

## Indian Air Power in Building Modern India

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**T**he journey of the United Service Institution (USI) of India in the

past century and a half encompasses the joys and sorrows, as also the trials and tribulations, of colonial and modern India. Its academic work and research chronicled the growth of the Indian Armed Forces under the British, and thereafter as independent arms in the Union of India. The Indian Air Force (IAF) has a special place in this journey since heavier than air flight started only in December 1903 when the Wright Brothers took to the air ... but the USI was already in its fourth decade by then! It is interesting to note that while airships and balloons were written about in earlier USI publications, the first mention of heavier than air aviation was only in January 1910, in an article titled 'Notes on Aeronautics' by Captain WM St G Kirke<sup>1</sup>, where the author discussed principles of aerodynamics. One can discern interest in aviation picking up, as in the January 1911 issue Major CD Field wrote an article titled 'Aviation Wireless Telegraphy and Telephony'. Meanwhile, the Royal Flying Corps (RFC) had been formed in Britain in May 1912<sup>2</sup>, and this probably resulted in a full-fledged article titled 'Aviation' by Lieutenant LVS Blacker in the July 1912<sup>3</sup> issue where the author laid out the advantages of investing in aeroplanes:

*"It is, therefore, obvious that a country which means to take war seriously must ensure having more aeroplanes than the enemy, and faster ones. Otherwise, the day after the declaration of war will see the wiping out of the slow aeroplanes and their pilots, and the "command of the air" for the enemy, carrying with it the most minute knowledge of his opponent's entire dispositions and movements and laying open all important points, such as the headquarters of general officers, artillery commanders, ammunition columns, ordnance and supply depots, railway bridges on lines of*

*communication, and even the camps and bivouacs of the infantry open to damage or destruction from high explosive shells dropped by the enemy."*

'Military Aeronautics' by Captain SD Massy in the October 1912 USI Journal had a very detailed description of what goes in to flying, its nuts and bolts, like engines, meteorology et al, and ends with a plea that a Flying Corps needs to be set up in India on the lines of the one in England. One can notice the impact air was beginning to have on military thinkers, with Lieutenant TC Fowle writing in the July 1913 edition on 'Observations from Aeroplanes in Field Warfare' and Major WGP Murray commenting on 'Aircraft – Influence on Naval and Military Operations' in the October 1913 issue. In the interim, Lieutenant Indra Lal Roy became one of the first Indians to join the RFC in July 1917, but that was in Britain.<sup>4</sup> The RFC, meanwhile, had moved to India too in December 1915<sup>5</sup> to address the threat in the North-West Frontier Province (NWFP) of British India. However, the first mention of the Royal Air Force (RAF) is in the October 1919 issue where Lieutenant HT Geary commented on the 'Instructional Methods in a Scout Training Squadron of the Royal Air Force', pointing to the fact that aviation had, till then, been considered an appendage of the ground forces (the RAF, the first independent air force in the world, came in to existence on 01 April 1918). An interesting idea of the RAF operating a commercial transport fleet in peacetime (that would convert to full military use in war) to offset the costs of First World War was put forth in a July 1920 article titled 'A Mercantile Air Fleet as a Factor in Indian Defence' by Captain HV Geary. The idea was indeed unique for those early days of civil commercial aviation and military flying. However, the fact that the aircraft was still looked on as an adjunct to land forces was very clearly stated by Major HG Martin in his Gold Medal winning essay, 'India and the next war', in the October 1922 issue; Major Martin wrote that, *"The conclusion is that, while aircraft are invaluable in their legitimate role as adjuncts to our land-forces, they are quite incapable of replacing them"*. This was a land centric view, the army being the older service, in contrast to what an aviator felt. The first article by an air force officer is from Flight Lieutenant RL Stevenson on 'The Army Cooperation Squadron' in the July 1925 issue of USI journal.<sup>6</sup> It is interesting to note that while the RAF

author describes the various roles that the Army Cooperation Squadron undertook, he ends up with the advice that, *“Army officers should take every opportunity of visiting aerodromes, and should fly frequently as observers, and it is essential that air force observers visit the units with which they have been or will be working, before and after all operations”*.<sup>7</sup> Jointness as a concept in operations is, thus, nothing new that has evolved recently.

