

# Indian Airpower in Irregular Conflicts

*A Conceptual Framework*

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# Indian Airpower in Irregular Conflicts: A Conceptual Framework

## *Abstract*

*The future holds a multitude of challenges for nation-building efforts in an emerging India. The Indian armed forces will have to work along with governmental and non-governmental agencies, in letter and spirit, to build capabilities to face the uncertainties ahead. This article attempts to trace the legacy of airpower employment in asymmetrical conflicts, such as counter-insurgency. The Indian experience of airpower employment is here examined to sketch a conceptual COIN framework and the role of airpower therein. The overall emphasis is to be on an adaptive OODA Loop and collaborative leadership, that are key to such airpower enabled operations.*

## **A Historical Perspective**

Beginning with the legendary exploits of Dakotas and Baba Meher and his gang of can-do pilots in 1947-48, a feat that saved J&K for India, Indian airpower has almost continuously been involved in less-than-war and low-intensity or limited conflicts (LICO). A major portion of this has been counter-insurgency within the Indian borders. Indian military helicopter and transport aircraft fleets have put in yeomen service over decades towards this and continue to do so. This has been matched by the humongous effort of supporting echelons of bases and detachments spread across the country.

Indian airpower's rich legacy of commitment over decades to conflicts that are variously termed as irregular war (IrW), counter-insurgency operations (COIN), hybrid wars, sub-conventional operations and less-than-war, however, is not too well documented. Some recent books have covered this facet e.g. *Operation Paawan* (Sri Lanka), *Operation Cactus* (Maldives), the 1962 Sino-Indian War and the post-independence wars with Pakistan. The Indian experience of airpower employment can be fleshed out for the conceptual framework within these facets. The Observe, Orient, Decide, Act (OODA) Loop model can be adapted for this purpose. It could be applied as a working model for the unified command structure being followed in India. A whole-of-government approach is necessary for these less-than-war scenarios.

Military history is replete instances of the weak defeating the strong: Spartans against Athenians; Spanish guerrillas versus the army of Napoleon; Vietnamese Communists against France and then the United States; Afghan Mujahidin against the Soviet Union and currently the Americans. Mao Zedong's art of protracted revolutionary war and its success, advertised the strategy of indirect defence. This typically relies on irregular armed forces merging in the background with non-combatants when not in actual combat. The resultant civilian casualties during operations generate even more rebellion and resistance – a key insurgent aim. With assured access to sanctuary and local support, the longer time-frames of conflict resolution favour the weak. When the US encountered this in Vietnam, it was befuddled by the political nature of the conflict and the limits of the conventional military in such operational settings. While a strong will and unconventional strategy of the weak is critical to success, it may not be enough for victory. External direct or indirect assistance, sanctuaries and other covert and overt help is needed to alter the asymmetric power relationship.

### **Myatezh Voina: Theoretical Foundations of Hybrid**

Evgeny Messner (1891-1974) was an officer in the Russian Tsarist Army during First World War. He fought in the Russian Civil War and participated in anti-guerrilla warfare in the Balkans and the Second World War along with Axis powers. His views were shaped by the defeats during the Russian Civil War and WW II where he experienced an enemy who was adopting irregular warfare tactics, terror and propaganda on a societal scale. Messner developed the concept of Myatezh Voina (MV); a new type of unorthodox warfare, which allowed a weaker foe to challenge, and possibly defeat the stronger without fear of provoking direct large military confrontation<sup>1</sup>. In the context of Pakistan's strategy of a 'thousand cuts' in J&K, his views are remarkably relevant.

The general characteristics of MV are relevant even today. First, the tactical, operational and strategic art of MV focuses on unconventional methods and instruments, such as betrayal, terror and false information. Second, a highly ambiguous strategic design that unfolds as a well-coordinated campaign that includes violence in ever novel forms such as labour strikes, a series of hostage takings and guerrilla attacks. Thirdly, despite its seemingly chaotic and amorphous nature, MV is waged in a professional, systematic and well-thought manner. It is planned, organised and executed by a core strategic command structure. Next, unlike a revolution, that is both rapid and radical, MV is protracted and incremental in nature. The escalation curve is not too steep and aims for gradual paralysis and multiple small-scale attacks spread through space and time. Fourthly, it is guided by core conventional tenets and does not represent a major shift in principles of war, e.g., the importance of surprising the enemy, the key role of intelligence, the striving to win at the lowest possible cost, and retaining the initiative. Fifthly, it does not adhere to values, laws or conventions, including own current ideology adopted for the campaign. The sixth and last feature is the importance of the psychological domain. Influencing the psyche of the adversary by propaganda is an essential instrument of the strategy. All kinetic operations are planned and executed on the basis of their psychological impact, and targeting is on the basis of an intensive analysis of the same.

A large variety of actors engaged in its conduct may consist of demonstrators, agitators, propagandists, criminals, saboteurs, terrorists, guerrillas, and irregular fighters. The opportunistic nature of the strategy makes the list open-ended. Messner broadly classifies MV actors into four categories, each representing different levels of skills, reliability and violence: Revolting masses; agitated civilians

staging public protests and creating social unrest; covert-forces – groups and individuals engaging in a broad spectrum of violent activities ranging from sabotage to acts of terrorism; resistance movements – irregular units attacking govt forces using primarily guerrilla tactics; and, regular armed forces. An actor may shift between different categories and move vertically. For instance, an individual may start as a demonstrator (stone thrower), then engage in acts of sabotage (looting banks), and later join a guerrilla movement. The process may also work in reverse.

### Countering Myatezh Voina

According to Messner, a defensive effort against MV has to acknowledge the existence of the threat, i.e. the various violent events are connected and represent a strategic assault by a sophisticated adversary. Any counter-strategy has to encompass all domains to address a broad spectrum of potential attacks. As per Messner's line of thinking, the way-ahead must encompass: the development of a comprehensive strategy based on a whole-of-government and whole-of-society approach - with a critical role for psychological and information warfare.

### Age-old Precepts

In order to reduce uncertainty and ambiguity, Kautilya advocated a well-connected network of spies along with established armies in any state. Exploiting conditions of uncertainty and attacking stratagems and planning of the enemy through deception are integral functions of the state. According to Kautilya, military operations are mainly of three types– open war (*prakashayuddha*); covert war (*kutayuddha*); and silent war (*gudayuddha*). Boesche notes that Open warfare is traditional warfare, armies arrayed openly against one another and concealed warfare is what we call guerrilla warfare, attacking and fleeing, harassing an enemy with surprise. Silent warfare involves openly praising another king as a friend and ally, all while striking him again and again ... by spies and saboteurs.<sup>2</sup>

Kautilya advocated the use of all three forms individually or in combination to achieve the objectives of the state.<sup>3</sup>

### Current Concepts

All participants in modern armed conflict will attempt information warfare, cyber-attacks, irregular war, disruptive technology employment, and other unexpected initiatives before a force-on-force engagement. In the book *Unrestricted Warfare*, two PLA colonels are of the view that, “the new and old terrorists who consistently uphold the principle of resorting to every conceivable means are still the best teachers of each nation's government.”<sup>4</sup> While the focus has been on conflicts such as the Israel-Hezbollah (2006), and Crimea-Ukraine currently; closer to home, Kargil (1999) was a classic hybrid model adopted by Pakistan against India. It combined regular army troops (NLI) disguised as Mujahidin, the occupation and holding of key locations, the use of man-pads and Stingers, and even the full might of Pakistan Army artillery and counter-battery units. It was only the asymmetric Indian air power that finally tilted the scales.

