

SOME REFLECTIONS ON THE IAF

JASJIT SINGH*

The past hundred years have seen not only the extension of war into the third dimension, but also the expansion of peaceful human activities ranging from speeding up of science and technology to new forms of rapid transportation across the globe. Air power, indeed, is at the core of the concept of the global village, dramatically enhancing human knowledge and endeavour. Extension of air power into space was an inevitable progression leading to the concept of aerospace power. There is indeed a new revolution in air and space power taking place in military, as well as in relation to peaceful, uses. To deal with any aspect of air power covering the past hundred years would be a daunting task even if we confine ourselves to some aspects rather than attempt an overall view. I, therefore, would attempt a brief survey to understand the role that air power in general and the Indian Air Force (IAF) in particular (without in any way decrying the role of other components of military power) has played in our defence ever since air power started to impact our security. This would not be a chronicle of events but an analytical overview. In fact, air power has been a powerful component of overall military power. The lesson of a century of air power is unambiguously clear, that while air power cannot win wars by itself, no war can be won without it.

EVOLUTION OF AIR POWER IN INDIA

Air power was introduced into India at about the time World War I was ending. In the period between the two wars, air power in India almost entirely com-

Air Commodore Jasjit Singh AVSM VrC VM (Retd), Director, Centre for Air Power Studies, New Delhi

prised the British Royal Air Force (RAF). The IAF was born on October 8, 1932, as an independent force under orders of the Governor General in Council. The first operational unit, No. 1 Squadron, was raised on April 1, 1933, at Karachi. The bulk of air forces in India since the early 1920s were deployed on the Northwestern Frontier with the specific role of “air control” of the unruly tribesmen and providing air support to the army’s ground columns engaged in similar tasks. It is not surprising, therefore, that the first operational formation of the IAF was designated an “Army Cooperation” squadron. This has had a profound impact on the evolution of the IAF and its role during the succeeding decades, the effects of which are yet to completely wear off. The designation of No. 1 Squadron as an army support unit was not entirely due to the priorities of the then government in New Delhi in controlling the turbulent Northwest. There was a more fundamental strategic logic of the Imperial Raj behind the designation of roles and missions to the IAF.

We need to recognise four processes that shaped the thinking, policy and employment of air power in India, at least in the early decades:

- Strategies of the Imperial Raj.
- World War II and perceptions about city busting that culminated in the atomic bombing of Hiroshima and Nagasaki.
- Perceptions that use of air power is an escalatory phenomenon.
- Strategic role and impact of air power.

Strategies of the Imperial Raj

British strategy from the early 18th century (as defined by the policies of the East India Company till 1858 and the British government after that) had been constructed on the principle of retaining the dominant strategic component of military power directly and exclusively with the British troops, not only in terms of command, but also in terms of weapon systems, manning policies and force structures. Thus, artillery manning was limited to the British troops in the 18th century, and horse artillery remained the exclusive preserve of the British troops during the early 19th century, with “native” troops being allowed by the middle of the century to provide the manual labour only. The Court of Directors of the

East India Company, in fact, once again specified the broad policy on this issue in 1857 while the British still had to regain control of India. The weapons and equipment of the Indian troops, according to this policy, were to be superior to those of the likely enemy of the British, but were to be inferior to those of the British troops of the East India Company. The forces, in any case, were to be officered exclusively by the British.¹

As part of this fundamental policy, the newly created IAF was restricted to tactical direct support roles, while the RAF in India was assigned independent and strategic roles of fighter defences and independent bombing. The eight operational units of the IAF raised after No. 1 Squadron were all Coastal Defence Flights. The intrusion of World War II was to have its impact on the force structure of the IAF and its role in India's defence. But the British patterned the expansion of the IAF within the broad strategic policy guideline of the earlier century. The 1941 plan for air power for the defence of India visualised 10 squadrons of the IAF and 20 of the RAF in India. But the critical element was that all ten IAF squadrons were to be tactical army support (in those years essentially consisting of artillery spotting and visual reconnaissance), while the RAF would consist of fighter and bomber squadrons.²

Impact of World War II

Concurrently, other developments were to shape thinking about the role and employment of air power. The political leadership had lived through the experiences of World War II being reminded on an almost daily basis about the indiscriminate bombing of civilian targets and economic infrastructure under the concept of strategic bombing. Firebombing of cities like London, Coventry, Dresden and Tokyo undoubtedly left an indelible mark on the minds of these leaders who were soon to assume responsibilities of running national policies. Japanese bombing of Madras (where at most a few small 250-pounder bombs were dropped while the fleet sailed north in the Bay of Bengal) had resulted in near

-
1. This in turn provided the impetus for demands and pressures during the freedom struggle by the political leaders for "Indianisation" of the officer corps.
 2. This was consistent with other imperial policies. For example, the British Indian government continued to pay £137,000 per year to the navy for the "defence of India" till 1939, thus, obviating the need to create a regular Indian Navy while subsidising the Royal Navy's budget!

total evacuation of the city. Bombing from carriers also took place on Vishakapatnam and Kakinada, while later land-based Japanese bombers from Akyab bombed Calcutta, Chittagong, and Cox's Bazar. These bombings were child's play compared to the bombings in Europe. But the experience left deep scars on the public memory. It is not surprising, therefore, that abhorrence of bombing and deep concern for population centres marked the attitudes of political and military leaders of independent India.³ Nuclear weapons and strategies of mass destruction, which would almost invariably be delivered by air power, only strengthened the distaste for bombing which was almost invariably indiscriminate because of the nature of nuclear weapons and poor accuracy of delivery systems due to limitations of technology.

This concern about risks of cities being bombed was to heavily influence the thinking that led to the decision of not using combat air power during the war with China in 1962. John Galbraith, who was the US ambassador in India at that time, records that India wanted the US Air Force to come into India "so that they (Indians) can employ theirs tactically without leaving their cities undefended."⁴ Perceptions arising out of these experiences were still noticeable in the 1965 Pakistan-India War; and their influence on strategy and force structure remained an important one. Even in 1965, the prime minister often sought reassurances from the air chief that Delhi would be safe from bombing. It was only in the 1971 War that the air superiority achieved by the IAF permitted visible public demonstration of the confidence of the political leadership that the cities were safe from hostile air attacks. In the middle of the war, Prime Minister Indira Gandhi addressed a pre-announced public meeting attended by nearly half a million people in broad daylight in New Delhi. A similar underlying concern was to lead to the 1985 proposal to Pakistan for a mutual agreement not to attack each other's nuclear installations which came into force in 1993.