And, so flow the chronology of documentation of military air activity in India, as seen through the pages of the USI journals in the early years of heavier than air aviation. On 08 October 1932, the Indian Air Force came in to being through the Indian Air Force Act (XIV of 1932).<sup>8</sup> The first Squadron, however, was established on 01 April 1933 at Drigh Road, Karachi with six RAF trained officers, 19 *Havai Sepoys* and four Westland Wapiti IIA aircraft<sup>9</sup>, and has since grown from strength to strength in the intervening years. From guarding the frontiers of British India in the 1930s and 40s, it was thrust into protecting the borders of independent India right from 15 August 1947 when the nation came in to being as a modern state. This article deliberates on the critical role played by the IAF in nation building in three distinct sub-sections, starting with protection of the nation’s territorial integrity; while analysing this it would become apparent that the IAF has moved on from being a tactical force to one capable of becoming an independent instrument of application of national political will. Second, the invaluable role as a vital cog in the nation’s military diplomacy and subtly projecting India’s power, both soft and hard, would be evaluated. Finally, an examination of the unspoken, but vital, role of the IAF in maintaining institutions of Indian democracy would be followed by some crystal gazing into where India’s air arm is headed-to in the coming decades. For sure, air power of a nation encompasses its total capability, both military and civilian put together; however, it is also true that a nation’s air force is the ‘business end’ of its ‘air power’ and, hence, this article would treat the two as synonymous.

### **Safeguarding National Frontiers**

Post the First World War, the 'Great Game' was playing up in the north-western part of British India and the RAF was thrust into the contest in an indirect way. With the British trying to enter Afghanistan to thwart the southward movement of the Russians, they came in to direct conflict with the fierce tribal militias in NWFP. With the setting up of the IAF in 1932, the first of the squadrons were bloodied in combat in those mountains; and with the start of the Second World War, the move of No 1 Squadron, with the legendary Wing Commander 'Jumbo Majumdar' at the helm, saw the fledgling IAF operating in the dense jungles of (then) Burma against the advancing Japanese. The real test, however, came immediately after India's independence when the IAF transport fleet of Dakotas airlifted Indian Army troops to Srinagar and saved the Valley from falling to the Pakistan backed raiders.<sup>10</sup> Similar was the airlift to the dusty airstrip at Leh.<sup>11</sup> While the IAF was unable to support the brave garrison at Skardu, which remained under siege for a year, leading to its fall to the enemy in August 1948, however, what demonstrated the innovativeness of the IAF was that Tempest fighters were used to drop some load to the besieged garrison.<sup>12</sup>

The modernisation of the IAF started soon after in the 1950s and 60s with the induction of jet fighters like Vampires, Toofanis and Mysteres, and transport aircraft like C-119 Packets and An-12; however, a fundamental switch in acquisitions occurred in 1963 when the then USSR offered the MiG-21, with manufacture in India through technology transfer. There was no looking back thereafter in the Indo-USSR cooperation and over the next four decades the MiG-23/25/27/29 and Su-7/30 entered the IAF fleet. But a fighter to enter popular folklore was the British Folland Gnat, which earned the nickname of Sabre Slayer due its excellent performance in the 1965 Indo-Pak conflict. The Hunter, Su-7, and later versions of MiG-21 were used in dedicated ground attack role in the 1971 Indo-Pak war, but what also became apparent was the subtle shift of the IAF from being in tactical support to the army to a force engaged in interdiction and striking strategic targets of the enemy; the IAF struck deep in Pakistan at Peshawar, both in 1965<sup>13</sup> and 1971<sup>14</sup> conflicts, and the oil tanks at

Karachi port were destroyed by an audacious strike by Hunters on 04 December 1971.<sup>15</sup>

Missed out, however, in the headline grabbing strike missions is the invaluable role played by the transport and helicopter fleet. In the disastrous 1962 conflict with China, while fighter aircraft didn't take part, transport aircraft and rotary wing fleet did yeoman service by continuously delivering supplies to Army deployments on the frontier (e.g., airlifting of tanks to Chushul by An 12s<sup>16</sup>) and bringing back casualties from the frontline. And in the months leading to the 1965 war, Pakistan's plans to create an uprising amongst the Kashmiri population through their 'Op Gibraltar' were thwarted in no mean way by Mi-4 helicopters which were hurriedly locally modified with guns and bomb racks to strike holed up Pakistani infiltrators.<sup>17</sup> The Bangladesh war saw the famous Tangail drop by transport aircraft and the Meghna heli-lift<sup>18</sup> that shortened India's march to Dhaka.<sup>19</sup>