Hybrid warfare is an emerging mix of tactics, techniques, and technology that combines some of insurgency's key advantages with some conventional strategies such as, control and hold of territory. It combines a highly decentralised C2, loose leadership, light footprint, and population support with

tactics to hold areas and cause attrition using man-portable anti-tank and anti-aircraft missiles, rockets, and mortars. Countering hybrid warfare will require a mix and match of combined-arms fire and manoeuvre capabilities, and the flexibility and population focus of a counterinsurgency.<sup>5</sup>

The future holds conflicts that would be a battle of narratives and multiple truths, apart from the 'real fighting'. Airpower leadership has to be keenly aware of the context, understand the strengths and limitations of partner agencies, and be innovative and adaptive in the joint campaign.<sup>6</sup> At the same time, they need to be aware of costs or affordability of airpower, and its vulnerability on ground and air. Optimum solutions can only follow if the bigger picture is not lost sight of.

### **The Indian Experience**

India's experience in counter-insurgency operations since independence has had some dramatic successes e.g., Mizoram, Tripura and Punjab.<sup>7</sup> The Indian Army's COIN doctrine and practices are fundamentally conservative and influenced by British (Malaya, Kenya and Cyprus), French (Indochina and Algeria) and United States' (Vietnam) experiences.<sup>8</sup> Western precepts of counter-insurgency may be suitable only for colonial or interventionist armies fighting in foreign lands. Most Indian conflicts are fundamentally ethnic minorities inhabiting states on the international borders negotiating new terms of integration. Armed forces actions are bound to be severely restricted when dealing in such cases with their own people.<sup>9</sup> Central Armed Police Forces (CAPFs) are now extensively deployed in situations of widespread terrorism, and have acquired considerable experience in counter-insurgency warfare. Although these forces have traditionally worked under the overall command of the army while handling insurgencies in India's Northeast, they have shown remarkable levels of success even when they have been on their own e.g. operations against Left Wing Extremists (LWE) in the Red Corridor.<sup>10</sup>

Civil-military relations and their respective roles in a counter-insurgency operation has been the subject of considerable debate and disagreement in most democracies. The question of overall command has often been a critical one, with the British favouring a committee at every level comprising a senior military commander, a senior policeman and intelligence officers under the chairmanship of the head of the local administration. The French have preferred a single commander system, who is usually a military officer, with advisors from the military as well as the civil administration. Regaining the allegiance of the population is both a premise for destroying the power of the insurgents, as well as an ultimate goal of a counterinsurgency operation. In an area of active hostility, armies are inevitably seen by a beleaguered civil population as an adversary in the initial stages of fighting, and the situation does not change until well after an army establishes its superiority. The task of increasing material comforts of the population and addressing their grievances remains the exclusive business of a civil administration. According to Ganguly and Fidler, the Indian approach has been primarily political in which force has an essential but a limited role, ultimately.<sup>11</sup> Except for secession, India has been willing to compromise on most other political demands. As per Mitra (2007), new states have been carved out, ethnic communities have been allowed to create autonomous regions and insurgency leaders have been allowed to enter mainstream political leadership.<sup>12</sup>

The Indian Army came out with its first doctrine for COIN in 2006 despite a very rich and continuous experience since the country's independence. Rajagopalan (2008) summarises it as encompassing: an overall approach of 'Iron Fist with a Velvet Glove'; a blurring of strategic, tactical, combatants, non-

combatants, front and rear; reorienting the soldier to the 'Own People' concept; a people-centric approach, and shifting emphasis to manoeuvre rather than attrition; a focus on minimum force, and neutralising rather than eliminating; and, basing the campaign on four pillars of security, development, governance & perception management.<sup>13</sup>

### **J&K 1965**

As stated earlier, the 1965 Indo-Pak War was an example of compound warfare, According to MoD and IAF documents, during the dark days of *Operation Gibraltar* by Pakistan in August 1965, a helicopter task force, initially consisting of two squadrons, but later raised to three, was formed to assist in the fighting against Pak armed infiltrators or *Razakars* who had entered Jammu and Kashmir in August 1965. This detachment was instrumental in helping the Army check the influx of Pakistani raiders and infiltrators. It was mainly based in Srinagar, and it carried out 79 offensive sorties against the infiltrators from August 20, 1965, till the end of hostilities. These IAF Mi-4 helicopters, suitably modified, bombed and strafed positions of infiltrators in many areas, especially Haji Pir Pass, Tangdhar, Badgam, Mandi, Budil, and the hills around Gurez. This was the first time that these medium-lift utility helicopters were used in the offensive role, and the modifications were done in a matter of days. While these offensive sorties did inflict some damage on the enemy, more importantly, they certainly had a huge demoralising effect on Pakistani guerrillas.

These helicopters also played an important logistical role in 225 sorties by dropping approximately 92,000 kg of essential stores and urgently needed ammunition to army columns operating in different areas, lacking suitable ground communication.<sup>14</sup> They also performed a useful task by speedily evacuating critical casualties from inaccessible areas, flying a total of 198 trips, each loaded to maximum capacity. Some of these helicopters, including three Alouettes, were used by senior army officers to get a good view of the areas of operations, so that quick decisions could be taken to plan and execute counter-offensives against infiltrators. This invaluable support finds a worthy mention in *War Dispatches*, the story of the Indian Army's Western Command written by Lt Gen Harbaksh Singh.

### **Mizo Operations 1966**

The Mizo problem which had been simmering for a while came to a head on the last day of February 1966 when the Mizo National Front (MNF) captured the Aizawl treasury and surrounded the HQ of First Assam Rifles. Other elements of the MNF also surrounded the Assam Rifles posts at Champai, Darngaon, Vaphai, Lungleh and Demagiri. A detachment of six Mi-4 helicopters of 110 Helicopter Unit, based at Tezpur was sent to Kumbhirgram airfield on 2nd March, 1966 and a sub-detachment of two helicopters was deployed at Aizawl. On March 4, 1966, attempts were made to fly in elements of 18 Assam Rifles, which had been moved to Kumbhirgram from Dimapur, into the besieged post of First Assam Rifles in Aizawl. However, MNF elements had occupied vantage points to the North and South of the post and opened fire at the helicopters ferrying in troops. The post fired a red vary cartridge to indicate that it was not safe for helicopters to attempt a landing. All seven helicopters then returned to Kumbhirgram to await further instructions. One had suffered minor damage after taking a bullet hit on the tail boom.