Air Power as Escalatory

Historically it is not clear when and how perceptions grew about the use of

3. It is relevant to note that during all the wars of the subcontinent, no cities were targeted; and in January 1994, India offered to Pakistan a mutual agreement formalising this in the shape of an agreement not to attack each other's population centres and economic targets.

4. John Kenneth Galbraith, *Ambassador's Journal* (London: Hamish Hamilton, 1969), p. 486.

air power being escalatory. The most likely reason appears to be that once air power started to be used for attacking non-military targets like population centres, its use was seen as escalation since it went outside the traditional envelope of warfare which was supposed to be confined to military forces and targets. Equally important, use of air power also results in tremendous psychological impact on the adversary, especially where the adversary's military or civil system has not been exposed to air strikes.

Society has always been involved in war preparedness and contributing the means and manpower for wars. However, till the closing years of the 18th century, wars were less destructive, especially in relation to society.⁵ War was an exclusive undertaking of the armies and navies. Restraint was not only a characteristic of 18th century battles and strategy. *Attitudes* towards the civilian population's direct involvement in wars had changed notably after the large scale casualties of the Thirty Years War. Military planners and commanders made serious efforts to preserve society from the ravages of war. Pre-French Revolution assessments were: "At the present day, war is carried on by regular armies; the people, the peasantry, the townsfolk take no part in it and as a rule have nothing to fear from the sword of the enemy."⁶ Fredrick the Great, in fact, even believed that "when engaged in war, the civilian population should not even be aware that a state of war existed."⁷ Developments arising out of the Industrial Revolution (leading to the industrialisation of war) and the French Revolution (with its revolutionary nationalism) resulted in war being expanded to civil populations with society itself becoming inclusive to war and war-fighting. This also coincided with the beginning of the totalitarian nature of war which finally culminated in the two World Wars of the last century.

But the logic of warfare as propounded by Clausewitz and practised in the 19th and 20th centuries focussed on the population and the leadership as the centre of gravity. Proponents of air power like Douhet and others argued strongly for exploiting the characteristics of air power to directly target the enemy country's population by simply going over the surface forces. The blood-letting

5. Carl Von Clausewitz, *On War*, edited by Anatol Rapoport (Middlesex, UK: 1968, Penguin Books).

6. Vattel in *Laws of Nations*, cited by Sir Basil Liddell Hart, *The Sword and the Pen* (London: Book Club Associates, 1978), p. 85.

7. Geoffrey Treasure, *The Making of Modern Europe 1648-1780* (London: Methuen, 1985).

in the trenches of World War II made this option even more attractive. Progress in technology threatened to increase the ability to cause pain and punishment. Towards the end of the 19th century, before the advent of aircraft, serious international efforts to control the means of destruction, and keep them localised, through negotiated agreements (negotiations at the Hague Convention, 1899) had been initiated where aerial bombing (from balloons) was unsuccessfully sought to be banned.

World War I saw the total war model really coming into its own with the emergence of political economy of war on one side, and the expansion of military-technological means to bring society totally within the fold of war, on the other. As Ludendorff was to write: "The nature of totalitarian warfare literally demands the entire strength of the nation, *since such a war is directed against it*"⁸ (emphasis added). Released of earlier limitations of having to necessarily destroy the adversary's military or conquer his territory first, air warfare made it possible to target the adversary nation's society (and its "will") *directly*. Early attempts to control the process failed. On the other hand, the strategists of Western Europe and the USA conceptualised that air power will project the spear point of a nation's military force *behind* the frontlines of the battlefield into an enemy's vital areas to render it powerless to defend itself. Aerial bombing would cause such destruction and paralysis that "resistance is no longer possible and capitulation is the outcome."⁹ The essential target was the enemy nation. Douhet was forthright about inflicting *terror from the skies* when he prophesied that victory "must depend upon smashing the material and moral resources of a people caught in a frightful cataclysm which haunts them everywhere without cease till the final collapse of all social organisation."¹⁰ Obviously, use of air power would be a significant escalation from the way war had been fought for centuries. As technology advanced and matured, this was manifested in the 'strategic' bombings of World War II, with the killings of people in the bombing of Dresden, the decimation of Coventry, the fire-bombing of Tokyo, and the final culmination of bombing in the mass destruction at Hiroshima and Nagasaki. Society had

8. Erich Ludendorff in *The Nation at War*, cited by Hart, n. 6.

9. W.F. Craven and J.B. Cate, eds, *The Army Air Forces in World War II* (Chicago: University of Chicago Press, 1948).

10. Lee Kennett, *A History of Strategic Bombing* (New York: Charles Scriber, 1982).

become totally inclusive to war in the total war paradigm. Nuclear strategies, with the potential of mass destruction and nuclear winter, have perpetuated the paradigm since then.

The flip side of the coin was that air power, by extending the destructive envelope beyond directly engaged military power, naturally escalates wars to non-combatants and economic targets even deep inside the adversary's territory. This had not been possible earlier because the adversary's military power had to be defeated first before any punishment on his people or economic assets could be imposed. And, hence, the perceptions in the earlier decades that air power, *per se*, was escalatory. With the spread of democracy, globalisation and the information revolution, greater concerns about civilian casualties have been emerging and, hence, renewed concerns about the escalatory nature of air power. The risk of "collateral damage" is a major political factor which applies a major constraint in modern war-fighting. This dimension of escalation to civilian targets is distinct from the intrinsic escalatory process in any clash of arms even when it does not move out of the pure military domain. This aspect has to be borne in mind by defence planners and practitioners.

On the other hand, with technology making the use of air power far easier to avoid or minimise collateral damage concurrently with a quantum jump in its effectiveness, the question of air power as escalatory has to be viewed afresh. Precision strike would intrinsically escalate the destructive effect, but not necessarily cause collateral damage, especially of civilians that we have been historically witness to. It is not surprising, therefore, that John Warden is not very far off from Clausewitz and Douhet in his concept of attacking the five rings in parallel warfare with air power in spite of the global concerns about collateral damage since technology and precision strike avoids the negative consequences of escalation to include civilians while making the strike itself more effective with less force. The core issue, therefore, is not that air power is escalatory, but that its use for area targeting and indiscriminate bombing is escalatory.