The two decades of 1980 and 90 saw a rapid deterioration of the security environment around India to which the IAF had to adapt, it also was the period in which Pakistan acquired the nuclear bomb. While the Chinese aviation industry was slowly picking up, the Pakistan Air Force was gratuitously supplied with F-16 fighters by the US under the garb of fighting threats from Afghanistan where the USSR had intervened.<sup>20</sup> This was a steep accretion of modern technology in the sub-continent and to counter it, the IAF modernised with the purchase of Mirage-2000 fighters and the Jaguar deep penetration aircraft. With advantages of network centric operations being vividly demonstrated in the 1991 Gulf War, the IAF went in for the Sukhoi-30 MKI air dominance fighter. There was, thus, a qualitative jump in the way the IAF planned to prosecute air action in India's endeavour to expand its footprints in the sub-continent, attuned to the national aims spelt out by the Ministry of Defence.<sup>21</sup>

India's defence preparedness was tested in 1999 when Pakistani troops occupied the heights of Kargil. While Indian Army troops valiantly stormed the hills to evict them, the IAF played a major role by quick modifications to their equipment and weapons to strike targets at 18,000 feet, something never done before in the world.<sup>22</sup> And, in subsequent years, while the offensive element

of the IAF was transforming to conduct long range strategic strikes through acquisitions of combat enablers like Airborne Warning And Control System (AWACS), flight refuelling aircraft, and Intelligence, Surveillance and Reconnaissance (ISR) assets (all used in the Balakot air strike in Pakistan on 26 February 2019), it is the modernisation of the transport aircraft and helicopter fleet that gave it the capability of becoming a regional Humanitarian Assistance and Disaster Relief (HADR) provider. The entry of C-17 Globemaster and C-130J Super Hercules in its inventory has given the IAF a true trans continental capability, while the 250 plus Mi-17 series medium lift helicopters, in conjunction with Chinooks, afford it a heli-lift proficiency of a very high order. Together, the two fleets have done India proud in internal and international disaster relief.

In the year 2020, the IAF is at the vanguard of India's response to the wanton Chinese attempts to change the Line of Actual Control on its Northern borders, the system is in place to give a fine riposte to any Chinese misadventure.<sup>23</sup> While the army on ground would get all the close-in support required, it's the strategic reach of the IAF that would tilt the balance if diplomacy fails and the balloon goes up.

### **Military Diplomacy**

In the national security construct, diplomacy is the art to avoid war. Military diplomacy supports traditional diplomacy by nurturing a positive perception amongst friend and foe through actions that influence the common populace. With its fleet of eleven C 17 Globemasters and twelve C-130J Super Hercules supported by almost 100 short haul An 32, along with 250 Mi-17 helicopter variants, 15 heavy lift Chinooks, and 80 odd ALH Dhruv, India has been a regional HADR provider for quite some time, as seen in multiple disaster relief operations nationally and internationally.<sup>24</sup> The IAF's contribution to UN peacekeeping has been immense, commencing with the deployment of Canberra bombers and Dakota aircraft to Congo in 1961. Thereafter, helicopters were sent to peace missions in Somalia, Sierra Leone, Congo and Sudan; at one time, between 2005 and 2010, there were 25 IAF helicopters (17 x Mi-17 and 8 x Mi25/35) in MONUC in Congo and UNMIS in Sudan, an aviation package that no country has ever

sent to the UN.<sup>25</sup> The goodwill that the Indian soldier and aviator enjoy in the international arena is commendable. Goodwill is also spread by the crack aerobatic display teams – *Surya Kirans* flying the Hawk advanced jet trainer now and *Sarang* flying the ALH Dhruv – showing their prowess in international air shows and other events. Internationally, the IAF has been exercising regularly with friendly foreign forces, including participating in the Red Flag exercise in the US, and letting friend and foe alike know its professional acumen through such subtle engagements with audiences and other air forces.