It is not widely known that Lt Gen SHFJ Manekshaw, GOC-in-C Eastern Command, and Air Vice Marshal YV Malse, AOC-in-C Eastern Air Command, flew in a Caribou aircraft of 33 Squadron for



a reconnaissance over Aizawl. The Caribou limped back to Kumbhirgram airfield riddled with bullet holes. One bullet narrowly missed the future Field Marshal who, it is understood, was standing behind the co-pilot during the reconnaissance. After consultation with Army and Air HQ it was decided to fly in troops into the First Assam Rifles camp with fighter escorts. Accordingly, seven helicopters and four French built Toofanis were used for this operation. The rendezvous was in the Tural Valley east of Aizawl. As each helicopter turned onto the final approach to the makeshift helipad in the Assam Rifle post, one Toofani on each side of the chopper fired rockets at the MNF elements sitting on the North and South of the post. Suffering casualties, the MNF cadres fled the scene and the siege of the post was thus ended. Additional battalions, 2/11 Gorkha Rifles, 8 Sikh and 5 Para reached Aizawl by road from Silchar. While Toofanis operating from Kumbhirgram and Hunters operating from Jorhat were subsequently used over Champai, Darangoan, Vaphai and Demagiri; these operations were not coordinated with any helicopter activity and were undertaken to keep the MNF at bay and to ease the pressure off the surrounded posts, till they could be reinforced by flying in troops by helicopter.

Mi-4 helicopters undertook quick reaction operations, including an abortive attempt to raid an MNF camp in East Pakistan near the Mizoram border. Many such missions were undertaken with 5 Para, 13 Kumaon, 8 Sikh, 18 Punjab, 1& 6 Assam Rifles, 16 Jat, 5 J&K Rifles and some other battalions. The IAF offered high mobility to troops and a tremendous element of surprise. It was here that the term Special Heli-Borne Operations (SHBO) entered the lexicon of joint army-air force operations of the Indian Armed Forces. 5 Para, one of the first army battalions to



move into the Mizo Hills, was based at Aizawl and was used as a fast reaction unit of 61 Mountain Brigade. While the battalion may have had some role in and around Aizawl, it was primarily used to intercept MNF cadres on the move. SHBO missions were undertaken by the battalion in Mi-4 helicopters. An enemy that had been sitting unchallenged for days or weeks could suddenly, without warning, find itself under assault from troops brought in by helicopter. Pilots had just read about the exploits of similar air mobility operations then ongoing in Vietnam and were willing to undertake such missions, fully confident of their ability. Gen Sagat's experience with 110 HU perhaps contributed to his confidence in planning for the heli-lifts during the Bangladesh War in 1971 when he was the GOC 4 Corps.<sup>15</sup>

### **Indian Northeast (NE): A COIN Continuum**

Besides the Mizo movement, virtually every state among the 'seven sisters' has witnessed different degrees of insurgencies. Nagaland led the way immediately after independence. Since then, Indian air power has played a critical role in supporting governance and conflict management. This synergy with the army and police forces has resulted in innumerable successful operations and dousing of fire-fighting scenarios in Nagaland, Tripura, Meghalaya, Assam, Arunachal Pradesh, Mizoram, and even Sikkim during the Gorkhaland agitation. There are some vivid examples. Hundreds of special heliborne missions have countered the advantage that terrain affords to the insurgent besides the deterrence of rapid reaction. Some dire contingencies such as drying up of fuel in Manipur in 2010 were addressed by flying in diesel and petrol in-flight refuelling IL-76s, thus avoiding the economic

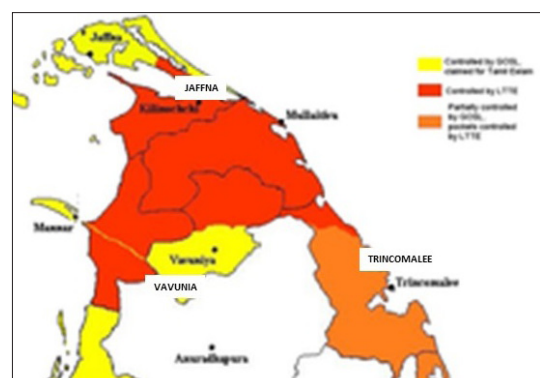
trap set up by anti-national forces. Development of roads and rail network in insurgency-prone areas has been enabled by heavy-lift of men, material and specialised equipment through a mix of transport aircraft and medium-lift helicopters. Specialised equipment such as heavy earth-movers and trucks have been innovatively heli-lifted to most far-flung and inaccessible areas by 'breaking' them into manageable packets, thus allowing quick impact projects in remote areas affected by insurgency. Above all, saving lives of civilians and combatants across this insurgency-prone region has been a mainstay of 'hearts and minds' and morale boosting.

One example of support is combat search and rescue operations. In a classic case in 2000, a Mi-17 evacuated four life-and-death cases from Chapakhowa in Upper Assam at midnight. The operations were being conducted by joint forces of the unified command structure established by the Governor of Assam, Lt Gen SK Sinha. The ambush by the dreaded ULFA, left seven dead while four battled for their lives. The fire-fight continued even as the helicopter evacuation was done from an available clearing in the foothills near the Assam-Arunachal border. The successful evacuation, at midnight in the midst of actual ops, of a Border Security Force officer, two army NCOs and an Assam Police constable boosted morale across the unified command and emboldened them to carry out many effective missions thereafter.

Logistic support to civilian governance and deployed forces has been the foundation of counter-insurgency in the NE for decades. A network of more than a thousand helipads and advanced landing grounds (ALGs) across the region enables sustainment as well as rapid reaction to emergent contingencies. Many of these ALGs and forward helipads are manned continuously by IAF and Indian Army detachments, which over the years have transformed from rudimentary to well networked modern infrastructures. Virtually every known method of supply by the medium of air has been used to support combat and non-combat efforts to integrate this region into mainstream. Fixed wing aircraft have carried out air-landed and parachute drops over many decades with venerable aircraft such as Caribous, Otters, Dakotas, Packets and An-32s. Chetak/Cheetahs, Mi-4s, Mi-8s, Mi-17s and the latest V5s have done millions of hours and sorties of para and free drops, and heli-landing in some of the most hazardous, dangerous and difficult terrain in the world. Even the Mi-26, the largest helicopter in the world, has been effectively used for a variety of roles such as assisting in the building of infrastructure and supply of critical items at crucial junctures. The hub-and-spoke model of centralised command and decentralised execution of air power has been practiced on a daily basis in the NE for the last six decades.

### ***Op Pawan: IPKF in Sri Lanka***

Another major operation which saw extensive employment of Indian military helicopters was in Sri Lanka. From October 1987 to March 1990 when the Indian Peace Keeping Force (IPKF) finally returned to India, the helicopter and transport fleet of the IAF were used in large number of roles. While the most important and extensive was airlift of supplies, troop lift and reinforcements, helicopters were also used in the offensive role. These specially armed helicopters delivered deadly cargoes



of rocket, bombs and other armament accurately against numerous jungle hideouts of the LTTE (Liberation Tigers of Tamil Eelam). As in 1971 Bangladesh, helicopters gave invaluable support to the Indian Army Peacekeeping Force (IPKF) in crossing the numerous water obstacles and picked up troops or air landed them in remote areas of the thickly wooded terrain of northern Sri Lanka. With their support and maintenance base at Sulus, Mi-8s, Mi-7s, Chetaks and Mi-25 gunships maintained detachments at Jaffna, Trincomalee, Batticaloa and Vavunia. Employment of the Mi-25 changed significantly during each phase of major actions of the IPKF. For example, classic search and strike missions of Phase I could not be executed subsequently because of serious identification problems. Mi-25s were employed in the following roles<sup>16</sup>:-Suppressive fire in the general area of the intended landing zones of tactical helicopters.

