



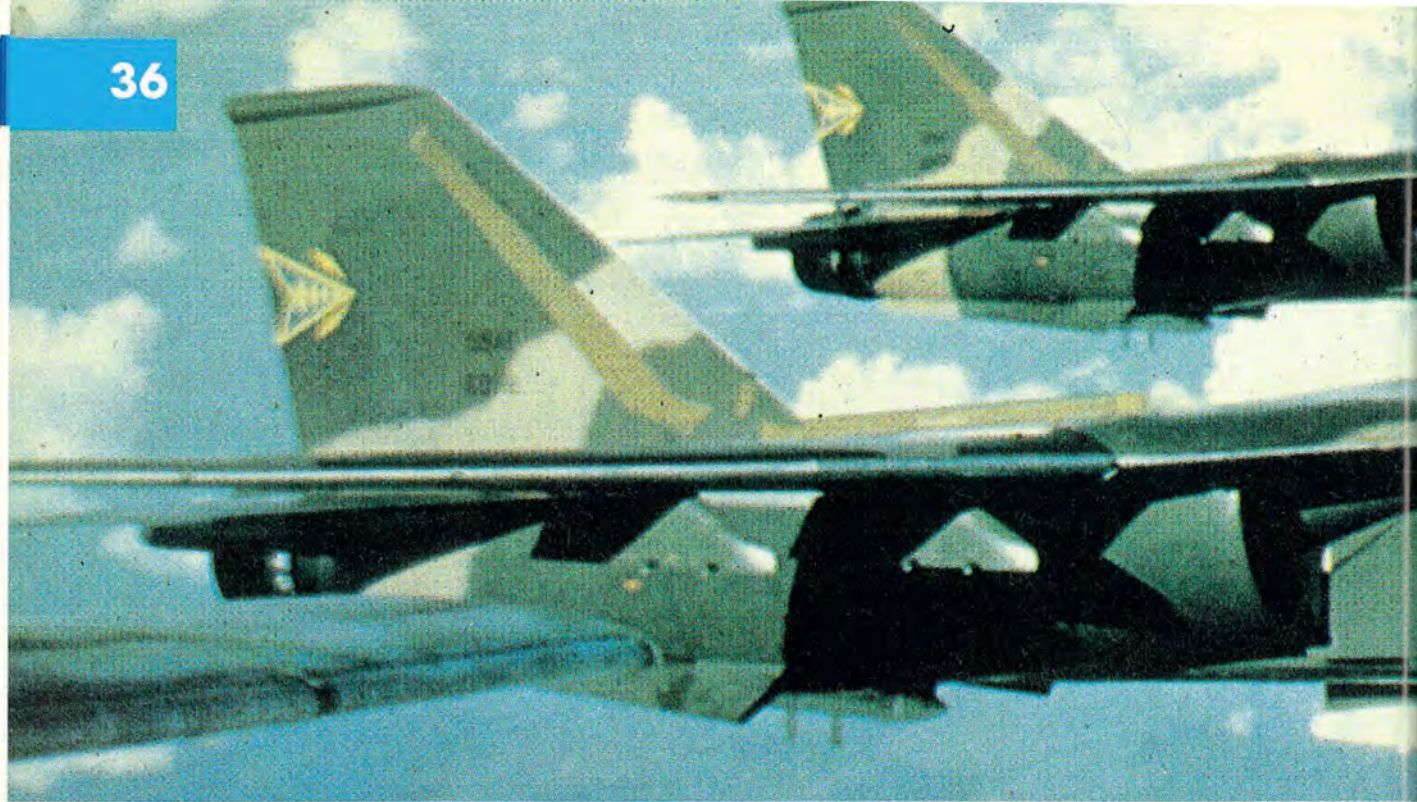
the
**Vietnam
War**

1964-1973

by Lieutenant Colonel
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Powered flight began at the beginning of this century and rapidly became an important, if not decisive, medium to deliver power in military operations. Experience drawn from all major conflicts, often confirmed that the control of the air was a prerequisite to success. Nevertheless, air power was not always the panacea, and, in some cases, the inferior side still had scope for action and a '*road to victory*'.¹ In this respect, the American-Vietnam war is a very interesting case study. This *underdog* severely bit the American eagle. By luck and by skill the North Vietnamese employed political and military approaches to counter the effects of enemy air superiority and ultimately achieved a major objective, that is, American withdrawal. As we shall see, in their defensive struggle against American air power they took advantage of every technical, tactical or political weakness. Moreover, in