airpower to break the adversary's will and achieve decisive impact; however, technological deficiencies and weak strategies prevented airpower from doing so. Later, especially in the second half of the 20th century, advancements in technology and the advent of new concepts developed airpower as a military tool of the first choice to achieve strategic advantages. Traditionally, states remained the referent objects and a prime focus for national security, but post-cold war developments witnessed the emergence of a non-traditional security paradigm, increasingly making individuals referent objects of security. This security dimension primarily affected individuals and ideational aspects and led to the developing of a new identity-based construct with increasing political, economic, military, environmental, and societal influences. This paper highlights that despite the remarkable advancements in airpower technology and its ever-increasing role as a critical military instrument, its effectiveness in dealing with security threats and achieving a decisive victory in situations complexed by non-traditional threats remains ambiguous. Considering terrorism as a social construction allows investigation into unthinkable policies to counter it. Nevertheless, the main objective of the policy perhaps can be the deconstruction of the undesirable construct whereby airpower, enabled with modern technology, can act as a leading military component.*


**Keywords:** Airpower, Non-traditional Threats, Terrorism, Social Construct, Disruptive Technologies.

Air power was initially conceived as a means to break the adversary's will and achieve decisive impact by early theorists like Giulio Douhet[1] and William Lendrum Mitchell.[2] Over time, their theories proved ineffective due to technological deficiencies and feeble strategies. However, the latter half of the 20th century witnessed technological advancements, such as long-range bombers and smart weapons, and the development of relevant strategies found in the writings of John Warden,[3] Collin Gray,[4] Robert Pape,[5] Shaun Clarke[6] and John Olsen.[7] According to Shultz, these developments enabled airpower to act as a military tool of the first choice to achieve strategic advantages, confirmed in the first Gulf War and later in Operation Allied Force.[8] As part of military muscle, airpower capability took the central stage in the

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security paradigm, where the state was the referent object and national security was the prime focus.

On the other hand, the post-cold war developments witnessed a new security paradigm characterized by globalization, transnational crimes, cyber challenges, ethnic and religious conflicts, terrorism, mass migration, environmental instability, information theft, and many other non-traditional threats. This dimension of security largely affected individuals and ideational aspects. It led to the development of a new identity-based construct with increasing political, economic, military, environmental, and societal influences, which added an individual-centric security dimension to the narrow conception of traditional state-centric security. In Buzan's view, the emergence of a new construct of non-traditional security challenges has transformed the concept of security into a much more multifaceted and complex nature.[9] Melamed and David argue that these developments have instigated a new yet incessantly evolving character of warfare characterized by irregular, non-traditional, asymmetric and hybrid dimensions with blurred boundaries between the state of peace and war.[10] Anastasiei, Boscoianu, Mihaita and Necas noted that the most significant non-traditional challenge remains terrorism, as it has been used as a strategic weapon and is likely to replace conventional war.[11] The challenge heightens because terrorism is understood and fought differently among states as a socially and politically constructed complex phenomenon. It can occur due to political, religious, economic, or ideological reasons, through local, national, or even transnational violent actions against civilian populations.

Owing to this transformational change in the character of warfare, notably during the last two decades, the military advantage provided by airpower against traditional adversaries in the international system has been tested against these new threats. Stockings, Craig, and Fernandes argue that theories of early proponents of airpower, such as Douhet and Trenchard, who advocated bombing civilian centres to break the will of adversaries, are being challenged by Afghanistan and Iraq-like circumstances where non-state actors are in action.[12] The military is also expected to counter non-traditional threats, such as asymmetric conflicts and non-state actors waging guerrilla and terror wars.