- Area bombing/strafing of known jungle hideouts (this naturally had to be restricted to areas where there were no civilian habitats).
- Armed escorts/CAP (combat air patrol) to tactical helicopters engaged in special heliborne operations (SHBOs).
- Close air support or CAS of own troops from 'On Call' position (on ground at forward helipads).

**IPKF Forces.** GOC-in-C Southern Command was made the overall force commander with the following forces under him: 4 Infantry Division (2 brigades only); 18 (Ind) Infantry Brigade; 36 Infantry Division; 54 Infantry Division; 57 Infantry Division; 340 (Ind) Infantry Brigade; an army Air Observation Post helicopter unit; one An-32, two Mi-8 and one Mi-25 (attack helicopter) squadrons. The Indian Navy contributed with two naval squadrons - Breguet Alizes and Chetak helicopters, MARCOs and small patrol boats monitoring Palk Strait and Gulf of Mannar. The CRPF and Indian Coast Guard were the two paramilitary forces that lent a helping hand. The aim of IPKF was to defeat the LTTE completely, or, at least compel it to fully accept the India Sri Lanka Accord (ISLA). In spite of the fall of Jaffna, this did not come about as the LTTE reverted to its best fighting technique i.e. guerrilla warfare. For two years, the IPKF successfully put the LTTE down and drove them to hiding in jungles, but later, it had to be recalled in 1990 due to political vacillations.

By the end of May/June 1988, the modus operandi of the militant had settled into a set pattern of ambushes close to posts as troops would be caught off-guard; avoiding villages except for provisions/collection of taxes; and, not staying at one hideout for too long which meant a large number of camps spread over vast areas of the jungles. IPKF's concept of operations was to continue to maintain pressure, dominate areas known to be frequented by militants, lay ambushes, prevent coastal hopping, and increase psychological operations. Mi-8s were employed for: induction/de-induction of troops; redeployment of troops; resupply of arms/ammunition, including artillery ammunition; resupply of food and water in some cases; casualty and medical evacuation.

### **UN Peacekeeping**

Indian airpower in UN Missions has supported some very robust and high-risk peacekeeping and enforcement tasks. Many reports, UN-sponsored or independent, concede that even before 'robustness' became fashionable, Indian airpower in conjunction with ground forces had already set benchmarks

in terms of combat ethos, ethics and practices. Many ground forces and UN civilian components, including Indian Army deployments in the Congo, Sierra Leone and Sudan have documented the critical role that Indian helicopters played in their success, and very often in their survival, against some of the toughest odds. These were good role-models of jointness at a multi-national level. Two cases in point are DR Congo and Sierra Leone under UN Chapter VII.<sup>17</sup> Employment included: show of force; close air support; communication; intelligence; surveillance and reconnaissance (ISR); airborne early warning & C2; target acquisition; combat air patrol; special heli-borne operations; and casualty evacuation. More importantly, care and calibration ensured no collateral damage in the almost seven years of aggressive peacekeeping in the Congo (Indian Contingents I & II) and Sudan (UNMIS) as depicted in Table 1, below.

| <b><u>FLYING EFFORT: IAF AV CONTG</u></b> |                       |                        |                                     |
|---|-----------------------|------------------------|-------------------------------------|
|   | <b><u>MI-17</u></b>   | <b><u>MI-25/35</u></b> | <b><u>ARMT</u></b>                  |
|   | <b><u>SOR/HRS</u></b> | <b><u>SOR/HRS</u></b>  | <b><u>57MM / 23 MM / 12.7MM</u></b> |
| • IAC-1 :                                 | 15930 / 9590          | 5652 / 6170            | 1803 / -- / 400                     |
| • IAC-2                                   | 13780 / 8680          | 4485 / 4720            | 297 / 100 / --                      |
| • IAC-UNMIS                               | 22045 / 10445         |                        |                                     |
| • TOTAL                                   | 51755 / 28715         | 10137 / 10890          | 2100 / 100 / 400                    |

**Table 1.**

***Operation Rakshak (J&K)***

Counter-insurgency operations by the army, paramilitary, IAF and police forces in Jammu and Kashmir (J&K) State were termed *Operation Rakshak III*. *Operations Rakshak I and II* were conducted by the army in Punjab during 1990-91. Initially the army’s role in J&K was limited to curbing infiltration from across the border, as in Punjab, while the insurgents were fought by J&K Police, Central Reserve police Force (CRPF), and Border Security Force (BSF). However, when the extent of Pakistan’s involvement became clear and a proxy war was recognised, the Indian Army stepped in to lead the fight. Military helicopters have been instrumental in providing operational support to the ground forces by providing vital tactical airlift capabilities over decades. An example of one such operation follows.

The Indian Army’s Northern Command conducted a complex militant-camp busting operation called *Operation Sarp-Vinash* with skill and precision. It was a landmark counter-terrorism operation in Hill Kaka area of Jammu & Kashmir. Hill Kaka was no Kargil in terms of its strategic importance

but merely a staging post for Pakistani militants. The IAF was called in to provide air support, both tactically and in terms of logistics. According to records of units that took part, it was estimated that up to 100 militants were holed up, in and around the mountain hideout surrounded with thick forests, when Special Forces carried out the initial raid.<sup>18</sup> They killed 13 Pakistani militants and in subsequent combing operations which lasted 10 days, seven militants were ambushed near Hajipir as they were attempting to cross over into Srinagar. Altogether, 45 militants were killed against four soldiers killed and two wounded. Substantial recoveries were made: approximately 60 caches and hideouts were busted yielding 20 AK 47 rifles, 5 PIKA guns, two sniper rifles and unspecified quantities of grenade launchers, self-loading rifles and 45 kg of plastic explosives. In addition, substantial quantities of radio sets and other communication equipment were also recovered, besides enough rations to feed 500 men for two weeks. The first thing that Romeo Force did in the first phase of *Operation Sarp-Vinash* began, was to construct three helipads in the region, at heights between 10,000 and 11,000 feet. These were utilised to form the logistics chain in terms of men and other logistical support to carry out operations under various constraints, including the inability to deploy troops on a long-term basis, due to lack of access.

### **Indian Airpower in Anti-Maoist Operations**

It has now been nearly a decade since the Indian Air Force was called upon to render support in tackling what has been called the gravest internal threat to India's security. While the IAF's initial contribution to *Operation Triveni* was two helicopters, this was enhanced to four after the Dantewada massacre of April 2010. By end-2010, two more helicopters were added to the operation, bringing the total to six. This extended commitment was made possible by IAF recalling its helicopters from various United Nations missions abroad and the induction of the latest Mi-17 V5 fleet. Currently, *Op Triveni* stands as the largest helicopter operation in terms of the area covered, with two helicopter squadrons dedicated to providing a 24x7 response and support to Central Armed Police Forces (CAPF), state police forces and administration.

From the outset, the Indian govt has been unequivocal in its stand that military assets would only be employed in a support role with no direct offensive application in any form whatsoever. Consequently, in spite of the tremendous firepower at hand, helicopters have been employed only for reinforcing troops of CAPFs, evacuating any casualties, providing air logistics support to those deployed on ground, besides carrying out aerial reconnaissance over hilly and mountainous areas of this region. The operation covers mainly the states of Chhattisgarh, Bihar, Jharkhand, Maharashtra, Andhra Pradesh and Orissa.