their offensive endeavour, they chiefly relied on guerrilla and subversive warfare to bypass US air efforts but they also reached the limits of their strategy when they wanted to increase the tempo.

Before considering the details, it is worth mentioning important features of the context, for the background always plays a major role in war and is the crucial light to assess events. This conflict took place in the Cold War era, at a time when, under the nuclear umbrella, the thriving United States were indirectly challenging the prosperous Soviet Union. Containment was the American rationale to thwart the expansion of Communism on a global scale and flexible response the strategy to coerce their enemies.² Hanoi³ had one single, constant and regional goal: the reunification of the two Vietnams under the Communist banner.



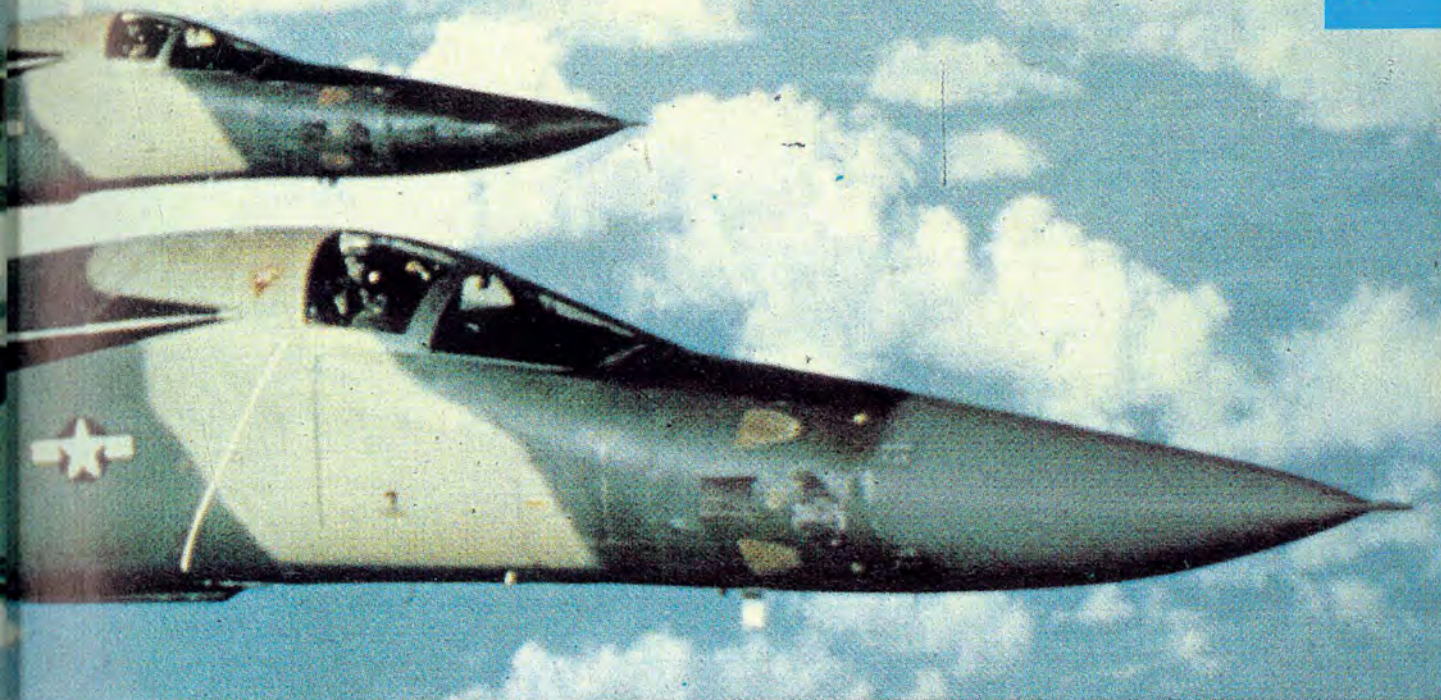
F-111A 'Aardvarks' fly 'Combat Lancer' missions. These long range ground hugging strike aircraft introduced an entirely new form of aerial warfare to the region