Military diplomacy, however, is not just the benign use of air power but also its employment to further national interests through deterrence and compellence. So, the IAF has been an important cog in the foreign policy apparatus of the country, enabling the government in meeting international commitments and safeguarding India's interests through coercive actions. The capability of intervention in a foreign land to help a friendly regime in trouble was clearly demonstrated as early as in November 1950 when the King of Nepal was evacuated by an IAF Dakota during the Rana's revolt. After the revolt fizzled out, he was restored back leading to the commencement of work on the Indo-Nepal Treaty.<sup>26</sup> In 1971, when the *Janatha Vimukthi Peramuna* (JVP) insurrection threatened the stability of the then Ceylonese government, India deployed five Alouette III helicopters and some fighter pilots – the former for airlift task and the latter to train pilots for armament work. 'Op Cactus' was launched in 1988, when sections of the 50 (I) Para Brigade were airlifted by Il-76 from Agra to Male to successfully thwart a coup against President Gayoom. Closer at hand, the reputed India Today magazine reported that the IAF was ready to airlift elements of the Para Brigade in 2010 to aid the Government in Bangladesh when there were reports of a threat of a coup to the life of the leadership there.<sup>27</sup> These interventions went a long way in stabilising and shoring up governments friendly to a democratic India.

### **Strengthening Indian Democracy**

The IAF has played a key role in the strengthening of Indian democracy too. In the first few decades after independence, and to a lesser level even now, many regions of the North East depended on air dropped supplies by the IAF of daily essentials, including food grains. An intangible effect of these drops is the emotional integration of the populace of those far flung areas that are totally cut off from the rest of India due their remoteness. The IAF has been called out on numerous occasions in aid to civil power to transport police and para military forces to areas of internal strife, the latest example being the massive airlift to Srinagar prior to the abrogation of Article 370.<sup>28</sup> It can also be said that elections in certain parts of the country cannot be held (due difficult terrain and/or law and order situation) without the logistical airlift provided by the IAF for transporting election personnel and equipment.<sup>29</sup> And, who could have thought that the IAF's role would be critical in the post demonetisation months in 2018 when billions worth of currency were airlifted to the extremes of our country by its transport aircraft and helicopters.<sup>30</sup> And, as one ponders over new challenges that India, which is a relatively young democracy, faces in the coming decades, it is pertinent to star-gaze where the IAF is headed to.

### **The Future**

The IAF's leadership has its task cut out as India navigates in to a time period where its neighbourhood is rife with security imponderables. As this is being written, there seems to be some cooling-off in the tensions along the borders with China. However, India was bitten once by Chinese machinations back in 1962 where a similar hope of de-escalation was actually followed by a full-fledged war. So, while there is a full 'op alert' in IAF bases, one is acutely aware of the capability voids that exist in IAF's inventory, foremost being the troubling decrease in number of squadrons; the major task for the government is to stop this slide and get the strength back to a minimum of 39 squadrons. This is easier said than done due the acute shortage of monies as funds have been diverted to the social sector on account of the Covid-19 pandemic. There is also the issue of the inefficiency of Hindustan Aeronautics Limited and the not so rosy R&D capability of



Defence Research and Development Organisation (DRDO) to support the IAF's faith placed in these two agencies to equip it with indigenous aircraft, Tejas Mk1, Mk1A, Mk2 and the Advanced Medium Combat Aircraft.<sup>31</sup> There needs to be a focussed and single minded drive to get our private industry involved intimately in defence R&D and manufacturing in a big way. The transport and helicopter fleets are well placed for the next decade and a half, but planning beyond that has to happen now. Indigenous radar R&D and manufacturing has been a success story but the same cannot be said of other cogs in the complete air operations chain. There is no choice but to go indigenous, but mere launching of drives like 'Make in India' or the '*aatmanirbhar abhiyan*' would be of no avail if a whole of government approach is not adopted to address the ills of indigenous R&D and defence industry. The whole of government approach can only happen if it is driven from the very top, the way it happens in the nuclear and space realms.