The real issue is not whether one type of military capability is by its very nature escalatory, but how escalation would evolve, in what areas it escalates to and with what effect, who retains the initiative in controlling escalation, and

whether escalation dominance can be achieved in one's favour. Meanwhile, the issue of air power being naturally escalatory has assumed a very important dimension since the use of military power within the framework of nuclear weapons capabilities on both sides would need to rely heavily on escalation dominance.

There is little empirical evidence to suggest that this in any way restrained the employment of air power in wars conducted by the industrialised powers of the north. This was essentially because Britain and the USA saw air power in strategic terms, and Germany expanded air operations beyond army support only when its cities were attacked and it was forced to respond in kind to the escalation initiated by Britain. In fact, Britain consciously decided to attack German cities, thus, escalating the war in order to divert the German air offensive against British airfields and air force which otherwise would have led to the Germans being able to control the skies, leaving Britain at a serious disadvantage. It would be natural to expect that the adversary would employ its air power to retaliate with maximum capacity once we use air power in war. But surely by itself that hardly qualifies the designation of escalation.

Escalation by definition implies rapid increase in extent, intensity or scope of actions. This means that if the adversary possesses the capability to increase the intensity and scope of retaliation with air power, then it would amount to escalation. So would the use of nuclear weapons since they represent a notably different intensity of destruction than conventional weapons. Germans used air power as an integral element of their *blitzkrieg*, but that was not seen as escalation. In practical terms such escalation has happened, for example, in extending the bombing to cities in World War II. Britain launched its bomber attacks on German cities since this was the only way it could hit back at Germany and stay in the war after it was forced to withdraw from Europe, while provoking Hitler to switch targeting by the German Air Force from British airfields. In turn, this also meant acceptance of German bombing of British cities which also involved aerial combat. But in this sense, use of any component of military power would invite the enemy to use similar capabilities. Artillery would require artillery counter-barrage, and the use of armoured tanks would lead to tank battles

unless the other side did not possess such capabilities, or did not wish to engage in such combat (in which case it would be accepting a severe limitation on its war-fighting strategy, possibly leading to defeat).

Even if World War II is seen as a total global war, and, hence, without any restraints on escalation, the record of other wars, in Korea, Vietnam, Arab-Israeli Wars, Afghanistan, 1991 Gulf War and the recent Iraq War all indicate that the use of air power was not actually escalatory by itself. It seems that it is only in India that we have adopted the concept of air power being escalatory and have not looked deeply enough to get rid of this flawed impression that impacted negatively for us more than once in our wars. Interestingly, there seems to have been little such inhibitions during the 1947-48 War and any limitations on using combat air power came either because of the limitations of overall capacity or because of the strategy that the British commanders on either side adopted in pursuit of British interests rather than those of the countries they served.¹¹

Strategic or Tactical

Lord Trenchard, the “Father” of the British Royal Air Force, had described air power as intrinsically strategic since it could effectively influence the conduct and outcome of war and conflict in all three dimensions, including the operations of land forces and naval power besides its own, while the other two components of military power could not affect air power and its freedom of action. As noted earlier, British imperial policies ensured that Indian military power would remain in the nature of a tactical force with the British component providing the strategic dimension, especially in naval forces and air power. World War II itself provided the framework of definition of strategic and tactical air power in terms of bombers and fighters. The former was linked with independent bombing of population centres, economic and military targets to achieve what was considered to be a strategic objective, of weakening the enemy’s potential to wage war. On the other hand, tactical air operations (and forces) were seen as those supporting the war on the ground, whether directly (through close air support) or indirectly (through reconnaissance and interdiction). The latter, of

11. C. Dasgupta, *War and Diplomacy in Kashmir 1947-48* (New Delhi: Sage Publications Ltd., 2002).

course, merged finally at its outer edge where any distinction between the strategic and tactical became notional. The IAF was created at the lower-end of tactical air power, and it had to continue struggling with the dichotomy of seeking some form of independent role, which in British India was played by the RAF (and later also by the US Army Air Forces).¹² And if it fell short of any classical concept of strategic role, the absence of air power theory, study, debate and sufficient thinking through have contributed to continuing inertia in conceptual and doctrinal terms.

The problem seems to have been aggravated in the aftermath of Hiroshima and the Cold War. Strategic air power came to be associated with nuclear weapons initially; and heavy bombers defined the platforms as strategic in spite of the fact that from Vietnam to the Iraq Wars, even strategic bombers have been playing what used to be considered a classical tactical role. Post-War assessment of the strategic bombing campaign of World War II concluded that it would take a long time and massive air effort to produce the required results. Many surveys even concluded that in the nuclear age there simply was not the time available for a prolonged strategic bombing campaign to produce any viable results unless you had nuclear weapons (which generated an entirely new dimension where the warhead rather than the component of military power started to become the criterion for strategic-tactical). Since middle powers like India would not have the resources, targets and nuclear weapons for heavy strategic bombing, by implication it was assumed that such countries would only have tactical air power.

A similar Nelson's eye seems to have played out its role in respect of air superiority. Based on World War II experiences, air superiority was believed to take a long time and immense resources to achieve, and such luxuries, it was assumed, would not be available to middle powers, especially developing countries, whose wars would, by definition, be short. This, of course, ignored the reality that the very first war (incidentally not even called a war by official India!) would last 14 months. War planning from all accounts catered for a one-year-

12. Interestingly, the first ever land-based bombing of Tokyo during World War II was undertaken by the Americans from Indian airfields.
See P.C. Lal, *My Years with IAF* (New Delhi: Lancer International, 1986).

long war at least till after 1971. But how flawed was this doctrine was proved in practice again and again by the Israeli Air Force achieving dominance in the air at times in as little as six hours!¹³ What came to be the dominant doctrine in India was “favourable air situation” which often came to be further clipped to “local” favourable air situation and even very localised favourable air situation! And our staff colleges happily kept teaching such doctrines. How much this doctrine was a concession to the perception of tactical support to the land forces being the primary role, aggressively pushed by the Indian Army, putting the IAF conceptually on the defensive, may yet have to be explored. What is certain is that military leaders and thinkers need to look into these areas with objectivity.