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THE DEFENSIVE STRUGGLE

From the start of the war, the Vietnamese knew that they could never enjoy air superiority against the American-led forces. However, they learnt from their struggle against the French that air power has intrinsic limitations and dependencies as described in AP 3000.⁴ Hence, whenever their enemies used air power against them, they tried to exploit as much as possible the fragility of the aeroplane, its limited payload and its technological insufficiencies as well as human mistakes or political constraints.

The US entered the war in 1965 with a reprisal air attack called 'ROLLING THUNDER'. Throughout the ROLLING THUNDER operation the Vietnamese suffered heavy bombardment.⁵ They could not ward off these strikes but they did their best to reduce their effectiveness. The SAMs,⁶ AAA, or flak, were their most favourite tools to achieve this. The NVA⁷ SAM crews were often inexperienced but they managed 'to rattle a strikeforce'.⁸ The AAA and flak units along with SA-7 users prevented re-attacks and forced the striking aircraft to fly higher and faster, thus rendering them less accurate.⁹ Furthermore, the Vietnamese managed to reduce the vulnerability of their assets to air strikes through dispersal, camouflage or movement. To deny the Americans an accurate order of battle, the Vietnamese frequently and swiftly moved the SA-2 missiles, thus opposing the Soviet concept of operations of fixed sites.¹⁰ They also managed to conceal a large part of their relatively small industry, some of which was even moved underground.¹¹ Cunningly, to confuse the pilots, bridges were broken into pieces or constructed under shallow water.¹² The aircraft were scattered in the surroundings away from the base and the supplies were well dispersed.¹³ Similarly, oil was stored throughout the country¹⁴ and portable generators compensated for the destruction of the electric power plants.¹⁵ To mitigate the