The IAF is the weapon of choice of Indian leadership as seen in the 2019 Balakot strike and the signalling done by Indian air power in the India-China stand-off. The potency of the IAF cannot be allowed to shrivel, for it is the prime instrument of deterrence and, if required, offense for the security of the nation. The dictates of geo-politics are not cast in stone but can be modulated to one's advantage by having the required deterrent capability, and the resolve to use it; only then would the message that India would stand by its national interests get demonstrated. Indian air power would be a major cog in India's journey to attain its rightful place in the comity of nations.

And as this unfolds, one is confident that the USI of India would continue to track the march of the air arm of the nation, as it has faithfully done over the past century.

### Endnotes

<sup>1</sup> USI journal VOL XXXIX NO 178 : January 1910 Available at listing of USI Journals at <https://usiofindia.org/wp-content/uploads/2019/02/Part1.pdf> accessed 08 Apr 2020. The USI maintains a pdf version of this, and all the subsequent referred articles, in its library. The author has read each one of them enumerated here.

<sup>2</sup> Editors of Encyclopedia Britannica, Royal Air Force, 14 February 2020, available at <https://www.britannica.com/topic/The-Royal-Air-Force> accessed 12 Apr 2020.

<sup>3</sup> USI Journal VOL XLI NO 188 : July 1912 available at listing of USI Journals at <https://usiofindia.org/wp-content/uploads/2019/02/Part1.pdf> accessed 08 Apr 2020.

<sup>4</sup> KS Nair, "Remembering Lt Indra Lal Roy, India's Ace over Flanders," 22 July 2017, available at <https://thewire.in/history/indra-lal-roy-ace-flanders-india-failed-celebrate> accessed 11 Apr 2020. Read his incredible story of achieving the 'ace' status by shooting down 10 aircraft in just two weeks before he himself died in combat.

<sup>5</sup> Dr Narendra Yadav, 'Military Aviation and Indian Air Force,' *Indian Defence Review Vol 31.3, Jul-Sep 2016*, available at <http://www.indiandefencereview.com/news/military-aviation-and-the-indian-air-force/0/> accessed 12 Apr 2020.

<sup>6</sup> USI journal Vol LV NO 240 : July 1925 Available at listing of USI Journals at <https://usiofindia.org/wp-content/uploads/2019/02/Part2.pdf> accessed 08 July 2020.

<sup>7</sup> Ref N 1 regarding availability of pdf versions of this archived articles.

<sup>8</sup> Air Cmde Jasjit Singh, *Defence from the Skies: Indian Air Force through 80 Years*, (New Delhi: KW Publishers, 2013), pp 6.

<sup>9</sup> History of IAF, Official Indian Air Force website, available at <https://indianairforce.nic.in/content/history-iaf-0> accessed 12 Apr 2020.

<sup>10</sup> Air Cmde Jasjit Singh, *Defence from the Skies: 80 years of the Indian Air Force*, (New Delhi: KW Publishers, 2013), p 54-55.

<sup>11</sup> Ibid. p 60-61.

<sup>12</sup> Ibid. pp 62.

<sup>13</sup> Ibid. p 120.

<sup>14</sup> Jagan Pillarisetti, *Two sides of the same Coin: The Raid on Peshawar*, available at <http://www.bharat-rakshak.com/IAF/history/1971war/1277-raid-on-peshawar.html#gsc.tab=0> accessed 02 July 2020.

<sup>15</sup> Sushant Singh, "December 4, 1971: When Navy got credit for IAF's strike on Karachi oil tanks," *Indian Express December 01, 2015*, available at <https://indianexpress.com/article/explained/december-4->

1971-when-navy-got-credit-for-iafs-strikes-on-karachi-oil-tanks/ accessed 08 July 2020.

<sup>16</sup> Air Cmde Jasjit Singh, *Defence from the Skies: 80 years of the Indian Air Force*, (New Delhi: KW Publishers, 2013), pp 80.

<sup>17</sup> Wg Cdr Bhupinder Singh Nijjar, *IAF Helicopters: Aapatsu Mitram to Tejas Shatruh Damanam & Beyond*, (New Delhi: KW Publishers, 2019), pp 27.

<sup>18</sup> Major General JFR Jacob, *Surrender at Dacca: Birth of a Nation* (New Delhi: Manohar Publishers, 1997), p 116.

<sup>19</sup> For details of the air drops and heli-lift in Bangla Desh war see Air Cmde Jasjit Singh, *Defence from the Skies: 80 years of the Indian Air Force*, (New Delhi: KW Publishers, 2013), p 146 - 149.