Despite the remarkable advancements in airpower technology and its ever-increasing role as a critical military instrument, its effectiveness in dealing with security threats and achieving a decisive victory in situations complexed by non-traditional threats remains ambiguous. Vietnam, Afghanistan and Iraq war scenarios showed that even the greatest airpower could not overcome intricate non-traditional threats constructed by inimitable societal, social, cultural, economic, and political mesh. The primary reason, argued by many analysts, appears to be the nature of the construct having blurred distinction of the threat, where traditional operational art of airpower aimed to break the enemy's will to fight could not be applied.[13] Pahlavi and Ouellet noted that the snags were observed in airpower strategy during the asymmetric armed conflict between Hezbollah and Israel. Despite heavy and ruthless

airstrikes by the Israeli Air Force in Beirut, Lebanon and Palestine, Hezbollah continued its resistance, illustrating the inability of military tools to get a decisive edge against non-state actors.[14] Similarly, in Operation Iraqi Freedom, the US airpower killed al-Qaeda leader Abu Musab Al Zarqawi; however, it could not achieve desired results in urban centres against irregular fighters, mainly because of a deficiency in airpower employment strategy and requisite technology.[15]

This paper, therefore, relates to the non-traditional security paradigm, while its theoretical framework is based on constructivism. Considering terrorism as a social construction allows investigation into numerous social, cultural, economic, political and security policies to counter it. However, examining all dependent variables would be an intricate process, given that empirical evidence specific to a culture and society cannot be analogous to the ideational characteristic specific to the actors under examination. Nevertheless, the main objective of the policy must be the deconstruction of the undesirable construct. The deconstruction policy arguably needs to employ a wide approach involving all elements of national power, such as the economy, politics, information, and military. The research hypothesis surmises that airpower enabled with modern technology can act as a leading military instrument for deconstructing the undesirable construct within the wide approach. This paper mainly focuses on airpower enabled by modern technology as a military instrument to complement the policy. It also demonstrates how the application of airpower interplays with ideational aspects and deconstructs the terrorism phenomenon.

Since there are diverse security challenges, airpower must adopt compatible strategies and technologies to remain effective. In keeping with its agility, flexibility, reach, lethality, precision, responsiveness and ability to generate direct and indirect effects, this research is focused on the use of airpower as an instrument to coerce contemporary non-traditional threats, especially non-state actors. It can be argued that adoption of evolving cutting-edge and disruptive technology, airpower can become a reasonably practical instrument and a force of coercion against non-state actors. Accordingly, many air forces, particularly US Air Force, Israel Air Force and Pakistan Air Force, have developed and evolved counter-insurgency strategies. Contemporary air forces are venturing into disruptive technology, such as AI, drones, space-based ISR, and long-range standoff weapons, which would play a vital role in countering these challenges.

This paper consists of three portions. While considering constructivist's thoughts, the first part explores conceptual viewpoints that elucidate contemporary non-traditional security challenges and explain how these challenges erode states' national security. The second part discusses the effectiveness of airpower against non-traditional threats and its ability to serve as an instrument to deconstruct the non-traditional security construct, especially terrorism, along with some empirical evidence from military operations in which airpower was successfully employed. This part also includes the case study of the employment of airpower by Pakistan to combat terrorism. The third part puts forth strategy options available to airpower that can

harness airpower's potential to achieve deconstruction of the terrorism construct, essentially as a significant component of the policy. It also discusses using modern technology by airpower to achieve effectiveness in this role.

## Contemporary Non-traditional Security Challenges

As mentioned earlier, the non-traditional dimension of security primarily affected individuals and ideational aspects and led to the development of a new identity-based construct with increasing political, economic, military, environmental, and societal influences. Though elaborated in various writings, the non-traditional security concept is still evolving, with no clear distinction in what it encompasses and what remains excluded. Nevertheless, Caballero-Anthony defines it as "challenges to the survival and well-being of peoples and states that arise primarily out of non-military sources."[16] Raghavan observed, "The existing state-centred approach to national security, confined to the defence of a country against territorial aggression, has been widened to the idea of security inclusive of a larger set of threats to the people of the state."

The involvement of non-state actors, international scope, and rapidity of transmission make non-traditional threats more intimidating than traditional ones on both internal and external fronts, posing existential threats to individuals, states, and systems. These threats are an outcome of the construction that emerges based on novel identities of non-state actors, natural causes or social groups rather than what was conceived by neorealists. The phenomenon is unpredictable, viral and hard to control, where non-traditional threats affect security; their indirect effects are often severe, particularly detrimental to the economy, political order and external affairs.

