

STRATEGIC BOMBING-

A Shibboleth?

*The world continues to offer glittering prizes
to those who have stout hearts and sharp words¹*

Earl of Birkinhead (1872 – 1930)

By Cdr Phil Harrall AFC MPhil RN

In 1911 a Mr Francis McLean offered to instruct Royal Navy Officers in flying, using his own machine. Two hundred volunteered, out of which four were selected, one of whom was a Royal Marine.² This was the start of organized aviation by the British military, these humble beginnings saw the formation of the Royal Naval Air Service (RNAS).

During the Fleet Review of 31 July 1914 sixteen seaplanes took part in the first Royal flypast; four days later war began.³ Churchill considered that the might and power of the Zeppelin was of grave concern; this feeling was also picked up by the popular press and Zeppelin hunting became the theme of the day. Aerial defence of Great Britain was given to the RNAS whilst its sister arm the Royal Flying Corps (RFC) was tasked with supporting the Expeditionary Forces abroad.

Zeppelins had carried out a limited number of mining runs against the south east coast of England, but in the early stages of the war had not turned to effective offensive action.⁴ The RNAS had drawn up plans for attacking Zeppelins both in the air and on the ground, and the decision was taken to attack the Zeppelins in their sheds, with the first raid planned for 12 September 1914.⁵ Poor weather led to the cancellation of the raid, but it was remounted on the 22 September when four aircraft of the RNAS took off from Antwerp to attack the Zeppelin sheds at Cologne and Dusseldorf. Elementary navigation skills and poor visibility forced three of the aircraft to abort the mission and return to Antwerp, but (Flight) Lieutenant C H Collett laboured on and descended through the cloud to find his target, Dusseldorf, below him.⁶

His attack was successful leading to the destruction of a newly manufactured Zeppelin in its shed. Although of immense significance the Admiralty were unimpressed, believing that the RNAS had entered areas such as strategic bombing where the Admiralty felt it had no business.⁷ This was the first offensive

bombing attack of the war, and in the world, an act that was to lead to the use of aerial bombardment as one of the fundamental weapon of war.

LESSONS FROM THE FIRST WORLD WAR

Despite the successes of the immature aerial campaign, not all in Government or the Armed Forces appeared to be moved by this new way in warfare. Basil Liddell Hart in his book 'The British Way in Warfare' describes the lack of strategic thought in Britain post the First World War in rather a scathing manner, "But its growth was stunted by shallow thought and by slavish imitation of Continental fashions. The consequences of that malformation are to be found in the years 1914 – 1918, and have been felt ever since." It would appear that the efforts of both the RNAS and RFC had been lost to political and military infighting, or overlooked as a financial diversion of funds from the 'more important' single service projects. The emerging elements of air power, surprise, flexibility and striking power were to be cast for use in the Imperial conflicts of India. Returning to the ground campaign Liddell Hart develops the argument of one of his most famous phrases 'the indirect approach'; he states that "Reflection suggests and history confirms, that a direct approach is the worst of all military risks..." He also recognized that the advent of the aircraft "tore aside the veil which formerly had hidden strategic manoeuvres". Building on his argument and to take it one stage further, if surprise and manoeuvre are the key elements of the 'indirect approach' then the use of air power, which Liddell Hart recognized as having these elements, must be the ultimate 'indirect approach' in warfare. Liddell Hart was not alone in his expounding the virtues of this 'third element'; Douhet, Trenchard and Mitchell were busy lobbying hard for the aircraft as the new weapon of warfare.