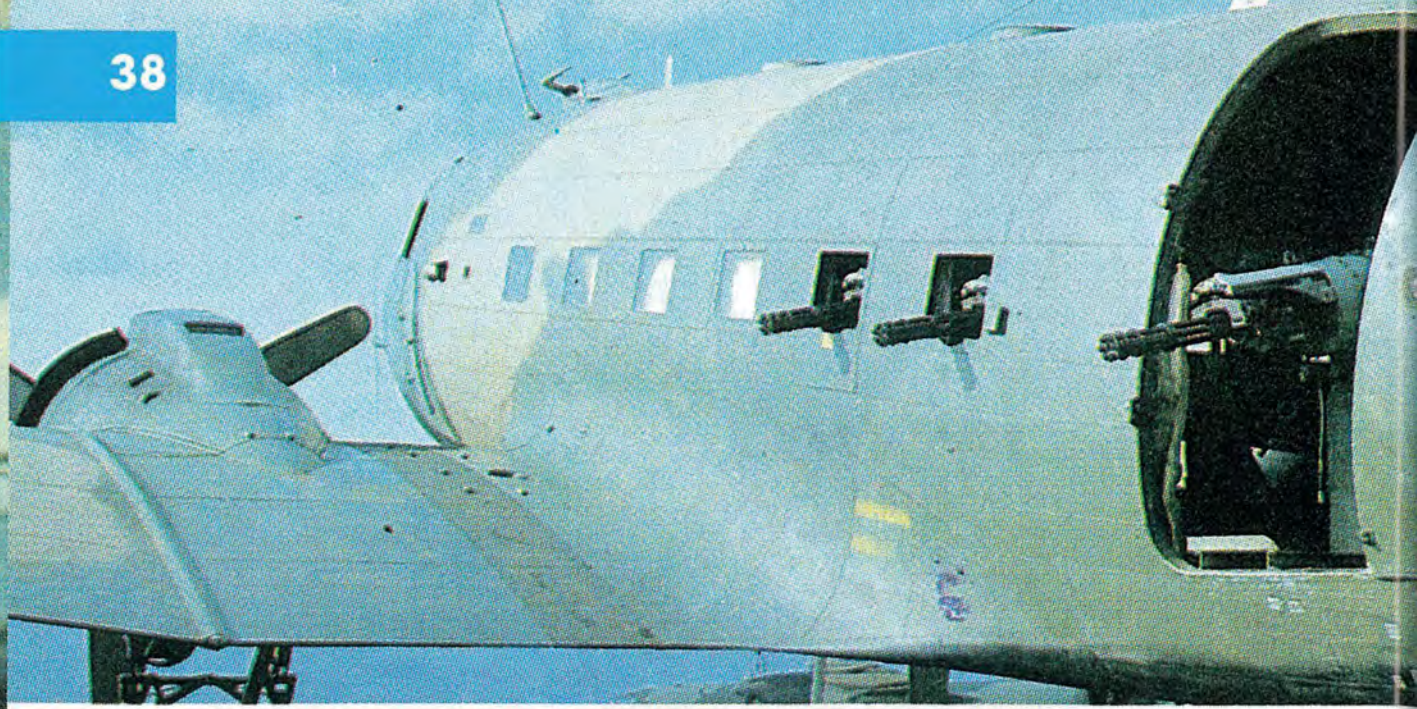


physical vulnerability of the population, non-essential personnel were evacuated from cities to rural areas.¹⁶ Moreover, they exploited international law and US political weaknesses. Indeed, on one hand, the Geneva conventions state that civilian casualties are to be kept as low as possible; hence the North Vietnamese stored some material in residential areas¹⁷ and anti-aircraft artillery on roof tops in urban areas.¹⁸ On the other hand, in accordance with the preferred strategy of responding

flexibly along with their endeavour to avoid direct clash with Russian or Chinese forces, the US government foisted many constraints on its airmen.¹⁹ The latter were not allowed to cross given limits and some targets were not authorised. Thus valuable MiGs²⁰ could be sheltered in China and trains²¹ were kept safe in the northern part of the country.

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However, the Communists could seldom elude the air attacks, but nevertheless they tried at least to increase the costs to their adversaries. Indeed, they managed to shoot down a significant number of aircraft.²² This score remained within American expectations²³ but it boosted Vietnamese morale.²⁴ They took advantage of tactical mistakes, especially stereotyped tactics, by salving barrages of SAMs at the point where the B52s executed their post-target turns.²⁵ Very cunningly they ensnared US pilots and destroyed aircraft with second rate weapons.²⁶ For example, they used the SA-2 radar to force the adversary to fly at low level where their heavy artillery fire inflicted severe losses.²⁷ Furthermore, they achieved 'virtual attrition'²⁸ by forcing the Americans to protect their bomb carriers which in turn reduced the number of bombs dropped on North Vietnam. The MiGs flew 'hit and run' tactics²⁹ performing opportunity shots or forcing the strikers to jettison their ordnance.³⁰ Sometimes they would not even engage in the fight, only shadow the formations to report their deeds.³¹ By doing so, they compelled the US to provide the attacking aircraft with escorts.³² The MiGs were accredited with at least 100 kills,³³ and the US had to mount a specific operation to neutralise this threat.³⁴ In the same



AC-47 Dakota gunships
with side-firing cannon

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way their abundant ground based air defences³⁵ forced the US to divert a significant part of the air effort into suppression of enemy air defence (SEAD) tasks.³⁶ Consequently, the strikes were often accompanied by flak or SAM suppression missions³⁷ and, with political clearance, the US pilots also attacked the SAM sites.³⁸ This trend remained throughout the war, and usually there were as many escort aircraft as bomb carriers.³⁹ Furthermore, the A-1 aircraft were put out of business due to portable SA-7.⁴⁰