Previously constrained by a series of mine and IED blasts, CAPFs have now been able to increase their footprint over a larger area, as their reliance on roads as the sole means of supplies has gradually reduced. Over the more than 15,250 hours and 20,000 sorties flown by the IAF in *Op Triveni*, it has been able to airlift 1600 tonnes of supplies, as well as 90,000 troops in this theatre. Needless to say, ferrying this load over mine-ridden roads would have entailed a great degree of danger and vulnerability. The ability to fly in reinforcements during ongoing operations, has also allowed the PMFs to maintain a high tempo of operations over a longer period of time than was hitherto possible. An example in this regard is the operation conducted in Gaya in September 2016, where PMFs were able to maintain their pursuit of the Left-Wing Extremists (LWEs) in a remote region, primarily due to the fact that men and material could be flown in with alacrity.

Such operations are now conducted with the knowledge that casualties, if any, would be extracted promptly by helicopters. The effect of this knowledge on a soldier's morale has a telling effect on his performance during operations. Helicopters have evacuated more than 1200 life and death casualties so far. Retrieval of almost 500 mortal remains by day and night has shown the commitment to bring back all. Once again, during the operation in the Gaya region, eight casualties were recovered in spite of inclement weather, with bullets flying all around, and no regular helipad in the vicinity of the operation. By going into this area repeatedly during the operation, The IAF displayed its commitment to the ground action which in turn resulted in boosting the morale of troops on ground.

The natural combination of monsoons over hilly and wooded terrain makes helicopter flying in this region very challenging to say the least. Flying for extended periods in such an environment without any radio contact and ground radar contact adds to hazards faced by aircrew on a daily basis. Added to this mix is the ever improving arsenal of LWEs. Besides acquiring LMGs and even RPGs, LWEs have also educated themselves on how to engage helicopters better. A booklet on 'Guerrilla Air Defence' has been included in the training of an LWE. Consequent to these efforts, LWEs have been able to hit four helicopters - in one case even with fatal consequences. The air component of the task force has consequently been constantly revising its procedures, laying down certain strictures to prevent any mishap. Military history is replete with examples where operations over the long haul tend to conform to the law of averages, while one-time affairs are brasher. Operating from non-military airfields, the danger to military helicopters on ground also remains a constant worry for planners.

Flowing out of national directives, airpower elements have placed upon themselves very restrictive rules of engagement which treat the entire operation as being against insurgency, rather than against terrorists. This distinction ensures that helicopters fire only in self-defence and that too not with any of their integral heavy weapons, but rather from sideward-facing LMGs. Proportionality and avoiding collateral damage is thus built into operations. In addition to the mammoth task accomplished in this operation, more than 2000 police personnel have also been trained in various special ops including slithering operations, low hover jumps and air maintenance. A large number of ground training programmes are also conducted for paramilitary forces to improve awareness and mutual trust. The focus is on making these troops proficient in undertaking weather assessment, handling radio communication and efficient load planning.

To further enlarge the CAPF footprint in the area, pre-positioning of aviation fuel in certain areas has been done in order that the radius of helicopter action can further be increased. Most established helipads have been upgraded to accepting Night Vision Goggles enabled sorties. At present, the Task Force Commander is an air commodore, who is overseeing successful air operations in the Red Corridor. Employment of helicopters has thus acted as a force multiplier and given a huge impetus to the anti-Naxal operations of paramilitary forces. The mere presence of helicopters is a source of strength to troops engaged as it provides much needed logistic/communication back up, recce/observation capability, lifesaving missions (cas-evac/med-evac), timely augmentation of troops and any other special requirements of the CAPFs and PMFs. In short, the aviation task force has been a huge enabler and morale booster for paramilitary forces. The synergy between forces involved is at the core of the successful turnaround in operations against LWE.

## A Conceptual Approach

**Complex Adaptive System (CAS).** A CAS exhibits complexity and is made up of a large number of individual components called agents. These agents are diverse and though their behaviour or functions differ from one another, they are also inter-connected or a 'system-of-systems'. It is characterised by interdependence, self-organisation and non-linearity.<sup>19</sup> CAS systems adapt to the environment; changing behaviour to improve chances of survival or success through a learning or evolutionary processes. Evolution is the longer-term refinement of desirable characteristics (selection), while learning is a short term process with an ability to apply past experience and knowledge to future events. In the context of a military force, three different qualities describe a CAS' ability to adapt in response to and under conditions of stress:-

- Ability to withstand the effects of violence and force - capabilities, redundancies and re-configurability contributing to *Robustness*.
- Ability to recover capability following an initial degradation under stress - *Resilience*.
- Ability to gain strength while exposed to stresses through dynamism and fast-learning - *Anti-fragility*.

**Conflict Management and CAS.** A basic analogy for comparing simple linear systems to CAS is that of throwing a stone and a bird towards a target. As in the case of a bird, unpredictability, self-organising and motivational issues, are quite evident. It is dynamic, self-organising, and dependent on interactions between components rather than a centralised leadership or management structure. The net capacity of a system is not arithmetical because emergence can produce exponential effects, wherein a change in one part can produce unpredictable and non-linear effects in others. System thinking allows leaders to study these interactions, and discuss important patterns and causality, rather than just focus on individual capacities and efficiencies.

Leadership is still critical but in different ways. A vision must still compel components towards a collective set of goals. Communication of this vision has to be effective enough to align knowledge and action of all, with a commitment to put this before self-interests. However, when dealing with such dynamics and evolved members, the leader is more a host for facilitating involvement, participation and contribution. A top-down approach will have to be replaced by one that encompasses decentralisation and empowerment, and continuous evaluation and calibration of actions and directions. Learning is key to this process, especially steps of evaluation, reflection and adaptation. If leadership is about influence, then it exists in this space across any organisation and not only between formal leadership and constituents.<sup>20</sup>

**Adaptability: A Core Issue.** The term "wicked" for problems is reserved for complex issues that are: not fully understood till solution formulation; have a no-stopping rule or do not go away; there are no right or wrongs, as well as no given alternative solutions; and, the issue is unique and novel. Adaptability has two facets, as in the two faces of a coin: the ability to sense a change in situation demanding a change in response; and, the ability to commit to that requirement.<sup>21</sup> Complexity cannot be countered by paralysis or by adopting fundamentally reactive wait-watch-adapt actions. A faulty premise is that wicked problems do not allow for "good enough" approaches or preclude right or

wrong solutions. Overstating complexity may muddle thinking and also delay and degrade imperative actions. The more complex a system, the more important it is to rely on heuristics to peer through impenetrable complexity, and identify patterns and trends for planning actions and reactions.<sup>22</sup>

**Indian Airpower in COIN: Deriving a Conceptual Frame**

The model at Figure 1 below (an Indian COIN Model) depicts a generic template of how airpower has been used in counter-insurgency or low intensity conflict operations by Indian govt agencies.<sup>23</sup> The centre of gravity is the population; a sphere of influence for good governance, sense of security and nation-building. A second point of the concept is that it depicts a phase where insurgency has taken root and a whole-of-govt effort, consistent and well resourced, has been sanctioned by the national govt. The problems in North-eastern states such as Mizoram, Nagaland and Tripura are classic examples where matters had reached a breaking-point at various points of time.