THE SPECTRE OF DOUHET

The main influence in the use of air power and in particular the bomb came from the Italian Brigadier General Giulio Douhet who published his monograph 'Command of the Air' in 1921: a book that was more a collection of adapted writings from others, but was the first to address the problem of the aircraft and the advancement of warfare. He saw that "Aeronautics opened up to men a new field of action, the field of the air. In so doing it of necessity created a new battlefield".⁸ He thought that bomber aircraft were unrestricted by mountains, trenches, defences and distance, with the effect that battles could now be taken to the civilian population as well as attacking soldiers. He also believed that air power would dominate the land and sea power so much so that the enemy's ability to sustain war could be eliminated. Like Clausewitz he failed, or deliberately chose to ignore, the influence of technology on warfare; he also ignored such details as target selection. Douhet did acknowledge that the accuracy achieved by aerial bombing would never achieve that of the artillery fire; he ends this statement in a rather unfortunate manner "but this [accuracy] is an unimportant issue because such accuracy is unnecessary."⁹ However, his book became, almost, a bible for emerging air forces. Douhet preached a guiding principle that "The objective must be destroyed completely in one attack, making further attack on the same target unnecessary."¹⁰ He was an advocate of the use of poison gas such that a selected target area would be unusable over a period of days. This he thought, could be achieved with either delayed action fuzes or the use of large quantities of the poison. The destruction of enemy air power in the air and on the ground became a

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leading principle in Douhet's 'doctrine': "The need is not only to kill the enemy's eagles, but also to destroy the eggs and nests." He was convinced that the use of explosives, incendiary and gas weapons against civilians would cause immense fear and panic such that the population would force their governments to sue for peace. He also believed that a powerful strategic bombing force could deter potential enemies from attacking a state, a rather Clausewitzian view.

In the United Kingdom and the United States the Douhet doctrine was gathering momentum; however, other nations were not so quick to adopt the bomber as their strategic weapon. Richard Overy offers an explanation that the British were under the influence of authors such as H.G. Wells and the susceptibility of the public to the science-fiction view of air power made them somewhat sceptical to other forms of attack. Overy states that "H.G. Wells, whose 'War in the Air' published in London as long ago as 1908, painted a lurid picture of 'German air fleets' destroying 'the whole fabric of civilization'." Overy describes this fascination amongst the British and American military for the bomber as 'flying in the face of conventional military wisdom'.¹² He continues by laying the blame for such ill thought out strategy at the feet of Trenchard, "In the 1920's the RAF, and in particular its overbearing, truculent commander, Sir Hugh Trenchard, clung to the quite unproven assertion that the moral effect of bombing was twenty times greater than the effect of material damage. It was an assumption that lingered on past Trenchard's retirement in 1930".¹³ For nearly 20 years the Trenchard doctrine influenced the structure, roles and missions of the RAF and attention was focused on the development of the bomber at the expense of fighter

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aircraft, and the defence of Britain. His reasons for this approach appear to have been the success of Douhet's book and the results of bombing campaigns carried out at the very end of the First World War. The weapons used against the towns and villages were twenty-pound bombs, which caused little damage to the infra structure. However, as Alan Stephens outlines "Any reading of the news reports of the bombing attacks against England and Germany during World War I conveys the sheer panic and fear which was created...Similarly, accounts in German newspapers of ...attacks against Cologne in May 1918 spoke of 'terrible panic' and 'deadly terror', of nerves ruined for life'; while a captured letter pleaded 'It is really terrible. May God protect us from anything so awful.'"14 Trenchard used these elements to convince the Air Board that the strategic bomber and the art of bombing were the weapons of the future.

A similar chain of events was unfolding in the United States where the brilliant and emotional General Billy Mitchell was crusading for a separate Air Force in the 1920's and lost.

AIRCRAFT VERSUS SHIP

The Royal Navy (RN) was suspiciously quiet during the mid twenties whilst Trenchard was sweeping the corridors of power like an olden day 'Darth Vader', his deep booming voice all persuasive. One aspect of aerial bombardment, the role of attacks against shipping, was to spark a highly emotional and partisan debate. The Royal Navy remained convinced that aircraft were unable to sink modern warships; several trials, known as the CENTURION trials, were set up under the control of a Sub Committee on Bombing and Anti Aircraft Gunfire Experiments, or more simply the ABE.¹⁵ The United States Navy (USN) had carried out earlier anti-shipping bombing trials against two remotely controlled ships, the *Agamemnon* and *Centurion*. These targets were damaged, but did not sink immediately; however, the results proved disappointing for the air world, and perhaps gave the surface navy the wrong impression of invulnerability:

CENTURION BOMBING TRIALS ¹⁶				
Method	Height	Bombs Dropped	Hits	Hits as %
Level	16,000	72	1	1.4
Level	14,000	260	4	1.5
Level	10,000	1030	60	5.8
Level	8,000	460	58	12.5
Dive	1,500	34	128	38

These results fuelled the debate for strategic bombing of cities, towns and populations. From the data contained in the table 'level bombing', particularly from heights over 8,000 feet, produced extremely poor results. This may well have been due to the basic bombing sights and lack of understanding of the effects of wind velocity on the projectile. Once the dive bombing technique was introduced, albeit from a low level, the success rate of hits soared, the same is true today if dumb bombs were to be used against ships. However, then as now, use of this weapon aiming technique means that the delivering aircraft has to fly over the target vessel, bringing the aircraft into

the self defence umbrella of the target, thereby vastly increasing the attacker's vulnerability. Weapon effort planning also indicated that a vast number of bombs would be required to sink a vessel and the argument of payload versus fuel began in earnest. Bernard Brodie expresses concern over the lack of payload that aircraft can carry, and in particular the trade off between fuel and weapons, "For no development in aircraft or other weapons of war has nullified the tremendous bearing upon strategy of the factor of distance. Aerial bombardment can be carried on much more effectively at 300 miles than at 600, and immeasurably more effectively at 600 miles rather than 1200".¹⁷ The balance between range and payload would continue to haunt aircraft designers and strategists alike, and remains a design goal of the modern day players.

It is worthwhile looking across the spectrum of warfare and delving into some recent campaigns in which strategic bombing was thought to be an influential factor in the outcome of hostilities.

THE SECOND WORLD WAR

At the outbreak of the Second World War Germany had the most powerful airforce in the world. Experience gained during the Spanish civil war taught the Germans that support for their troops on the ground was a vital element in war fighting.¹⁸ Learning from the campaign German planners, who also believed in Douhet, tailored much of their bomber force to the tactical support of their very mobile army.

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As Operation SEA LION was put into effect Germany turned to Douhet's theories in an attempt to gain air superiority over Britain. The German bomber fleets failed to bring Britain to her knees, the Luftwaffe were unsuccessful and failed to gain air superiority. The 'rag bag' fighter force of the RAF, supported by the Fleet Air Arm, Poles, Canadians and other nations inflicted unacceptable losses on the German bombers and their fighter escorts. After the Battle of Britain had been won, Hitler turned his aerial weapons on London in an attempt to bring the population to its knees. The bombing only stiffened the morale of the Londoners and brought Britain's war effort to a higher pitch.

The RAF began daylight raids into Germany as retaliation, but because of poor navigation large positional errors built up whilst flying long ranges, and as a result the unescorted bomber forces took serious losses. The large number of aircraft losses forced a change of a tactic to the employment of indiscriminate night bombing of Germany's cities. However, this technique was generally ineffective. Sir James Cable is quite scathing of the bombing effort "The initial continental commitment and the bombing offensive seemed retrospectively – it was nearly posthumously – justified... nor could the long range bombers come near their original objectives of deterring Germany from war and preventing her conquest of Europe".¹⁹ All of these results stood in the way of Douhet's preaching.

In May 1942 a committee of inquiry into bombing accuracy, headed by Judge John Singleton, published its results: fewer than a quarter of all bombs dropped fell within 5 miles of their designated target, and only 30 percent hit built up areas.²⁰ As during the First World War and the Centurion Trials the bombsights and navigation techniques were the weak links in the delivery of ordnance.