Certainly, the American airmen were challenged by their foes but, at times, they also achieved significant results. In fact, both sides sought to keep the initiative. Hence they triggered a technological and tactical contest. The electronic countermeasure (ECM) struggle is the most obvious example of this trend. To thwart the SA-2, US aircraft were gradually fitted with radar homing and warning (RHAW)⁴¹ to warn the crew of hostile radar lock and ECM⁴² to jam and confuse the guidance system. To counter this, the Vietnamese used a radar from a different weapon system⁴³ or switched to visual mode.⁴⁴ US pilots also learnt the basic manoeuvres to avoid 'the flying telephone pole'⁴⁵ but the defenders would then fire missiles in pairs.⁴⁶ To limit the effectiveness of anti-radiation missile (ARM),⁴⁷ a missile designed to destroy the electromagnetic guidance system, the Communists resorted on emission control, decoys and various traps.⁴⁸ Finally, to improve their bombing success, the Americans devised the precision guided missile (PGM)⁴⁹ and



to reduce the attrition rate they made use of the long range air navigation (LORAN) navigation system⁵⁰ and terrain following radar.⁵¹ Another important contest took place along the Ho Chi Minh Trail where the Vietnamese managed to overcome the dreadful and very efficient Gunship aircraft⁵² with strict discipline, duplication of tracks and tactical leadership.⁵³

In the defensive battle against enemy air power, the Vietnamese proved to be very skilful and seized almost every tactical or political opportunity to reverse their military imbalance and to raise the stakes for their foes. Nevertheless, it should also be noted that they benefited from the lack of opposing ground troops on their soil.⁵⁴ More importantly, the American ill-designed strategy of limited force preserved valuable assets such as the radar network, SAM sites in Hanoi and Haiphong or industrial infrastructure until a late stage in the Rolling Thunder campaign.⁵⁵

THE OFFENSIVE ENDEAVOUR

Hanoi also conducted an offensive campaign within its own country and in South Vietnam along with the Vietcong to establish Communist rule over a unified nation. Therefore their perceived centre of gravity was the hearts and minds of the people of both countries. Moreover the departure of the Americans was a decisive point. Hence, they needed to fight a war on their own terms rather than accept the kind of attrition warfare the US wanted to foist on them. In fact, implementing the lessons learnt during their war against the French, they resorted primarily to guerrilla and subversive warfare to circumvent the opponent's air superiority. As Liddell Hart noted '*Strategically, guerrilla action reverses the normal practice of warfare by seeking to avoid battle, and tactically, by evading any engagement where it is likely to suffer losses*'.⁵⁶ In their own country as well as in Laos, they were only opposed by air power since ground forces were not allowed to reach those areas.⁵⁷ Thus, they exploited intrinsic weaknesses of air power to wit: impermanence, detachment, cost/payload/time ratio and political constraints.⁵⁸ This enabled the Communists to support efficiently the Vietcong in South Vietnam. Moreover the side effects of air strikes fostered resistance in North Vietnam, weakened the US from within and had major political backlashes. Again the



After his aircraft is shot down, an injured US pilot is paraded through the streets of Hanoi

The population was fully armed and encouraged through various incentives to shoot attacking aircraft

Communists proved to be very clever and seized every opportunity, but they also reached their limits when they had to shift to conventional war in 1972.