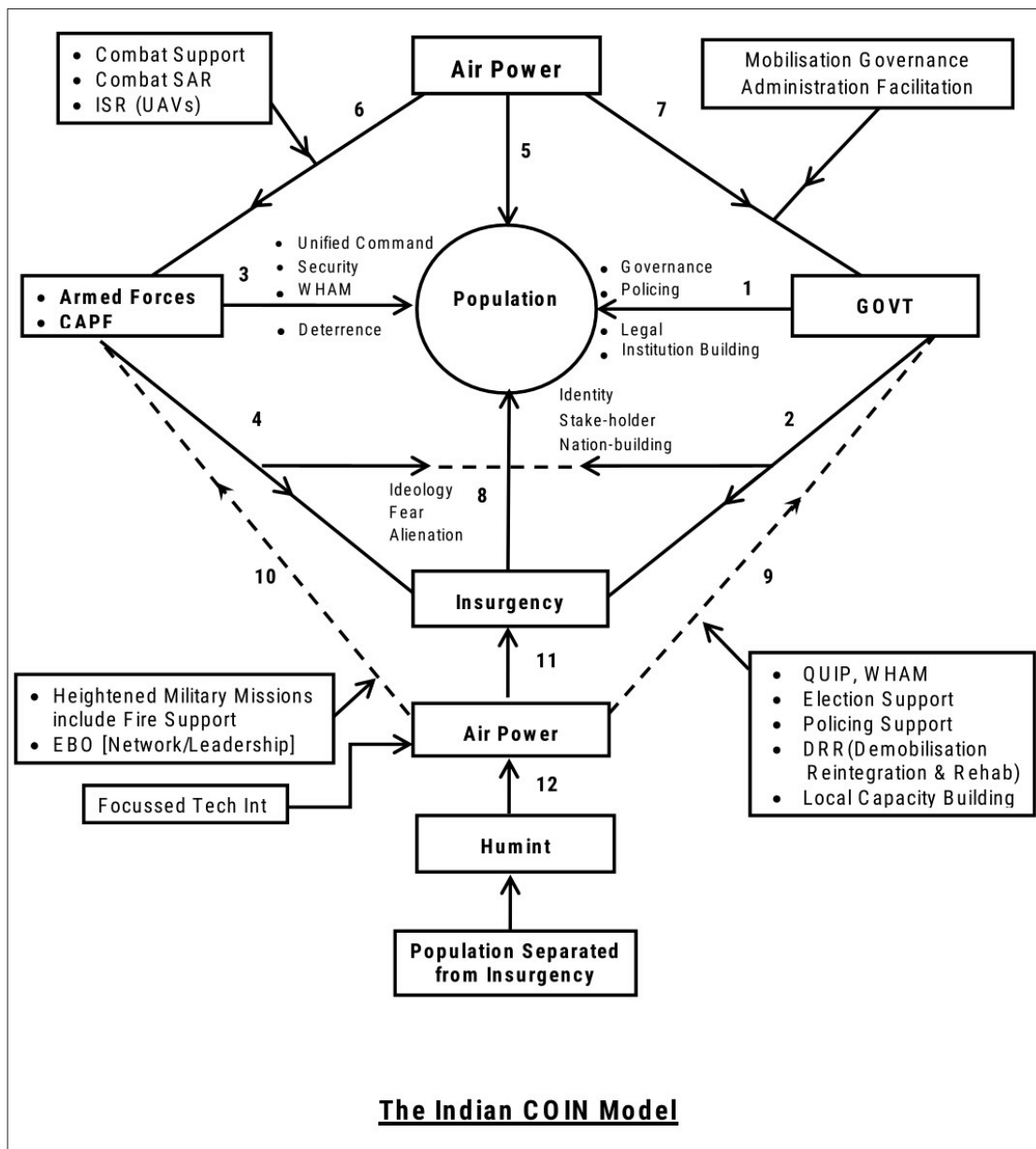


Figure 1<sup>24</sup>



The population is mostly passive and busy eking out a difficult livelihood in mostly rural areas. Some are strongly inclined to support the insurgent because of felt or real grievances against the national or local govt. 'Sons of the soil' insurgents garner a natural sympathy and support especially when underlined by strong identity or ideological causes. In a well-matured insurgency, most of the population can be coerced for tacit support, and fence-sitters can multiply. There are mainly three factors that determine which side people take. First is governance or the lack of it that breeds contempt and frustration. An effective administration besides providing good governance nips such issues in the bud. Second is greed for economic benefits or share of power that accrues from such a movement. The situation in J&K is classically poised in this conundrum. Lastly, there are grievances that may be rooted in religion, ideology or a backlash to force a change on well-established cultures. Islamic radicalism seems to be most affected by this factor. The insurgent's source of real strength is the population.<sup>25</sup> An ideology that feeds into local grievances or is borne out of it, is a starting point. As the movement takes root, the insurgency tries to alienate the population (action 8) by all means including threats and use of violence. Perceptions of the relative strength and effective influence of the govt and insurgents are a crucial determinant of support from the populace.

Referring to Figure 1, Action (1) is the influence of governmental agencies and general administration through its mandated actions including overall good governance, policing (law & order) and institution building (legal, academic, social etc.). Actions (2) are direct actions by the administrative machinery against insurgents such as police, magisterial processes and intelligence gathering. The aim is to keep chipping away at the movement and work on those who can be weaned away. In remote and inaccessible areas, airpower plays a powerful role (7) in mobilisation and facilitating governance. This includes movements of teams, equipment and requirements to expedite development projects. Move of political figures to 'hot zones' is a critical component of the same. Air power also provides direct and very visible support (5) to the public in terms of medical evacuation and movement of medical teams, as also support during disaster response and management.

In large insurgencies where local capacities are not enough to manage the affairs, the military or central armed police forces (CAPF) are mobilised. They form part of the larger matrix of a whole-of-govt approach. For example, the concept of unified command in Assam and J&K initiated by Gen SK Sinha (retired) when he was the governor in these states.<sup>26</sup> These act on the (3) populace in terms of providing physical presence, mobility and quick reaction with large and capable forces. This also adds an element of deterrence and for fear of quick retribution in the minds of insurgents. There is also a large component of 'winning hearts and minds' or WHAM. All these actions are enabled or facilitated by airpower (6) by helicopters and transport aircraft. Surveillance and reconnaissance are enabled through specialised ELINT (electronic intelligence) aircraft and helicopter surveys. A core element of this is casualty evacuation or even combat SAR from conflict areas such as ambush sites, by day and night. Combat support comes in the form of air delivered (landed or air dropped) logistics to sustain operations, quick reinforcements by air and other such innumerable imaginative and innovative uses.

Actions (2) and (4) denote all direct missions against the insurgency. For example, 'search-and-cordon' and 'clear-and-hold' which are essentially armed action followed by governance elements. Communication infrastructure is a prime target for insurgents to disable critical capacities of the govt. Improvised explosive devices (IEDs) are a crucial capability in their hands. Till the time this battle is won by govt forces, airpower plays a crucial role in the 'clear and hold' tactics. The entire effort is

to separate the insurgent from the populace (8). This is a core political move, other than the concern for collateral damage. Besides negation of the insurgent's tools such as ideology, fear, grievances etc., govt agencies are armed with tools for nation-building, identity-building and making the public stakeholders in their economic growth. Airpower, especially helicopter support plays a vital part.