The debate of 'narrow' versus 'wide' in the concept of security provides differing views. The narrow approach confines security to the military dimension, whereas the wide approach includes people, nations, states, alliances and systems in the security realm. The wide approach has been explicitly relevant, particularly in the dictates of the contemporary strategic environment. In the words of Richard H. Ullman, "National security should not be perceived in the narrow sense of protecting the state from military attacks from across the territorial borders" because it can easily "draws attention away from the non-military threats that promise to undermine the stability of many nations."[17] Ullman considers non-traditional threats predominantly detrimental as "they threaten to degrade the quality of life for the inhabitants of a state or threaten significantly to narrow the range of policy choices available" to counter these.[18] The non-traditional paradigm may include but is not limited to terrorism, transnational crime, environment, migration, energy security and human security.

It has been observed, especially after the 9/11 incident, that violent non-state actors, including terrorist networks, have evolved into a challenging societal construct. Though limited, sporadic and organizationally untenable, this construct has challenged the rules-based norms of virtually every state in the international system.

These networks, frequently supported by proxies and geopolitical interests of states, take advantage of chaotic conditions to operate and corrode the stability and functioning of the state and the international system. Importantly, due to complexities involved in the construct of non-traditional threats, archetypal military and non-military responses remain lacking in countering them and would therefore require discrete military as well as broad social, economic, and political responses to resolve them. State also requires a wide approach that is not limited to a military-centred narrow strategy but needs to enhance economic power and strengthen law enforcement to protect individuals. The traditional military advantage provided by airpower, primarily configured to deal with traditional adversaries in the international system, thus, has been challenged.

Pakistan has also been affected by the rise of non-traditional threats, especially post-cold war, because of great powers' divergent interests in the region, political and economic instability, and regional strategic stability-instability paradox catalysing non-traditional phenomenon. According to Pakistan National Human Development Report-2020, the economic, health, water, education and environment sectors have experienced continuous degradation over the last three decades. Subsequently, unemployment, lack of basic amenities, corruption, bad governance, deteriorating law and order situation, unrest and intolerance, misled ideologies, political divide, and chaotic conditions have led to unfavourable societal constructs. The most awkward of these have been terrorism, whose roots lie in the US invasion of Afghanistan in 2001, which, yet for another time, caused a massive influx of Afghan refugees in Pakistan. The military operation in Afghanistan also pushed many terrorist groups toward Pakistan, especially in erstwhile Federally Administered Tribal Areas (FATA). They found it convenient under such vulnerable conditions to create their identity-based construct by challenging the state's writ. Thus, terrorism caused immense costs for Pakistan. In the last two decades, more than 80,000 people have lost their lives with an enormous $150 billion economic loss, human suffering and whopping damage to the state's reputation and ethos.[19] In order to deal with these security challenges, Pakistan launched a military operation, resulting in the defeat of terrorists and the restoration of law and order in troubled areas. However, the recent withdrawal of US-led coalition forces from Afghanistan and socio-political instability in the country may pose non-traditional security challenges for Pakistan.

## Airpower and Non-traditional Challenges

Before examining airpower's ability and strategy to deal with non-traditional challenges, it is essential to define airpower *per se*. There are numerous definitions of airpower. UK Joint Doctrine Publication (JDP) 0-30 defines airpower as "using air and space capabilities to influence the behaviour of actors and the course of events." These air capabilities are instilled in airpower under its fundamental characteristics of height, reach and speed, allowing observation with accuracy, generating effects rapidly, and surmounting entire oceans and natural barriers in all weathers. Recognizing these abilities, Douhet and Mitchell conceived airpower to penetrate deep into the enemy's

heartland to attack strategic targets and centres of gravity and advocated massive and independent use of air power to break the adversary's will. Mitchell claimed that strategic employment of airpower "would yield a victory that was quicker and cheaper than one obtained by surface forces."[20] However, these theories could not yield desired results due to the unavailability of requisite weaponry and futile tactics. For instance, the UK, Germany and Japan received massive bombing campaigns during World War II; however, these campaigns alone could not break the enemy's will due to weapon inaccuracies and lack of target information.[21]