<sup>20</sup> Air Cmde Jasjit Singh, *Defence from the Skies: 80 years of the Indian Air Force*, (New Delhi: KW Publishers, 2013), p 74-75.

<sup>21</sup> The Indian Ministry of Defence publishes an annual report laying out the salient activities and issues handled by it concerning India's defence. Invariably, the report (available on the internet) leads with a threat analysis which points to the scope and range of India's security interests.

<sup>22</sup> For more on the Kargil conflict read 'Air Power at 18,000 feet: The Indian Air Force in the Kargil War,' Monograph of Benjamin Lambeth published by Carnegie Endowment for International Peace, available at <https://carnegieendowment.org/2012/09/20/airpower-at-18-000-indian-air-force-in-kargil-war-pub-49421> accessed 05 July 2020.

<sup>23</sup> Manjeet Singh Negi, "IAF Chief visits Leh to oversee operations along China border – air force on high operational alert," *India Today website*, available at <https://www.indiatoday.in/india/story/iaf-chief-visits-leh-to-oversee-operations-along-china-border-iaf-on-high-operational-alert-1690636-2020-06-19> accessed 04 July 2020.

<sup>24</sup> To list a few – Tsunami relief in 2004-05 within India and its neighbourhood, Kedarnath flash floods of 2013, Srinagar flood relief September 2014, Nepal earthquake April 2015, evacuation of diaspora from Kuwait in 1991, Libya in 2011 and Yemen in 2018. Additionally, water was airlifted to Maldives in December 2014 by five C-17 / IL-76 and cyclone relief material sent to Fiji in 2016.

<sup>25</sup> Wg Cdr Bhupinder Singh Nijjar, *IAF Helicopters: Aapatsu Mitram to Tejas Shatruh Damanam & Beyond*, (New Delhi: KW Publishers, 2019), p 52-55. Also see 'India and UN: Peace Keeping and Peace Building,'

Permanent Mission of India to UN, available at [https://www.pminewyork.gov.in/pdf/menu/submenu\\_\\_272670114.pdf](https://www.pminewyork.gov.in/pdf/menu/submenu__272670114.pdf). accessed 02 July 2020.

<sup>26</sup> Jasjit Singh, 'Air Power in the Foreign Policy of Nations,' in Jasjit Singh (ed), *Aerospace Power and India's Defence*, (New Delhi: Knowledge World, 2007), p. 52.

<sup>27</sup> Saleem Samad: "Bangladesh: Coup bid against Sheikh Hasina Foiled," *India Today magazine*, available at <https://www.indiatoday.in/magazine/special-report/story/20120206-bangladesh-coup-bid-against-sheikh-hasina-foiled-757149-2012-01-28> accessed 08 July 2020.

<sup>28</sup> Debanish Achom, '8000 more troops being sent to Kashmir after Art 370 Scrapped,' available at <https://www.ndtv.com/india-news/government-sending-more-troops-to-kashmir-8-000-paramilitary-troops-airlifted-from-different-parts-o-2080427> accessed 07 July 2020.

<sup>29</sup> 'The Functions (Electoral System of India," Election Commission of India's report available at <https://eci.gov.in/about/about-eci/the-functions-electoral-system-of-india-r2/> accessed 03 July 2020.

<sup>30</sup> 'IAF flew 625 tonnes of new notes after demonetisation: Dhanoa', Economic Times report available at <https://economictimes.indiatimes.com/news/politics-and-nation/iaf-flew-625-tonnes-of-new-notes-after-demonetisation-dhanoa/articleshow/73106194.cms?from=mdr#:~:text=MUMBAI%3A%20Former%20Air%20Chief%20Marshal,Modi%20on%20November%208%2C%202016>. accessed 03 July 2020.

<sup>31</sup> Sudhi Ranjan Sen, "IAF tells Government it is ready to buy 300 indigenous fighters and Trainers," *Hindustan Times* 07 Nov 2019, available at <https://www.hindustantimes.com/india-news/iaf-may-buy-300-indigenous-basic-trainers-fighters/story-OfWTLGuQUH2j7sp5R12zl.html> accessed 08 July 2020.

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