Once the physical and mental separation has been done (8), the field is ready for more vigorous and offensive employment of airpower. Actions (9) to support governance initiatives include supporting the political process such as elections, proactive police actions, enabling the demobilising, reintegration and rehabilitation of those who surrender, and local capacity building, especially of the security apparatus. Development efforts such as quick impact projects (QUIP) require moves of large equipment by air e.g. bulldozers, earthmovers, generators, telecommunication setups. Instead of waiting for the road/rail infrastructure to come up, aerial delivery kick-starts the whole programme. On the other hand (10), airpower is freed up to play a more direct role by providing fire support to ground action, effect-based (EBO) combined arms operation, taking on time-sensitive targets and targeting various levels of leadership.

A key to aerial action is targeting information that comes through focussed tech intelligence via unmanned aerial vehicles, electronic and communication monitoring, and aerial surveys. But the most important source is humint through various agencies that form part of the unified command. The separation of the populace from the insurgent allows free flow of credible information (12). However, the setup for gathering and analysis is different from the usual joint setups that the military is used to.<sup>27</sup> A key requirement is knowledge, familiarity and networking of intelligence analyst who prepare target folders for aerial missions.

Insurgents have certain core needs to sustain an insurgency: money; arms, ammunition and explosives; leadership, communications, and command and control; ideology, popular support and sanctuaries. A holistic, consistent and well-resourced civil-military effort seeks to deny them the elements vital for their survival. The mix of operations includes conventional clear-hold-build operations and Special Forces action for high-risk targeted operations. An effort has to be mandated to create the infrastructure to organise, train, equip, the local police and paramilitary forces. At the same time, a larger effort must go into facilitating good governance and associated infrastructure and capacities. There will be a need to improve basic services, education, infrastructure, access to food, health-care to win the population over. This is the essence of the unified command concept.

It has been recognized that a successful counter-insurgency strategy has three distinct but overlapping stages: Clear, Hold and Build. The first involves military operations to clear territory of insurgents, the second calls for holding territory and protecting the population from insurgent attacks, and the third consolidates military successes by building functional institutions of state that, in turn, can deliver effective governance. While the security forces are equipped, trained and prepared to handle the clear and hold stages, they find themselves inadequate to take on the challenge of the build stage (more correctly, the rebuild stage, after the destruction caused by the insurgents and collateral damage caused during counter-insurgency operations). Local civil agencies would have inevitably atrophied without sufficient capacity to undertake development in a conflict-destroyed area. Additionally, political, public and media attention will move on to other and newer issues once violence statistics improves.

## Adopting the OODA Loop in COIN

In a unified command setup, shared goals, objectives and situational awareness (SA) are critical for a coherent and synergised effort by govt agencies. While traditionally the emphasis in the OODA loop has been on the other three prongs besides orientation, they seem to be reversed in COIN. It is possibly the most important component because COIN is about people and policies, and their primacy in all solutions. The model at Figure 2 below shows the different phases adapted to unified command decision-making based on shared goals and sense-making.<sup>28</sup> The first phase of observation includes the collaborative mechanisms available that delineate roles and responsibilities. This ensures that accountability is not diffused. Observations are tempered by constraints of uncertainty and flexibility required, which are constants. Communication interoperability, networking and common operating pictures (COP) allow shared SA. Opponents such as insurgents are highly adaptive and unpredictable allowing them to be tactically agile. They will fight where they are at an advantage and not the battle the counter-insurgent prepares for. Therefore, a complex adaptive system theory is most applicable in such situations. This was exemplified by the Hezbollah against Israel in 2006 in Lebanon.

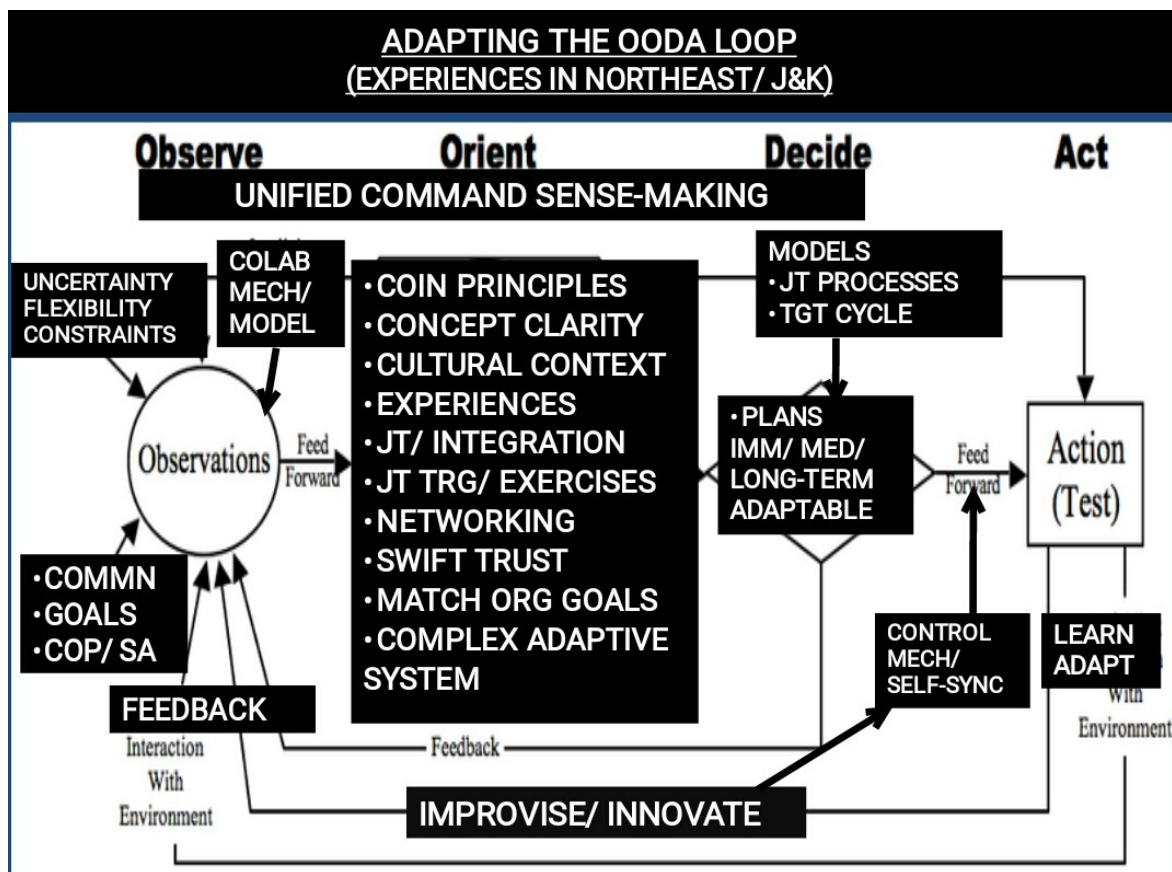


Figure 2: COIN as an OODA Loop<sup>29</sup>

The next step of orientation is possibly the cornerstone of a sense-making edifice. The first element is the COIN principles, as dictated by experience over decades in India. These are: politics is the focal point; one size does not fit all, and geography or context are relevant; an end-state needs to cater for a long-haul; a steep learning curve from mistakes is crucial; appropriate force is a major dictator of action; a whole-of-govt approach only; and, perception shaping is as important as other actions. These have, more or less, evolved from the ones espoused by David Galula who advocated deployments

that were in constant touch with the population, were winning-over or destroying the insurgent, and encouraging local political organisations.