Since the end of World War II, technology has experienced transformational changes to include airpower platforms that can hit targets with greater accuracy. With continuously evolving technologies of combat aircraft, potent radar systems, long-range missiles, enhanced mobility platforms, improved reconnaissance and surveillance, precision-guided munitions and concepts that were once considered unrealistic have started to find validity. Accordingly, novel theories of airpower have emerged. In his famous Five-Ring Model theory, John A. Warden III argued that if crucial elements of the adversary, i.e., leadership, system essentials, infrastructure, population and field forces, are neutralized by airpower, the state would collapse. In contrast, Colin Gray argues that airpower strategy is critically reliant on the conditions of a conflict. Robert Pape advocated that instead of focusing on targets, air strategists must consider coercive mechanisms leading to the fulfilment of political objectives; hence, the decision of what to attack must come after knowing why to attack it.[22] Shaun Clarke deliberated on the offensive airpower strategy that a small-to-medium-sized force can adopt and put forth the strategy of SPOT bombing, which emphasizes persuasion and high impact rather than an old-style concept of overwhelming force aiming to paralyze the adversary. According to Shultz, all such developments enabling airpower to act as a crucial military tool to achieve strategic advantages were observable in various air campaigns since World War II.[23]

Taking the lead from the above-cited academic work and harnessing technological advancement, airpower campaigns were widely observed to act antagonistically during Korean War, Vietnam War, and Arab-Israel Wars. According to Ronald D. Jones, airpower was crucial during Israel's pre-emptive air strikes on Egypt during the Six-Day War (1967), which destroyed Egyptian, Jordanian, and Syrian military forces and an overwhelming victory for Israel.[24] Airpower was also observed significantly in a geostrategic role in 1981 when Israel destroyed the Iraqi nuclear reactor at Osirak.[25] Lamberth noted that airpower played a crucial role during Operation Desert Storm in 1991, where Iraqi objectives were engaged at will with pinpoint accuracy, mainly due to the convergence of high technology and determining strategy.[26] Regarding airpower's decisive role in Kosovo, the preeminent military historian, John Keegan, in an editorial in Daily Telegraph, wrote that "now there is a new turning point to fix on the calendar: June 3, 1999, when the capitulation of President Milosevic proved that war can be won by air power alone."

## Airpower and Non-traditional Security Threats

Airpower has been a valuable military tool to inflict deciding blow on hostile adversaries, as observed during the abovementioned campaigns. However, emerging complexities of non-traditional security threats to national security have raised eccentric challenges for airpower.[27] The most severe problem in employing airpower against the non-traditional threat of terrorism is the blurred distinction between friend and foe. Though technological advancements, such as precision targeting and rapid response, make airpower an effective instrument against terrorism, often airpower has to bear some associated political cost arising from collateral damage and other ideological factors. Moreover, due to limited footprint and endurance, aerial platforms are often criticized for lack of persistence – a capability essentially required to detect and engage terrorists and provide much-needed support to land forces. Land operations often involve chase and pursuit operations into populated areas; however, troops rely on airpower if they get stuck in a perilous situation. Airpower, in such cases, must provide support for extended periods. Improved technology of engines, UAVs and aerial refuelling capability have made it possible for airpower to enhance its persistence.

The potential of airpower to challenge traditional threats was perhaps identified right at the onset of aviation birth, as the air policing concept was conceived almost with the arrival of aerial platforms. Airpower's role against non-traditional threats could be observed as early as 1913 once French airpower was applied to crush the uprising in Morocco.[28] In 1916, the US captured Mexico's radical leader Pancho Villa by utilizing its 1st Aero Squadron. During the interwar period, the British used airpower to control rebellious tribesmen in Transjordan and Iraq.[29] In numerous other irregular conflicts, such as in the former USSR, the KSA, the US, and El Salvador, airpower was employed to counter insurgencies. Airpower had also remained prominent in countering irregular war in the Middle East. Colonel Olsen argued that the Israeli Air Force's strategy during the second Intifada (2000-2005) conflict was focused on targeting Palestinian infrastructure and targeted killings of leadership,[30] which Carvin criticized due to severe collateral damage, legal implications and boomerang effect.[31] Despite controversies, Israel used Apache helicopters to fire Hellfire missiles during the second Intifada to assassinate over 60 high-valued Palestinian targets.[32] The US airpower strategy against transnational terrorist organizations post-9/11, as argued by Stephen D. Biddle, was reoriented to replace significant conventional ground troops with airpower and special operation forces.[33] During Operation Iraqi Freedom, airpower was involved in multi-faceted engagements, such as providing critical intelligence, surveillance, reconnaissance (ISR) and enabling mobility.[34]