On the other hand, countries like Israel and the United States continued through the Cold War with the basic philosophy that air power intrinsically is strategic in nature. Hence, dominance in the air has remained the central pillar of air power in these countries, with obvious results. We, on the other hand, seem to be hesitatingly moving toward that line of thinking. This is in spite of empirical analysis that modern air power can perform a strategic role with a handful of aircraft to achieve effects that required repeated raids by a thousand bombers in World War II.¹⁴ Wars of the past two decades simply validated the same conclusions.

AIR POWER'S PIVOTAL ROLE

The early years of air power were marked by the use of air power for control of the ground situation from the air. British experience in Iraq after World War I started to be applied to the turbulent Northwest Frontier of India and this is where the IAF cut its teeth first. The expansion of World War II to the Pacific and to India's eastern borders altered many of the original plans of the British. But the central philosophy of a support role for the IAF remained unchanged in spite of efforts by individual Indian officers to expand that role.

The important role played by the IAF in the eastern theatre is symbolised by

13. The US Air Force (USAF) has continuously relied on the doctrine of dominance in the air, equipped itself accordingly, trained for it, and achieved it again and again. It can be argued that its adversary in most cases were smaller powers and, hence, were bound to lose the balance in the air. But the important point is that a conscious effort based on sound theory and doctrine helped the USAF to do it faster at less cost.

14. Jasjit Singh, *Air Power in Modern Warfare* (New Delhi: Lancer International, 1985).

the reconnaissance that spotted the Japanese fleet sailing north in the Bay of Bengal although it could do nothing to its actions, which included bombing of Vishakhapatnam (from where the reconnaissance aircraft had taken off) later the same day. What stands out in history is the defence of Imphal (where No. 1 Squadron first commanded by then Squadron Leader “Jumbo” Majumdar and later by then Squadron Leader, now Marshal of the IAF, Arjan Singh, played a historical role) against the Japanese siege which had a profound impact on the course of the war itself. The Battle of the Box in which IAF played a key role later represented another operation that altered the tide of war in favour of the Allies.

In almost every war that we had to fight since independence, air power tilted the balance of success between victory and loss in our favour, in all except one war. Our land forces (and naval forces in 1971) have performed admirably in wars, often against severe odds. But we need to recognise that air power played a key role in each and every one of them, mostly providing the critical factor that created the opportunities for the land forces to defeat the aims of the enemy. This reality is often ignored even by the air force itself because in many cases, this role was performed not so much by combat air power but by airlift. For our defence (leave alone the airlift in aid of Nepal in 1950 or in aid of Maldives in 1988), airlift at crucial periods of history has been more significant than the Berlin Airlift for strategic implications.

One only has to look at the empirical evidence to grasp the reality that the defence of Srinagar (and, hence, Jammu and Kashmir—J&K) would not have been possible if the transport aircraft had not managed to put some troops down on the airfield on October 27, 1947. Whether this was made possible by the delay of the Pakistani forces to reach the airfield is not the issue here. Kashmir would have been lost before we gained it if the airlift had not made the landing of the troops in Srinagar possible. One can, of course, argue with hindsight that why did the air force not send in fighter aircraft to soften any possible opposition at the airfield if it could threaten the troops being airlifted in?

Subsequent history of the airlift to Leh only repeated the same scenario except that it took place under even more exacting circumstances. Poonch was another crucial episode where transport aircraft were flown by young pilots who had

even to cut the engines on final approach at night to ensure they could land in the restricted field constantly under hostile artillery fire! Attempts to support the garrison (where only Tempest aircraft were used to drop ammunition, etc.) at Skardu under Pakistani siege unfortunately remained weak for a variety of reasons. But it also proves the point that adequate airlift could have made the crucial difference in saving Skardu, and today's map of J&K would have been totally different. Chushul in the 1962 War with China is another case in point of successful defence in the nick of time because of airlift. The landing at the world's highest airfield at Daulat Beg Oldi on an unprepared strip near the Karakoram Pass is a saga by itself. Similar situations arose in the defence of Siachen and its maintenance since 1983 till date. One can only speculate on the situation in which airlift was used day after day for air maintenance of our army and civil authorities all across the high Himalayas into many hundreds of air dropping zones and advanced landing grounds, in many cases where the landing and take-off direction had to be the same through narrow twisting valleys due to the very short length of the field and towering mountain ranges around it.

In terms of the broader foreign policy goals of the country in helping friendly countries on their request in difficult times, airlift played a vital role to support the legitimate regime in Nepal in 1950, Maldives in 1988 and the Indian Peace-Keeping Force (IPKF) in Sri Lanka during 1987-90.

Combat air power came to play a key role in the 1947-48 War in J&K. Its use does not seem to have been seen as escalatory or in any way inviting adverse reactions from any quarters. One can even argue that unless we look for it, the use of combat air power in that longest war that we fought might even go unnoticed! And our so-called "official" histories only bring greater confusion through ignorance to bear on history.¹⁵

It is against this background that we need to see three aspects that seem to have bedevilled thinking about air power in India, especially in vitiating the climate between the Indian Army (which felt badly let down by the IAF in 1965)

15. The official history of the 1962 War as available on *Times of India's* website informs us that a jet engine had been fitted on the "tail" of the Packet aircraft! Hunter and Mystere aircraft are depicted as "bombers" and no mention of Canberra light bombers is made in such listings. Official history of the 1965 War compares attrition in relation to inventory of aircraft rather than the number of sorties flown which is the traditionally accepted global norm.

and the IAF (which then went overboard in providing air support to the army in 1971 as if to compensate for the past).

The first is the perennial question to which no clear answers have been available: what happened in 1962? At the outset, we need to recognise that the higher defence organisation that had been established in 1947 and which had successfully directed the war in 1947-48, had dissipated by the late 1950s. The defeat in the Sino-Indian War of 1962 in reality is the failure of the higher defence organisation much more than that of the army as such. It seems that the Defence Committee of the Cabinet did not meet to discuss the evolving situation or the conduct of the war. The Defence Minister's Committees also do not seem to have been seized of the challenges of the time. The Chiefs of Staff Committee apparently remained sidelined or did not get down to fulfilling its mandate. A semblance of a *de-facto* "theatre command" reporting directly to the defence minister apparently worked, and the commander, in the words of the Cabinet Secretary, "...seems by then to have got himself worked up into a state of near hysteria."¹⁶

During the Sino-Indian War in 1962, the focus of employment of air power seems to have been entirely on airlift and transport aircraft, and the handful of helicopters performed heroically. No strategic photo-reconnaissance missions seem to have been undertaken although air effort was available and at least 22 photo-reconnaissance missions were flown over our side of the territory between October 13 and November 11, 1962.¹⁷ But it is important to remember that fighter squadrons were deployed to abandoned airfields in the Assam Valley within weeks of the Dalai Lama's flight from Lhasa in 1959 and they had been practising on a daily basis over the Himalayas for any future actions.