The second element in orientation is clarity of concept in terms of goals, objectives, roles and responsibilities. While this starts as a top-down govt diktat, considerable contextual changes do occur. The cultural context of the region as also of the multi-agency setup helps in the adoption of an inclusive approach that allows more buy-ins across the board. The element of previous experience especially at senior leadership level enables faster decision-making and OODA iterations. It also relates to joint experience of working or training together. Previous familiarisation allows effective networking that includes formal and informal face-to-face interactions. The next element is swift trust which is based on either having worked together in the past or professional and proven credentials. An incremental approach based on current performance or a mix of all these, especially if working together for the first time, is also a common way to achieve swift trust. This allows synchronised progress on a given task, and also helps in aligning individual objectives to the shared higher goal.

The third step involves deciding which is influenced by existing joint plans (short, mid-and long-term), and joint implementation and exercising of such plans and processes. Importantly, the first two steps allow the team to adapt and modify their decisions since no execution of a plan ever follows a certain track. There is a component of joint laid down processes that allow the various targeting cycles and processes of each agency to be on the same page. Any decision is also a feed to control mechanisms for executive orders, as also self-synchronising feeds for each agency or service.

The final step is action or execution of mission orders for which there are constant feedback loops to ensure quick adaptability, improvisation and self-synchronicity. There is also a major feedback loop for the first step of orientation that allows quick iterations of a fast-learning loop. The overarching element in all steps is collaborative mechanisms and models adopted and accepted by all the involved forces and agencies, so that baseline trust is established. This only gets reinforced as time passes.

### **Adopting a COIN Culture**

Irregular warfare will force conventional forces to respond across the spectrum of conflict and contingencies. Air warriors will have to learn to be adaptive and responsive to the demands of unconventional and irregular warfare.<sup>30</sup> Leadership is central to success in COIN. The intent is to create an organisation that develops and prepares leaders at all levels to operate in environment of uncertainty. Decentralised execution is essential for the conduct of operations. The importance of personal relationships and emotional intelligence for success in COIN cannot be overstated. Trust is built from a base level of demonstrated competence but is sustained by transparency. This demands tolerance for ambiguity, uncertainty and mistakes among agencies. Leaders must learn to resist the need to control and instead offer higher objectives and priorities to allow subordinate commanders the freedom to fight with adaptability and flexibility.

A COIN aviation unit's culture has to adapt from an aggressive warrior mentality that pursues enemies ruthlessly and violently, to a culture that protects the population from the enemy. Leaders have to see their fight (either from the air or on the ground) in the larger context of the struggle to connect the people to their government, to protect and serve them; which is not an easy evolution. A COIN orientation programme is essential because it creates an open forum for exchange of ideas. It

allows leaders and air warriors to understand counter-insurgency beyond their battle space and view the environment from different perspectives.

### **Imperatives and Paradoxes**

Certain common military imperatives emerge in all COIN/Irregular War contexts.<sup>31</sup> First is management of information and expectations of the affected population, which have to be wisely considered as being part of strategic end-objectives. Secondly, use of measured force and clearly thought out rules of engagement. Thirdly, there must be an ability to learn and adapt continually as individual agencies and as a unified command. Lastly, de-centralising control of forces is critical to deal with an unpredictable foe which treats asymmetry as a source of strength. Common paradoxes also must be recognised: Force protection versus people-connect; more force equals more collateral damage; action equals reaction, and no reaction can sometimes be an alternative; non-force instruments are generally more effective in a violent struggle; and, sub optimal local effort is better than 'outside' interference. Militaries must acknowledge that in such contexts, tactics change day-by-day and a tactical victory guarantees nothing. The old adage, 'patience pays, there are no quick-fixes' rings true, so a counter-balance for the 'can-do, will-do' military attitudes has to be found.

### **Airpower Leadership Challenges**

There are many leadership attributes that are widely acknowledged to be critical in war and conventional combat operations.<sup>32</sup> However, seven of these have been identified as crucially important for COIN. First is *adaptability*, which is a function of a leader's creativity and flexibility. The ability to think out-of-the-box while firmly grounded in reality, improvisation of techniques and procedures, and technical innovation are some examples. Second is *judgement* which is about logic and intuition for a fast OODA Loop in a geographically dispersed and complex situation and a multitude of actors and agencies that are all vying for the attention of the population. A third critical ability is *social prowess* in terms of interpersonal relationships and networking built on trust, reliability and credibility. Fourthly, resolute and persuasive *negotiating skills* enable good dealings with other agencies, civilian and tribal leaders, and creating win-win situations. Fifthly, *empathy* is important not only for own subordinates but also for interacting with other cultures and environments. Nuanced verbal and non-verbal interaction and understanding the genuine concerns of the common people are some of the results of empathy. Sixthly is an ability to be *independent* in a decentralised and truly delegated environment; independent responsibilities are much higher than conventional operations. Lastly, the *knowledge and experience* of leaders should allow them to implement an effective education programme for those under them.

### **Inter-Agency Trust**

A shared vision and a synchronised plan of action can build relationships that will allow objectives to be achieved in a whole-of-govt campaign. The main four obstacles to inter-agency cooperation, collaboration and effective integration are: a lack of personal and institutional trust; absence of networks for information-sharing; stove-piped plans and strategies in silos; and, competition for resources.<sup>33</sup> Institutional trust depends on beliefs relating to institutional behaviour and perceptions of competency.<sup>34</sup> Liaison officers and staff, and overall coordinators become necessary when a situation is highly dynamic and in constant flux. It follows that such personnel must be of quality, perhaps even more competent than those in the field. Conflict resolution and de-conflicting of agendas can

be effectively addressed by empowerment at delegated levels. It is also important to acknowledge that people-skills, that are mostly individualised, are critical to this communication-based endeavour.

### Operational Planning

The complexity of operational planning in an irregular war or less-than-war situations is further accentuated by the dynamism of threats and challenges. The process per se needs to be flexible, adaptive and collaborative. The key to shared goals and understanding is effective communication. It can be disabled by silo-mentalities and bureaucratic approaches.<sup>35</sup> The requirement is for a dynamic model where multiple procedures are performed simultaneously at different levels enabled by real-time data through a net-centric environment. Constant iterations of the OODA Loop allow a cyclical collaborative exchange to cater for tempo variations. For example, in response to an emergent contingency, leaders can respond rapidly, rather than schedule meetings.

### People First

Words written almost 50 years back for the USAF ring true for airpower leaders even today. “The Air Force must prepare officers today for the managerial and executive tasks to which they will fall heir tomorrow. The need exists for officers who can manage not only people but also ideas and concepts on a broad basis...”<sup>36</sup> The doyen of air power thinking in India, the late Air Cmde Jasjit Singh, very wisely said, “..demands of leadership among younger officers will keep increasing over the years. And more will depend on lesser numbers at younger age. They must, therefore, be trained to shoulder responsibility through the dictum of self-discipline, self-control and self-activation”.<sup>37</sup>

“The military establishment requires a balance between the three roles of heroic leader, military manager, and military technologist...”—Morris Janowitz, 1960.<sup>38</sup>

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