The United States joined the war, bringing the Eighth Air Force and their B 17's fitted with the top secret Norden bomb sight, supposed to have the ability to place its bombs in a 50 foot circle from 25,000 feet. This increase in fire power and effectiveness gave the general feeling that the struggle against Germany would improve and real damage could now be inflicted. The USAAF approach reflected the Douhet dogma, but varied from the Trenchard mantra, inasmuch that they believed in attacking the industrial heartland not the population. Ball bearing factories were the famous targets of those early and disastrous raids, the USAAF believed that no tank or plane could be made without ball bearings. The RAF did have plans to attack the industrial heartland, "The Air Ministry drew up a broad list of objectives, the so-called Western Air Plans, which included Plan W5, instructions for Attacking Enemy's Manufacturing Resources in the Rhur, Rhineland and Saar".²¹ Unfortunately for the Operational Planners from both Britain and the United States the Germans had been stockpiling

ball bearings since before the war, and had alternative sources of supply from Switzerland and Sweden. The targeting doctrine had been briefed to Churchill at the Casablanca conference, and he remained unconvinced of the boldness of the implementation plan, but could not dissuade General Eaker from carrying it out.

It would be inappropriate and too demeaning to the gallant aircrews who lost their lives in the bombing missions to dwell further, but in summary three main reasons are often quoted for the failure of carpet bombing:

- a. The bombers lacked sufficient accuracy, in navigation and weapon delivery.
- b. The bombers could not survive without fighter escort.
- c. The targets and their populations were ill defined.²²

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Stirling bombers fly in close formation

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Bernard Brodie in his "Strategy in the Missile Age" sums up the bombing campaign as:

"If one disregards for a moment the overall vision and considers only specific assertions and these, one has to conclude in World War Two that Douhet was proved wrong on almost every salient point he made...To assert the reverse, as is often done, is to engage in propaganda, not analysis".²³

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In the Pacific theatre, the Americans and Japanese were almost exclusively concerned with the use of the sea for amphibious operations and aircraft carriers were the decisive factor.²⁴ Despite the war at sea Brodie's concerns with the strategic bombing campaign appeared to be reinforced. General Curtis LeMay put Douhet's theories to the ultimate test. All of Japan's major cities, except for Hiroshima and Nagasaki were burned out with conventional weapons. Napalm and a crude version of fuel-air-vapour bombs were dropped on Japan's cities generating ferocious firestorms; this form of attack became known as 'conflagrations'. The greatest number of deaths ever generated within six hours came from the fire bombing of fifteen square miles of Tokyo – the damage caused by both 'Little Boy' and 'Fat Man' and the havoc they reaped failed to match these numbers.²⁵

At the end of the Second World War Trenchard, now Lord Trenchard, published three papers, as a combined volume, in which he describes, in rather vitriolic terms, his views of the lessons learned from the air war; these are his four principles of air power:

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1. To obtain Mastery of the air, and keep it, which means continuously fighting for it.
2. To destroy the enemy's means of production, and his communications, in his own country.
3. To maintain the battle without any interference by the enemy.
4. To prevent the enemy being able to maintain the battle.²⁶

Regrettably these lessons, or more precisely thinly veiled anti Navy and Army doctrine, would not be applied to future force structures post the war. The Treasury would win the future battles for Whitehall dominance.

VIETNAM

It would appear that the lessons were not learned from the Second World War and the United States Air Force (USAF) and USN again mounted a campaign of strategic bombing. The US had air superiority, a Douhet and Trenchard mantra, but clearly lost the war. Eric Hobsbawm sums up the American lack of success in the following way, "...the USA waged ten years of major war in Vietnam itself, until it was finally defeated and forced to withdraw in 1975, having dropped more high explosives on the unhappy country than had been used in the whole of the Second World War".²⁷ General LeMay said he wanted 'to bomb the North back to the stone age', apparently unaware that the North was not developed much past that point. General Westmorland was in favour of using nuclear weapons against the North Vietnamese troops surrounding Khe Sanh, because the tactical bombers lacked payload carrying capability to deal effectively with the enemy. There was one breakthrough when a device called 'Sky Spot' was placed in the approach path of the B 52's to further refine their bomb approach runs and target solutions. This increase in effectiveness was offset by the fact that now the strategic bombers were acting like tactical aircraft – a complete role reversal. A variety of missions were flown, with limited success; the 'Match Stick'