Airpower's ability to deal with terrorists embedded and hidden within a civilian population is driven by high-accuracy weapons to avoid collateral damage. Consequently, the usage of precision weapons progressively increased. During Gulf War (1991), it was less than 10 percent by the time of Operation Allied Force; this

percentage increased to 35 percent and rose to 68 percent during Operation Iraqi Freedom in 2003.[35]

## Employment of Airpower by Pakistan to Combat Terrorism

States have exclusive airpower advantage over terrorists and non-state actors because, almost in all cases, they lack airpower capability. However, the non-traditional construct complicates the application of airpower to attain intangible objectives, such as people's support and welfare, and political and cultural sensitives become the overriding factor in gaining operational success. Historical evidence, mainly US airpower applications in Vietnam, Iraq and Afghanistan, suggests that strategic failures were faced due to disregard for political and cultural sensitivities.

Pakistan Air Force (PAF) counter-insurgency operation in erstwhile FATA and Swat differed from US Air Force (USAF) operations in two aspects: firstly, due to the nature of the construct, PAF operations were not constrained by ethnocentrism as was the case for US air operations in foreign territories; secondly, PAF having observed the campaigns of USAF and Israel incorporated the mechanism to avoid political and cultural sensitivities present in the construct. Since PAF had to conduct its operations within its territory and in a construct with insurgents embedded with the society, airpower use was sensitive to collateral damage and limited by constraints of public pressure. The available firepower advantage of PAF over terrorists was thus curtailed. PAF had to upgrade those capabilities that could assist in achieving the desired deconstruct, including separating terrorists from normal society, eliminating terrorism identities, and assisting in society's deradicalizing and socio-economic development. It required compatible ISR, day and night precision strike capability, and those capabilities that can assist in air transportation, rescue and logistics.

Initially, PAF had to start its campaign with certain technological limitations and capability gaps. For instance, airpower in Operation Al Mizan (2002-2006) was limited to emergency surveillance and strike missions with mostly dumb bombs. Once PAF acquired precision-guided munitions, it played a more significant role in Operation Rah-e-Rast (2009) by destroying terrorists' hideouts and infrastructure and targeting their leadership. Employing its ISR and precision targeting capability coupled with reduced sensor-to-shooter delays, PAF became confident enough to take on time-sensitive targeting (targets requiring immediate response because they pose a danger to friendly operations or are highly lucrative) in Operation Rah-e-Nijat (2009).[36] As a result, the effectiveness of joint land-air operations increased manifolds with a sharp decline in causalities, mainly because of airpower advantages gained through ISR, rapid mobility and precision attacks. Despite fewer resources, PAF during Operation Zarb-e-Azb (2014-2017) and Operation Radd-ul-Fasaad (2014-) was instrumental in thwarting terrorism with zero collateral damage and helped ground forces to clear the troubled areas.

## Airpower Strategies to Combat Non-traditional Security Threats

Non-traditional security threats frequently emerge due to societal construct that evolves under the influence of changing identities of individuals. However, this construct still embraces overlapping identities where individuals hold the central stage and eventually become the centre of gravity. The strategy to achieve deconstruction of radicalized construct arguably requires winning the support of individuals and eliminating terrorist identities while strengthening customary social norms. Transforming people's identities remains vital for non-state actors pursuing terrorism ideologies and policymakers who need to deradicalize individuals.

According to Robert Jones, to deconstruct terrorist identities, states need to eliminate those chaotic conditions that facilitate violent construct; however, this task cannot be achieved easily because such conditions are often the result of hard fault lines.[37] States can remove chaotic conditions through good governance to prevent insurgent identities from establishing footholds in the population. People will support state institutions against terrorist construct only if they get convinced that the state has the capacity and resolve to eliminate terrorists and protect social identities threatened by terrorists.[38] James Corum argues that "the deconstruction of the terrorism, effort should be geared to driving a wedge between population and the reb."[39] Therefore, deconstruction becomes effective by separating the population from terrorist identities. Given the nature of the non-traditional security construct, its deconstruction requires an institutional approach where state and often international institutions must pursue policies to deconstruct complicatedly knitted identities which are sometimes transnational. Altering ideological beliefs of the masses through education and concentrated psychological operations has to be incorporated into the deconstruction policy. Only a national-level policy involving joint efforts of military, economy, diplomacy, politics and information domains can help achieve such deconstruct.