Coming back to our experiences, we seem to have voluntarily held back using our existing air power capabilities on more than one occasion and explained this in terms of air power being escalatory; our sense of morality seeking restraint in war is a throwback to the *Mahabharata* and the Rajput honour code of combat. The fact that this perception seems to have grown well after the longest war that we fought in 1947-48 may hold some clues for a pervasive belief held so wrong-

16. S.S. Khera, *India's Defence Problems* (New Delhi: Orient Longmans, 1968), p. 227.

17. *Official History of 1962 War*, Ministry of Defence, Government of India as on *Times of India* website, p. 348.

ly for so long. One of the factors that may have contributed to the belief that air power is escalatory could be the thinking (especially in the army, but also in the air force) that air power's main role was close support to the army and battlefield reconnaissance. And if this could not be done, then the only option was an "escalation" to a higher level which implied an independent and strategic (defensive or offensive) role. This may explain Air Marshal H.C. Dewan's view as reported in the official history of the 1962 War that use of combat air power would not be useful since it would be handicapped in carrying out close air support in the high Himalayas and its jungles. But little thought was apparently given to interdiction missions which would have had an important effect on the Chinese ability to conduct the war. By any logic, China withdrew after a unilateral ceasefire from the eastern sector from territory that it still claims as its own and at a time when there was virtually no viable land forces opposition left. This was undoubtedly influenced by the overly stretched logistic lines; and interdiction by the IAF would have caused serious dents in the logistic capabilities of the People's Liberation Army (PLA) much earlier. Interestingly, this was being taught at our staff college in the 1960s! In addition, no serious thought seems to have been given to the psychological shock effect of the use of combat air power by a Service that continued to believe much more in the kinetic kill effect for decades afterwards.

This would also indicate another serious failure at the higher military leadership level: a study of Chinese employment of air power in Korea would have indicated that city bombing was not part of their preferred strategy! This, of course, does not imply that they would not have used their handful of bombers to hit other strategic targets if they perceived any advantage. But given the fact that many such Chinese targets were within the range of IAF Canberras, the onus of escalation would have been on the Chinese and it is highly unlikely that they would have expanded the war in that form when their position on the ground was favourable to them. This also raises the issue of whether we had imbibed the lessons of history and the then ongoing debates across the world about deterrence issues?

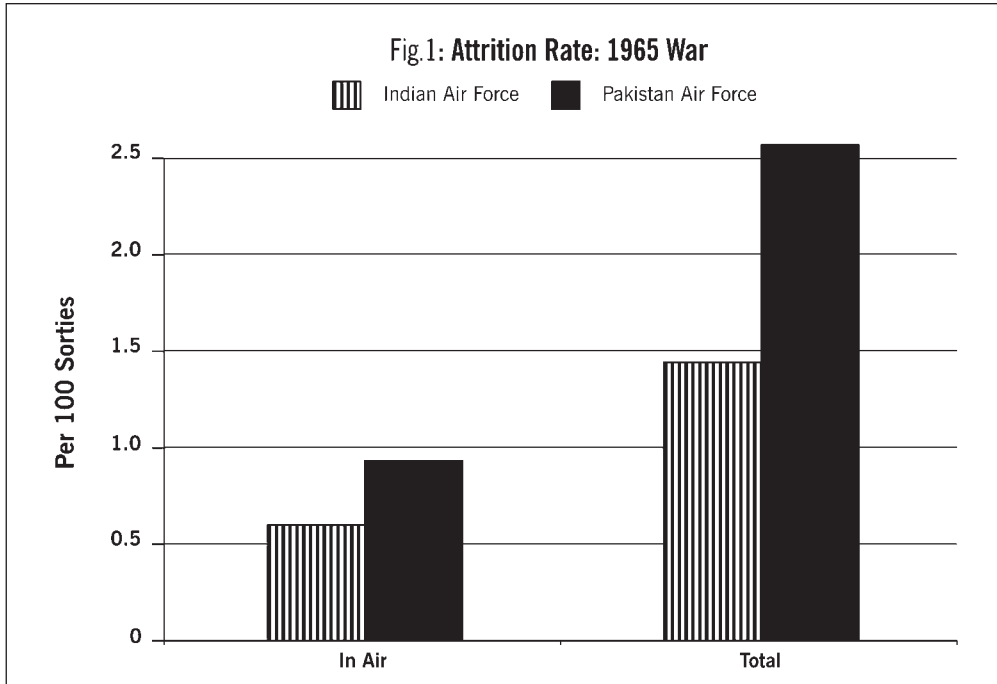
It is possible to conclude that the overall failure of the higher command con-

tributed in no small measure to the failure to employ combat air power. The overall psychological factors of the national leaders' perceptions of city bombing and civil-military concerns that use of air power would be escalatory appear to have been a major factor in the non-use of combat air power. The American ambassador's advice appears to have strengthened the inhibition about the use of combat air power. But interestingly, the only professional assessment of the period comes from a White House Intelligence Summary (declassified decades later) that concluded that in the land battle, the Indian Army would be severely handicapped because of major problems of logistics, but if combat air power was used by India, it would "make a material difference" to the outcome of the war on the ground!

What can be gleaned from the scanty information at the military-operational level is the perceived need for "close air support" and this being seen as of little value in the wooded, high Himalayas. No one seems to have considered interdiction in preference to close air support, a lesson that was still being learnt more than one generation later in Kargil. Nor was the psychological impact on the Chinese forces of the use of offensive combat air power given any thought—a factor which had been a key lesson of World War II two decades earlier.

The second aspect concerns the India-Pakistan War in 1965. There are two dimensions that are relevant. The first concerns the struggle for dominance in the air, or the classical struggle for air superiority. Pakistan has been claiming that it rapidly won air superiority and, hence, was able to support its army more effectively. This view seems to have received some endorsement by the unpublished Official History of the 1965 War produced by the Ministry of Defence, Government of India. Two reasons can be identified for this assessment by the official historians of the Ministry of Defence. One is that they tended to rely heavily on Pakistani literature, and even more so on one book, John Fricker's *Battle for Pakistan*, and less on our own records. It is possible that our records were inadequate for the task in hand. But that throws up the larger question of the very existence and functioning of the Historical Division of the Ministry of Defence and the role it is supposed to play.