Indeed, the main effort of the Communists was aimed towards the people of both Vietnams. In the North, the Communist needed to tighten their grip on the population.⁵⁹ The air strikes helped them significantly in that endeavour. On one hand, the war effort provided total employment: men, women and children alike were enrolled whether in the armed forces, the repair teams, the farms, or assigned to other essential functions.⁶⁰ The population was fully armed⁶¹ and encouraged through various incentives⁶² to shoot attacking aircraft. Along with passive measures, such as the famous shelters,⁶³ and a comprehensive alert and reporting system,⁶⁴ these measures boosted public morale.⁶⁵ On the other hand, the dispersal of the industry strengthened the party and thus the control of the population.⁶⁶ In other words, unable to thwart seriously the air strikes, the Communists nevertheless turned the consequences of these attacks towards their aim to wit: global resistance.⁶⁷ Furthermore, to counter the Vietnamisation⁶⁸ of the South, Hanoi needed to trigger political unrest and insecurity. Therefore, the Vietcong intensified the guerrilla war. Along with fresh troops, these fighters needed essentially logistic support. This was provided through the famous Ho Chi Minh Trail. This line of supply remained open despite heavy air attacks. To interdict this endeavour the US used B52s, Gunships and other aircraft to stifle obvious bottlenecks.⁶⁹ While it was a real hindrance,⁷⁰ this never completely stopped the flow because repair teams were quick and efficient,⁷¹ bypasses existed in large numbers⁷² often under a thick jungle⁷³ canopy, bicycles⁷⁴ could carry large loads and provide alternatives to vulnerable lorries and gunners cleverly defended critical nodes.⁷⁵ The Communists also launched attacks on main operating bases (MOBs)⁷⁶ in order to trigger insecurity and disruption amongst the South Vietnamese and their US allies. In this asymmetric war, they wanted to '*launch a retaliatory bombardment of their own*'.⁷⁷ Notwithstanding the little damage caused to high-value aircraft,⁷⁸ they demonstrated that their enemies were not immune and increased the costs for ground defences.⁷⁹

Similarly, Hanoi managed to reverse her foes' air superiority in the international arena. First, exploiting the havoc of the bombardment through active propaganda,⁸⁰ Hanoi managed to overturn an important part of the world's public opinion, especially the Europeans who were still aware of World War II.⁸¹ Second, they counterbalanced the destruction due to aerial bombardment by exploiting direct support from the USSR and China.⁸² More than just financial aid to compensate for the loss of their nascent industry,⁸³ they also received military equipment that was not produced in their country at the beginning of the war.⁸⁴ Third, the side-effects of air power provided some leverage to reject negotiations when deemed unfavourable, as in Paris in May 1968.⁸⁵ Fourth, and most important, the media coverage of the heavy bombardment shattered US public support,⁸⁶ and helped the Communists to achieve an important decisive point to wit: the American withdrawal. The uncensored press, boosted by the advent of satellite communication and extensive use of television⁸⁷ was primarily focused on American sensitivity. Thanks to the media's biased insight, Hanoi did not need to have a proactive relation with the correspondents, the bombing and the propaganda were sufficient.⁸⁸

As in their defensive effort, the North Vietnamese achieved progress in their offensive campaign as long as the level of needs remained low. As Pape argues: '*North Vietnam was largely immune from conventional coercion*'⁸⁹ especially air interdiction. However, in the South, they were bound to meet the limits of their strategy. There, time played against them. Although, the interdiction did not utterly stifle the Ho Chi Minh Trail, the flow of supplies was significantly reduced and diverted their energies on '*logistical realities when they would no doubt have much preferred to exploit local political and*

operational opportunities'.⁹⁰ Yet, as Liddell Hart noticed, '*guerrilla warfare must always be dynamic, and maintain momentum*'.⁹¹ Thus, to thwart the slow Vietnamisation,⁹² Hanoi had to send its own regular army, especially after the Tet Offensive in which the bulk of the Vietcong died.⁹³ A first attempt took place in 1972 in the 'Easter Offensive'. Conventional by nature on both sides, the asymmetry was this time against the North Vietnamese, and by the end of the year they agreed to take part at the Paris negotiations.⁹⁴

The Vietnamese exploited the natural fragility of aircraft by firing missiles and shooting at them from the ground and from the air

The Vietnamese exploited the natural fragility of aircraft by firing missiles and shooting at them from the ground and from the air. Determined, this nation in arms fought with whatever was available, cunningly exploiting every tactical opportunity to plug the technological gap that the Americans were trying to widen. To minimise their physical vulnerability they dispersed their assets and personnel thus rendering targets unworthy of an air attack and exceeding the limited payload aircraft could bring in theatre. Moreover, taking advantage of the impermanence of aircraft and the lack of ground forces, the hardworking Trong Son community funnelled supplies, through the Ho Chi Minh Trail, to the Vietcong. Nevertheless, it is also by luck that they painfully managed to achieve their defensive and offensive objectives. The overwhelming support from the USSR, China and East European countries kept their economy and fighting power afloat and the unleashed media, through unbalanced coverage, struck decisive blows against their foe.