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missions were used to destroy Vietcong caves and the 'Line Backer' series were the bombing of Hanoi. For ten years of war the conclusions drawn from the bombing campaign were very familiar; this list comes from Lieutenant Colonel M. A. Clodfelter's USAF lecture given in The Hague;

- a. Strategic heavy bombers are relatively useless in insurgent warfare.
- b. Bombing disenfranchised civilian populations is either counterproductive or ineffective.
- c. With external systems in place to improve accuracy, heavy bombers can carry out close air support missions.²⁸

Once again the Douhet doctrine was proven to be wrong. Clodfelter's lecture expanded past Vietnam into the Gulf War,²⁹ but his final remarks were extremely fitting "There are many factors that will determine whether an air campaign succeeds or fails, and how those factors are likely to affect combined operations should be thoroughly evaluated **before** the first bomb is dropped. Air Power cannot achieve victory alone".²⁹ I should add that Lieutenant Colonel Clodfelter and I were the only speakers to cast doubt on air power as the saviour to the military planners' dreams.

THE GULF WAR

The bombing campaign during Operation DESERT STORM was probably the best organized and executed set piece of air power so far. Colonel Deptula in his presentation to the Royal Netherlands Air Force Colloquium introduced the term parallel warfare, "The first night of the Gulf War air campaign signalled a radical departure in the conduct of war. One hundred and fifty two discrete targets – in addition to regular Iraqi army forces and SAM sites – made up the master attack plan for the opening 24 hours. The war began with more targets in one day's attack than the total number of targets hit by all the Eighth Air Force in 1942 and 1943 – that's more separate targets attacked in less time than ever before in history".³⁰ With an Air Tasking Order, the daily flying programme allocating aircraft to targets, over 600 pages long, and forces dispersed over four

countries and three aircraft carriers, the management of the daily plan was crucial to its success. Aircraft had to be at their attack gates, tanker lines, AEW barriers or SAR holding points on time or the plan would not have worked. The Commander of the British forces Middle East, General Sir Peter De La Billere, commented that "The air attack on Iraq was by far the most intense in the history of warfare, an operation of considerable complexity in which Allied aircraft flew over 3000 sorties during each twenty four hour period".³¹

Again the strategic bombing card was played, this time to bring the Iraqi army, and in particular the Republican Guard, to its knees, a true Douhet concept. However, once again the B 52s flying incredibly long sorties, proved that shifting sand from one corner of a desert to another was boring sport and the effect on the Republican Guard was limited. However, some twenty-five days, or so, of round the clock bombing began to take its toll on morale of the Iraqi army.

More success was achieved by the tactical bombing aircraft that flew in at high speed, low level and exited on completion of their bomb run at even higher speeds! The use of external, and in some cases internal devices, also proved the trump card in tactical strikes. Laser designation from the ground or from onboard sensors allowed some of the pin point accuracy, as shown on CNN during their daily summaries, to happen. It is worthy of note that a thirty year old naval aircraft, the Buccaneer, was brought in to assist the more modern Tornado in improving attack accuracy!

Target selection and the allocation of weapons was the 'brain child' of Colonel John Warden. He and his staff planned the air campaign around the clock with meticulous detail and with a target selection theory based, again, on Clausewitzian ideals. Warden discusses the importance of the 'Centre of Gravity' and attacks on the Command and its information spheres.³²

Poor weather and poor intelligence, or use of that intelligence, prolonged the air campaign. Several of the main targets of industrial importance survived and the Republican Guard, General Colin Powell's highest priority target,³³ lost only 30 – 40% of their fighting effectiveness. The open press claims that no Scuds were hit from the air; this may well be the case, but a large number of trucks, decoys or otherwise, were attacked and destroyed in the western sector. One mobile unit was destroyed by ground fire (Milan missile) in an ambush carried out by the Special Air Service.