The other aspect, however, is even more worrisome. Facts are crucial in com-



ing to objective conclusions. The official history prepared by the Historical Division of the Ministry of Defence, contrary to accepted international norms in such matters, took pains to work out the comparative losses of aircraft during the 1965 War in relation to the total inventory of the two air forces, instead of working out the attrition rate in relation to the sorties undertaken by them. On the other hand, the attrition rate of Pakistan Air Force (PAF) losses in the air during the 1965 War worked out to 0.9 per cent of the sorties flown compared to 0.6 per cent for the IAF. Even at this exchange ratio (which logically should have tilted increasingly in India's favour with the passage of time) the PAF would not have been in a position to conduct air operations beyond another 2-3 weeks. This is the reason that Pakistan despatched its former air chief, Air Marshal Asghar Khan to China (and Indonesia) within ten days of the war starting to get "urgently required fighter aircraft and the vast complex of weapons, equipment, explosives and spares that support air operations."¹⁸ Indonesia promised MiG-19s and MiG-15s besides other equipment after Asghar Khan gave President Ayub's letter to

18. M. Asghar Khan (Air Marshal), *The First Round: Indo-Pakistan War 1965* (London: Islamic Information Services Ltd., 1979), p. 38.

the Indonesian president saying that he expected Indonesia to “help us in our dire need.” Help was also sought from Iran which provided sanctuaries to PAF aircraft, Iraq which actually supplied some F-86s and spares, and from Turkey. These are hardly the signs of an air force that had “won” air superiority.

During the war, the IAF lost a significant number of aircraft to enemy action on the ground, especially in the eastern sector.¹⁹ This happened in the opening stages of the war. As may be seen from Fig. 1, total attrition rates during the war, including losses to enemy action in the air and on the ground, work out to 2.16 per cent for the PAF and 1.49 per cent for the IAF. This ratio would have undoubtedly tilted much more in our favour if the IAF had been allowed to retaliate in the eastern sector where Pakistan had one squadron of fighters and some other aircraft deployed.

But a second issue which became far more controversial and whose vibrations can still be felt four decades later concerns the matter of air support to the land forces. No other single issue has vitiated the atmosphere of army-air force relations more than the perceived conduct of the 1965 War. The war itself, it may be recalled, escalated rather gradually from the action in the Rann of Kutch in April of that year to the covert war beginning on August 1 with a strong Force Gibraltar infiltrated by Pakistan into Kashmir Valley. This was followed by Pakistan’s overt armoured offensive launched on the morning of September 1, 1965, codenamed “Grand Slam” in the Chhamb-Akhnoor sector of J&K where the Pakistan Army held strategic advantages due to terrain and initiative intrinsic in offensive action. The PAF, which possessed clear technological advantage in the air at that time, had been brought into the operational plans from June onward and was placed on full operational alert by August 30, ready over the area for any eventuality. Air Marshal Nur Khan, the PAF chief, had flown over the area in the morning of September 1 and ordered combat air patrols to be mounted to cover the armour thrust. Flights of F-86 Sabres and F-104 supersonic missile-armed Starfighters were flying combat air patrols over the area when the Vampires went in to provide close support, losing four Vampires. But the fol-

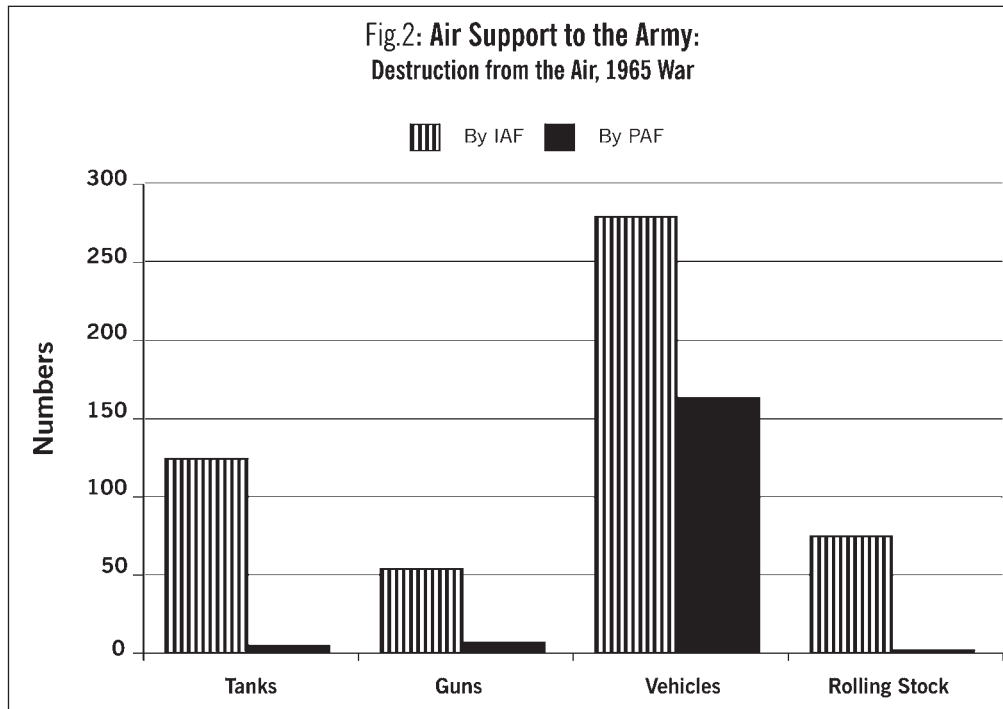
19. Interestingly, after the PAF hit a number of our airfields and caused substantive damage in the opening stage of the war, the IAF was restrained from attacking the PAF in East Pakistan by our Ministry of Defence on the same spurious argument that this would escalate the war, while a full-scale war was going on in the western sector.

lowing Mystere formations completed the task. What remains surprising is that given the tactical situation and the expected Pakistani offensive, prior approval of the Cabinet for using all elements of military power was not obtained. In fact, a whole day would elapse with our ground forces fighting out under severe handicap, before the army requested for air support.