For the US to seek to coerce an enemy relying on guerrilla warfare by resorting solely to air power, is like trying to bail water out of a sinking boat with a sieve; there always will be leaks. With the benefit of hindsight, the conventional asymmetry based on air superiority could not thwart the political advantage enjoyed by the Vietnamese, that is: total against limited war. Thus the North was fated to find a '*road to victory*'.

NOTES

- 1 Insight Team, *Insight on the Middle East War*, London: Deutsch, 1974, p 20-31. Explains the content and background behind Resolution 242, the ensuing negotiations and the Arab and Israeli positions.
- 2 War of Attrition: 10 April 1967-8 August 1970.
- 3 Herzog, Chaim. *The Arab Israeli Wars*. Steimatzky: A&A Press, 1982, p 207. Explains the intended effect of the Egyptian strategy of attrition on the Israeli economy and method of war fighting.
- 4 Ibid, p 213. Outlines Israeli successes and dominance during the War of Attrition.
- 5 Bulloch, John. *The Making of a War*. Chatham: Mackay, 1974, p 171. Explains the scenario behind the deployment of Soviet MiG-21s to Egypt.
- 6 Ibid p 175. Explains the background behind Sadat's assumption of the presidency on 7 October 1970.
- 7 O'Ballance, Edgar. *No Victor No Vanquished*. Novato: Presidio, 1978, p 289. Compares the relative merits of Western and Soviet aircraft in use in the Middle East 1969-1973.
- 8 Armitage Michael and Mason Tony. *Air Power in the Nuclear Age* 2nd Ed. 1985, p 121.
- 9 Hansen, James. *The Development of Soviet Tactical Air Defense*. *International Defense Review*, 1981, No5, p 533. A summary of Soviet Air Defence doctrine and the concept of layered defence.
- 10 Crabtree James. *On Air Defense*. p 152.
- 11 Herzog, Chaim. *Op Cit*, p 217.
- 12 Hansen, James. *Op Cit*, p 533.
- 13 Herzog, Chaim. *Op Cit*, p 217.

- 14 Herzog. *Op Cit*, p 226 & 229.
- 15 Kreis, John F. *Air Warfare and Air Base Air Defense 1914-1973*. Office of Air Force History, United States Air Force, Washington DC. 1988, p 321.
- 16 Hove, Paul J and Burniece, Joseph R. *Camouflage - Air Superiority Indicator? Armor*, Jul-Aug 1984, pp 16-20.
- 17 Crabtree James. *Op Cit*, p 152.
- 18 Herzog. *Op Cit*, p 277. Explains the background behind and miscalculations of the Israeli Intelligence Assessment.
- 19 Bulloch John. *Op Cit*, pp 208/209.
- 20 Ibid, p 206.
- 21 Crabtree James, *Op Cit*, p 90. It is assessed that Israel lost 10 aircraft over Sinai and 30 over the Golan on the first afternoon of the war.
- 22 Cardesman, *Op Cit* p 97,98.
- 23 Cardesman, Anthony & Wagner, Abraham: *The Lessons of Modern War*, Vol 1, 1990, p 90. Sources differ over the losses suffered during the war. The reference is based on extensive research and concludes that a total of 447 Arab aircraft were lost, against 109 by Israel.
- 24 Herzog. *Op Cit*, p 279.
- 25 O'Ballance, Edgar. *No Victor No Vanquished*. Novato: Presidio, 1978, p 294.
- 26 Crabtree James, *Op Cit*, p 156.
- 27 Crabtree James, *Op Cit*, p 153.
- 28 Carver, Michael. *War since 1945*. London: Ashfield Press, 1990, pp 267-272.
- 29 King Hussein of Jordan.

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