An effective military strategy employs ground and airpower to deconstruct non-traditional security constructs by eliminating or coercing terrorists to renounce their radical ideologies. However, the use of force is constrained by the fact that non-traditional security construct has overlapping and obscured identities where terrorists often hide in society. Under such conditions, unmeasured or inapt employment of airpower or ground force can lead to collateral damage and heavy losses to the population. Therefore, the identification and separation of terrorists from society must be achieved first so that they can be isolated and subsequently neutralized through applying force.

Airpower employment in non-traditional roles includes ISR, interdiction, rapid mobility, logistics, search and rescue, relief operations, etc. Airpower becomes exclusive while considering the factors such as rugged terrain and the inability of non-state actors to challenge airpower. Aerial platforms and other sensing capabilities can provide appropriate ISR, which becomes helpful in extracting information about

insurgents' identification, movement, and location. This information can be utilized to target insurgents in real-time. It provides continuous coverage to protect ground forces engaged with insurgents. Airpower's capability to provide swift air mobility and logistics, though limited in volume compared to ground and sea mobility, is often essentially required for the timely delivery of cargo to operational areas. It becomes critically important for logistics, socio-economic development, aeromedical evacuations and ground forces manoeuvres in poor road network conditions, rugged terrains and insecure environments. Besides, the precision attack capability ensures firepower is applied to the right target at the right time. Counter-insurgency operations usually require minimum damage to infrastructure while ensuring the elimination of terrorists, which necessitates exact intelligence and pinpoint accuracy. Airpower is the most appropriate tool to undertake such operations.

Airpower is a lynchpin in achieving separation between terrorists and society by executing ISR functions to identify terrorist outfits, gather information, transport men and material and establish logistics and aerial drops at remote areas to support relief and military operations. It helps in two ways: firstly, by assisting the area's socio-economic development by incentivizing people to maintain social norms and separate themselves from radical elements; secondly, airpower's ability and technological edge provides requisite information on terrorists. Applying airpower combined with the policy may result in varying deconstruction ranging from soft to hard segregation between terrorists and society. Soft segregation creates a construct in which society sustains its identity with an increased willingness to oust insurgent ideologies. In the Greek civil war (1947-49), such a construct was observed where insurgents enjoyed little social support despite colocation.[40] This kind of construct affords prospects of human intelligence that can be the basis for the kinetic application of air power. However, even intelligence-based kinetic applications cannot be without prohibitive political costs due to the high possibility of collateral damage. Air operations in such situations demand verified actionable intelligence[41] and weapons corresponding to the desired degree of destruction to the target; however, the decision to use kinetic application must go through a cost-benefit analysis process.

In some instances, deconstruct, achieved through airpower application, may restrict the space for terrorist identity. As a result, terrorists may consider it practical to pursue their ideology in a separate construct leading to a hard-social separation of terrorists from normal society. If it does not happen, separation must be created by internally displacing the normal society. During the Malaysian insurgency (1948–1960), insurgents separated and retreated into jungles once the British re-established their authority.[42] Hard social separation *per se* can interrupt terrorists' sustenance, logistics, arms supply, etc. It provides an enabling environment to achieve deconstruction by employing airpower to eliminate terrorist infrastructure or force terrorists to leave their hideouts and relocate into mountainous or hilly areas where they can protect themselves from air power. In such areas, airpower's kinetic application may not provide a decisive outcome, yet its indirect application, such as transportation, logistics and ISR, supports ground forces operations.

Airpower can arguably be a military instrument of the first choice to eliminate non-traditional security threats; however, the possibility of collateral damage followed by political constraints still exists. President Obama and other US officials have openly accepted that US drone strikes have caused numerous civilian casualties. The terrorists' construct strengthens through such situations because ideological and identity-based sensitivities can be exploited easily in society due to collateral damage, whereas socio-economic developments remain discredited. Airpower's direct role can be disastrous if physical and social separation is not achieved, as observed in Vietnam and Afghanistan, where insurgents could not be socially and physically separated from society; consequently, their social construct prevailed.