The failure of the higher defence organisation is apparent since neither the Chiefs of Staff Committee nor the Emergency Committee of the Cabinet (which had replaced the Defence Committee of the Cabinet) seems to have met. The defence minister authorised the use of the IAF based on the request of the army chief after he flew back to Delhi in the evening. In the late hours of the day, the air force put in whatever it had within range and took losses. But the end result was that the Pakistani advance to Akhnoor, its immediate objective, was stalled. Why Pakistan did not advance and take Akhnoor in spite of heavily degraded Indian Army capability to defend has never been explained though the issue has been raised by many Pakistani military writers since then. The only explanation that fits the facts is that during the first 48 hours, the IAF had imposed a heavy attrition on Pakistani armour in the face of heavy odds, and it would have been suicidal for it to proceed further. Akhnoor was saved and so was a crucial military-logistics key choke point.

But what became the real source of contention was the Indian counter-offensive on September 6, 1965, into Pakistan. The Indian Army's 15 Division was ordered to launch the offensive along a major road. But the IAF was not even informed, especially when daylight caught the force along the key highway! The army commander has been scathing in his criticism of the divisional commander on this count.²⁰ Our division exposed itself to enemy air strikes, its requests for close air support turned down by Corp Headquarters, while the IAF practically knew nothing of the PAF, which naturally had a field day. It is to the credit of the Indian Army that it continued to push through its advance in the face of air attacks. But the fact that we had not established the organisation and communications for responsive close support seems to have been ignored in all analyses of the war. It needs to be recalled that substantial experience of land-air warfare

20. Lt. General Harbakhsh Singh, *War Despatches 1965* (New Delhi: Lancer International, 1990).



and close air support and the organisation/procedures needed for their efficient functioning were available from the published records of World War II (especially the North African campaign) and the Korean War.

On the other hand, the damage to the division was probably much more in the psychological domain than in real terms. The official history only tells us about the casualties of two key battalions (3 Jat and 13 Punjab) in 15 Division engaged in the offensive on September 6, and that the total number killed on that day by enemy action (including by the PAF) was 22 (amounting to around 1.2 per cent of the force).²¹ It is also useful to note that the PAF flew a total of 24 sorties for offensive support in the area²² and achieved few kills. It is quite likely that Pakistan might have put in a larger quantum of air effort to block 15 Division's advance if the IAF had not been attacking its bases and tying down a great deal of its air effort for its own air defence. Unfortunately, the impression grew that

21. B.C. Chakravorty, *History of the Indo-Pak War 1965*, History Division, Ministry of Defence, Government of India, New Delhi, 1992, pp. 149-150, unpublished available at Times of India Online at <www.timesofindia.com>

22. See Pakistan Army's Maj. General Shaukat Riza, *The Pakistan Army: War 1965* (Dehra Dun: Natraj Publishers, 1977), p. 271.

the IAF failed to provide air support to the army and the rhetorical question “where was the air force” has continued to reverberate till now on the assumption that the primary and most important role for air power is that of direct and intimate support to land forces. This belief was probably strengthened by the expectations that the army should have two combat squadrons allocated to it per division in contact with the enemy; and such force levels were never available.

Conventional wisdom would have us believe that Pakistan provided better and more effective air support to its army than we did for ours. But this is not supported by facts. As regards the quantum of air support to the army, Pakistani accounts indicate that its air force actually devoted nearly 550 sorties for offensive air support during the war. This corresponds to 23.26 per cent of the combat flying effort. Compared to this, the IAF devoted close to 40 per cent of its total combat air effort to offensive air support.

As regards the effect of offensive air support to the army, Fig. 2 shows, the destruction of Pakistan’s military and rolling stocks by the IAF was far greater than that by the PAF.²³ What needs to be remembered is that our own system of providing air support to the land forces had been in a rudimentary stage. For example, a delay of as much as a day or two would often take place for the air force units to receive the demand for air support after it was originated by the fighting formations, due to weaknesses in the communications system. It is also quite likely that at the lower formations, the impression of inadequate air support may have grown because many demands would inevitably get filtered out at the Corps HQ levels in view of other priorities.

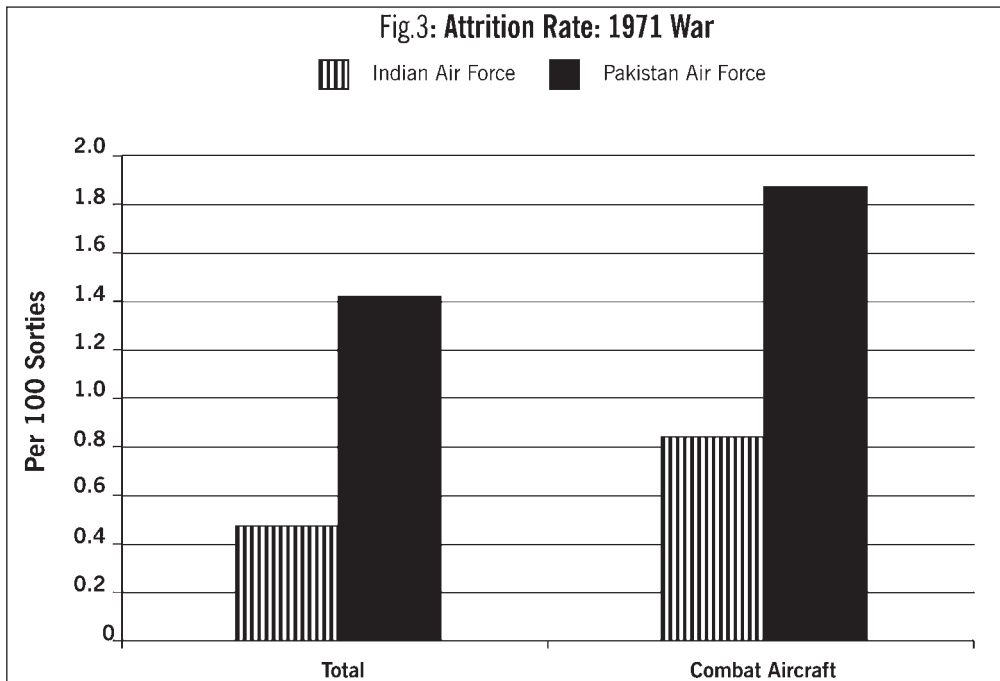
During the 1971 War, the performance of the IAF, if anything was even better. General Shaukat Riza is candid in admitting that “by 14 December, Indian Air Force had achieved alarming success.”²⁴ Claims and counter-claims of aircraft destroyed have always created significant errors in assessment of comparative results in all wars for a variety of reasons. But taking the most conservative estimates against the known air effort, it would appear that the PAF’s total attrition rate was 1.42 per cent compared to the IAF’s attrition rate of 0.48 per cent. It can

23. The data is derived from the then Army Commander Western Commands. Lt. General Harbakhsh Singh, *War Despatches 1965* (New Delhi: Lancer International, 1990).