Despite the upbeat articles in the press and the rather sycophantic books produced after the campaign it would appear that some of the lessons of the past are still being relearned. In a rather scathing article in the United States Naval Institute journal 'Proceedings' Colonel Riccioni produced a thought provoking summary in which he gives the following:³⁴

- a. Bombing cities and killing the innocents and the disenfranchised in enemy countries – ruled by despots or not – is either counterproductive or ineffective.
- b. The past failures of heavy bombers are: they were not survivable in autonomous operations: they were inaccurate, and the wrong targets were selected or were given the wrong priority.
- c. The common-sense weapons of a sane future are conventional. The need for long range strategic bombers to carry nuclear weapons has atrophied severely.
- d. Strategic bombers will have little effect in wars of religious fervour; in combating undeveloped countries; and insurgent guerrilla wars.
- e. History has proved Douhet wrong on essentially everything he believed.

An interesting summary that bears a striking resemblance to those of the Second World War and the Vietnam war above, perhaps now the days of the strategic bomber are numbered.

THE BALKANS

Lessons from the past were being learned and when NATO decided to take action in Bosnia the hard learned factors of previous campaigns were applied. Douhet's initial avoidance of the importance of target selection had grown throughout the Second World War with such plans as British Air Ministry's Plan W5, for attacks against the German industrial heartland, which were similar in intent to those drawn up by the Eighth Air Force. The concept of parallel warfare had been born during the Gulf War, although it is probably a phrase borrowed from industry where parallel, or concurrent, engineering has long been accepted as a best practice. In the Balkans coalition warfare was considered to be the way ahead, Douhet covered this form of 'jointery', albeit combining the Navy, Army and Air Arm of his own nation, but the words could be applied to modern times "More than anyone else, I have always asserted that the three armed forces constitute an indivisible whole, a single three pronged instrument of war."³⁵

The Bosnian campaign was a truly joint operation modelled on the previous successes enjoyed during the Gulf war. Initially it was an air superiority battle, perhaps along the lines of Trenchard's four principles; once command of the air had been 'won' the air effort was switched to close air support of the ground forces



The Bosnian campaign was a truly joint operation modelled on the previous successes enjoyed during the Gulf war. Initially it was an air superiority battle, perhaps along the lines of Trenchard's four principles; once command of the air had been 'won' the air effort was switched to close air support of the ground forces. During this phase of the operation strategic bombing was not employed; the powerful B 52's had no role to play in an arena that demanded precision guided weapons. In an interview with Commander Mark Boast, a former Sea Harrier pilot, the bombing that was eventually authorized by the political masters was executed by the tactical aircraft, using precision weapons, or under the direction of the ground forces, as Forward Aircraft Controllers.³⁶

On the political front the air planners faced something of a dilemma: if the war was a consequence of endemic cultural forces, then it had no culprits. All sides were equally guilty and equally innocent – victims of forces beyond their control.³⁷ The roles and missions of the air forces and ground forces were to become confused: who was the enemy, where was the enemy, and is the primary mission peacekeeping or the more vigorous peacemaking? As Owen further expanded the political and military balance during the operation he summarized the major study observations as "...the determined and robust character of DELIBERATE FORCE was essential to its near term success. The campaign's objectives were limited but, to achieve them, NATO airmen had to be free to make their plans and execute their operations within the full limits of appropriate boundaries of political objectives and the laws of war."³⁸ It leaves one wondering if the operation could have been better executed if decisions were not being made by political committees several hundred miles from the front line. Political interference, in whatever form, either as high level committees 'spinning' press releases, or multi-national target selection panels, are not new in warfare. Clausewitz complained of similar problems: perhaps the political dimension should be added to his description of the 'fog of war', or to bolster the factors that cause 'friction'. Whilst it would be easy to snipe at the politicians and their conduct during this campaign, Sir James Cable uses an example of Suez to highlight the political mishandling of that era: "The ineptitude of Britain's political leaders has rightly attracted so much of the blame for the debacle of Suez that it is sometimes forgotten that they were never offered the only option that stood any chance of working: immediate military intervention."³⁹ It would appear some things never change. The execution of warfare involving control of assets by the Security Council, the European Union, NATO Headquarters and the Western European Union would follow the NATO airmen from one part of the Balkans to another, the battle within the Former Republic of Yugoslavia shifted south east to the recently independent Kosovo.