## Impact of Disruptive Technology on Airpower Employment against Terrorism

In the contemporary environment, where technologically enabled non-traditional threats are increasingly challenging states' security, embracing disruptive technology, such as AI, drones, space-based ISR, long-range standoff weapons and integrating frameworks, seems to be the crucial requirement for airpower to counter these challenges. Non-state actors can quickly get hold of unconventional methods to exploit the state's vulnerabilities using modern technology. Terrorist groups increasingly use Web 2.0 to improve their communication. With 3D-printing technology, the manufacturing of firearms and other restrictive materials has also become possible for terrorists. Similarly, the possibility of manufacturing dirty bombs may also be within their reach through the dark web and using cryptocurrency. The use of killer drones by Houthi rebels in the Yemen civil war is another example of exploiting technology in irregular conflicts.[43] In January 2018, Russia's Khmeimim airbase in western Syria was attacked by 13 armed drones. Such attacks continued, and Russian Air Defence had incapacitated over 150 drone strikes in Syria.[44] These examples indicate the growing use of modern technology by terrorists.

Airpower has prospects to benefit from modern disruptive technologies. By incorporating cyber and space-based ISR systems, airpower can enhance real-time identification, geolocating, and forecasting of terrorist intentions. Drone technology has now been used regularly in counter-insurgency operations. Advancements in armed drones and swarm drone technology can benefit airpower's capability to counter non-traditional threats in many ways, including cost-effectiveness, risk mitigation, more extended footprint and loiter time, and ability to hit targets inaccessible by conventional platforms.[45] Integrating AI in airpower would enhance its counter-insurgency capabilities at all levels, from tactical to strategic. Target assessment, decision-making against time-sensitive targets, command and control functions, sensor to shooter management, data analysis, and many other functions can enhance airpower's effectiveness against non-traditional threats.[46]

Airpower has been relying on precision strike capability to eliminate terrorists at locations where chances of collateral damage exist, such as population centres.

Technological advancement in long-range standoff weapons has opened a new horizon for airpower. Airpower's accuracy, reach, lethality and effectiveness have further enhanced with a much-reduced possibility of collateral damage and minimum chances of exposure to the enemy threat. Aerial platforms, while delivering long-range standoff weapons, also remain non-observable to intended targets, and hence opportunity of any evasive action by targets also diminishes.

Despite the importance of modern disruptive technologies, the vital part of countering non-traditional threats rests in strategy. According to André Beaufre, such a technology "is nothing more than the use of means to achieve political ends." Whether existing or emerging, technology acts as part of the means alongside operators, who must ensure that technological advantages are harnessed to an optimum level.

## Conclusion

The use of air power as a military instrument against non-traditional threats has remained vague and intricate. Neither could it be well theorized owing to a short history of airpower nor well-practiced. Traditionally, airpower was never configured, geared, equipped, and trained to fight the enemy within; until the worldwide securitization of terrorism, followed by the deadly emergence of its violent character, forced the policymakers to utilize airpower to counter this threat.

In constructing or deconstructing non-traditional entities, actors' identities remain paramount, making individuals referent objects. In terrorist constructs, the population is the centre of gravity, whereas the transformation of identities remains vital for non-state actors and policymakers. Terrorism deconstruction requires an institutional approach where state and often world institutes need to pursue policies to deconstruct complicatedly knitted identities, which are sometimes transnational. Airpower's employment against terrorist networks has fetched varied outcomes. Lack of technology and precision and deficiency in strategy to cater to political and cultural aspects can cause negative fallouts (Vietnam, Iraq and Afghanistan). Unmeasured and unregulated use of airpower can cause the proliferation of ideological conflicts (Middle East). However, airpower has also successfully eliminated non-traditional threats and assisted in restoring social order (Pakistan). Despite these varying results, given the technological advancements being absorbed by airpower, it can be argued that airpower would be a critical component of future campaigns against non-traditional security threats. Since diverse security challenges have increased, airpower must adopt compatible strategies and technologies to remain effective. Embracing disruptive technology and integrating sound conceptual frameworks seem to be the crucial requirements to counter these challenges.

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