24. Maj. General Shaukat Riza, *The Pakistan Army 1966-71* (Dehra Dun: Natraj Publishers, 1977), p. 166.

be argued that nearly 7,500 sorties flown by transport aircraft and helicopters by the IAF would naturally have an impact on reducing the overall attrition rate since most of this flying would not be exposed to enemy action. But as Fig. 3 indicates, combat aircraft attrition rate of the IAF was 0.83 per cent compared with 1.88 per cent of the PAF. We also need to note that a substantive quantum of the IAF was deployed to the eastern sector where only one F-86 fighter squadron of the PAF was deployed. This had made the air power balance almost at par in the western sector.

The classical role of air power in 1971 was the purely aircraft versus tank battle at Longewala in the Rajasthan desert. During the night, a company of the Punjab Regiment held out against an advance by the Pakistani armour, forcing it to slow down till dawn when the complete tank regiment of the Pakistan Army was knocked out by a handful of IAF Hunter aircraft. But for this gallant action, there was a strong possibility of a major breakthrough by the Pakistan Army and



capture of Jaisalmer airfield, with far-reaching consequences.

Air power, once again non-combat air power, played a crucial role in supporting the battle at Saltoro Ridge to defend the Siachen Glacier in 1984. The sheer altitude, temperatures, winds and nearly 70-km-long glacier posed a monumental challenge for logistics. Only a few light helicopters could undertake the task bit by bit. But the ridge was successfully defended over the years and the troops, who have established a unique record of fighting at the world's highest airfield, have been regularly supplied for the past two decades.

An equally daunting challenge was posed in the summer of 1999 when the Pakistan Army achieved complete strategic and tactical surprise by its aggressive military action to establish a bridgehead across the Line of Control about 8-9 km in depth across a 120-km swatch of territory in the Kargil sector of J&K state in India. The Indian Army was faced with an almost impossible task of evicting the invaders established on the heights and peaks. Besides the transport support, the IAF undertook over 1,200 sorties of air strikes on the strong points at altitudes of 14,000-18,000 feet held by the Pakistan Army without crossing the Line of Control.²⁵ Day and night air attacks on the Pakistan Army's logistics camps and dumps in the confined valleys of the high Himalayas finally proved to be a key factor along with the indomitable spirit and the unique unbeatable fighting qualities and courage of the army that forced the Pakistani political-military leadership to seek US help in a face-saving withdrawal back across the Line of Control, leaving many of their dead to be buried by the Indian Army. ■

25. For an account, see D.N. Ganesh, "Indian Air Force in Action," in Jasjit Singh, ed., *Kargil 1999: Pakistan's Fourth War for Kashmir* (New Delhi: Knowledge World, 1999), pp. 178-189.

NOTES FOR CONTRIBUTORS

Articles submitted to *Air Power Journal* should be original contributions and should not be under consideration for any other publication at the same time. If another version of the article is under consideration by another publication, or has been, or will be published elsewhere, authors should clearly indicate this at the time of submission.

Each typescript should be submitted in duplicate. Articles should be typewritten on A4/Letter paper, on one side only, **double-spaced (including the notes)** and with ample margins. All pages (including those containing only diagrams and tables) should be numbered consecutively.

There is no standard length for articles, but 5,000-8,000 words (including notes and references) is a useful target. The article should begin with an indented summary of around 100 words, which should describe the main arguments and conclusions of the article.

Details of the author's institutional affiliations, full address and other contact information should be included on a separate cover sheet. Any acknowledgements should be included on the cover sheet as should a note of the exact length of the article.

All diagrams, charts and graphs should be referred to as figure and consecutively numbered. Tables should be kept to a minimum and contain only essential data. Each figure and table must be given an Arabic numeral, followed by a heading, and be referred to in the text.

Articles should be submitted on high-density 3 1/2 inch virus free disks (IBM PC) in rich text format (RTF) together with **an exactly matching double-spaced hard copy** to facilitate typesetting; notes should be placed at the end of each page. Any diagrams or maps should be copied to a separate disk separately in uncompressed TIF or JPG formats in individual files. These should be prepared in black and white. Tints should be avoided, use open patterns instead. If maps and diagrams cannot be prepared electronically, they should be presented on good quality white paper.

Each disk should be labelled with the journal's name, article title, author's name and software used. It is the author's responsibility to ensure that where copyright materials are included within an article, the permission of the copyright holder has been obtained. Confirmation of this should be included on a separate sheet included with the disk.

Copyright in articles published in *Air Power* rests with the publisher.

STYLE

Authors are responsible for ensuring that their manuscripts conform to the journal style. The Editors will not undertake retyping of manuscripts before publication. A guide to style and presentation is obtainable from the publisher.

Current Journal style should be followed closely. Dates in the form January 1, 2000. Use figures for 11 and above. British spelling are to be used. Authors should provide brief biographical details to include institutional affiliation and recent publications for inclusion in About the Contributors. Sub-headings and sub-sub-headings should be unambiguously marked on the copy.

NOTES

Notes should be **double spaced** and numbered consecutively through the article. **The first line of a note must align with subsequent lines. Each note number should be standard size and have a full point.**

a) References to books should give the author's name: title of the book (*italics*); and the place, publisher and date of publication in brackets.

e.g. 1. Samuel P. Huntington, *The Common Defense* (NY: Columbia UP, 1961), Ch.2, pp. 14-18

b) References to articles in periodicals should give the author's initials and surname, the title of the article in quotation marks, title of the periodicals (*italics*), the number of the volume, /issue in Arabic numerals, the date of publication, and the page numbers:

e.g. Douglas M. Fox, "Congress and the US Military Service Budgets in the Post War Period," *Midwest Journal of Political Science*, Vol.16, No.2, May 1971. pp. 382-93.