Much has, and still is being written on the Kosovo campaign, covering aspects from the length of the air war to the use of ground troops. There are two distinct camps involved in the analysis of the air war, those who favour the re-emergence of the all powerful Douhet tool of warfare, and those who want to try and understand why the campaign took so long and produced very poor

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results. There is no doubt that the Serbian army left Kosovo with the vast majority of its armour intact. Detailed information is conflicting at best, sketchily put together and definitely in one or other of the camps. It is not my intention to cover the ground that is being ploughed as I write, but when viewed with the lessons from the campaigns previously discussed I offer the following thoughts. The B 52s were involved, but as tactical aircraft deploying cruise missiles, this was a 'missile' war. Tactical aircraft executed the majority of the precision strikes, F 15s, F 16s and the F 117A 'Nighthawk' all veterans of the Gulf war. The targeting philosophy appeared to be based on the John Warden principles, and it is worthy of note that these same principles failed to meet their time lines during the Gulf campaign. The control of operations was, again, vested in political committees, the static friction from the Bosnian operation was again prevalent during this combat phase. Tim Judah sums up this feeling of frustration "Meanwhile, after four weeks of air war against Serbia, Milosevic was more powerful than ever. The effect of the bombing had been to consolidate support around him and to silence dissent."⁴⁰

That the air campaign brought the war to conclusion is true; however, the time taken to achieve such an outcome must be questioned, and further analysis is required.

This is not an attempt to discredit what has happened in the past. I have only highlighted what I consider the foolhardiness of some who have followed the words of a monograph, a dream, and attempted to make it a science.

Were Douhet, Mitchell and Trenchard all wrong in their approach to warfare? Probably, their work was conceived in a time of great tactical forethought. On land Clausewitz and De Jomini were being revived, Basil Liddle Hart was espousing his doctrine of the 'Indirect Approach in Warfare' and the maritime world had both Mahan and Corbett to worship. Alex Danchev in his biography of Liddle Hart used the phrase "Rub the lamp of recent historical controversy and out will come a genie called Basil. Strategic overstretch, imperial overstretch, the tradition of appeasement, the audit of war, war by timetable...all of these were seeded by the master."⁴¹ The period of the late 1919 and early 1920's must have been a time of great debate, with each 'camp' developing its own followers.

It could be argued that the use of aerial bombardment is the ultimate indirect approach, striking the enemy in the Liddle Hart flanks.

Air warfare has evolved at a rapid pace, technology has influenced its development, but the old Douhet and Trenchard parochial air force arguments continue to raise their heads at times of financial restraint and post campaign analysis. As the opening lines of this paper say about stout hearts and sharp words, Bernard Brodie perhaps sums this form of unhelpful 'in fighting' by quoting George Santayana thus "Pugnacious people will assume that you mean more than you say, and are attempting to smuggle in some objectionable dogma, under your truisms. Finally, docile minds, pleased to think you are delivering an oracle for their edification, will bow before your plain words as before some sacred mystery."⁴²

As a fitting endnote Sir James Cable's summary of the twentieth century appears appropriate, "The twentieth century has been a period of galloping change in almost every sphere of human activity. It has bustled with wars, revolutions, scientific discoveries, social and technological innovations."⁴³

Air power has evolved, but strategic bombing is a shibboleth; let the tactical aircraft have their day.

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