CHAPTER ONE

AIR POWER AND WEST ASIAN SECURITY

"'In the air are no streets, no channels, no points where one can say of an antagonist, if he wants to reach my capital he must come by here; in the air all directions lead everywhere.'"

- H. G. Wells

"'The only security upon which sound military principles will rely is that you should be master of your own air.'"

- Winston Spencer Churchill

Section One - Introduction

BRIEF REVIEW OF AIR POWER CONCEPTS AND DOCTRINE

Air power is the product of the scientific, industrial, and technological revolutions of the nineteenth and twentieth centuries. It came into being at 10:35 A.M. on December 17, 1903, when Orville Wright soared into the air in the first heavier-than-air machine at
Kittyhawk, North Carolina in the United States.¹ During the Great War (1914-1918), air power was employed to support ground forces, and the experience gained during that war led the major powers to critically examine and conceptualize the role air power could play in the future.

Among those who contributed immensely in this field, were Giulio Douhet, Lord Trenchard, "Billy" Mitchell, and Alexander P de Seversky. "The Command Of the Air" doctrine of Douhet is still considered relevant, though air power by itself cannot win wars as predicted by him.²

However, at the end of the Second World War, the bombing of Hiroshima and Nagasaki by the United States Air Force, may be said to have proved Douhet's doctrine to some extent, since it brought about the unconditional surrender of Japan.

During the Second World War air power emerged as the dominant force in a three-dimensional warfare. The Battle of Britain, the bomber offensive against Germany, and Japan, the air war over the Atlantic against German U-boats, the German air-borne invasion of Crete, the employment of air power in the Western Desert in support of the ground forces during North African campaign and the airborne and seaborne invasion of Europe in 1944 ending with the atomic bombing of Hiroshima and Nagasaki in 1945, would remain important landmarks in the evolution of air power. The rapid growth of air power during this century is symbolised by the first flight of only 12 seconds at Kittyhawk in 1903 and the atomic bombing of Japan by US B-29 bombers in 1945, in a short period of just 42 years.

After the Battle of Britain in 1940, when it was clear that the Royal Air Force Fighter Command had wrested daylight air superiority from the Luftwaffe over Britain and Hitler's dream of invading Britain had been shattered, Winston Churchill, the war-time Prime Minister of Britain paid the following tribute to the British airmen:

"The gratitude of every home in our Island, in our Empire, and indeed throughout the world, except in the abodes of the guilty, goes out to British airmen who, undaunted by odds, unwearied in their constant challenge and mortal danger are turning the tide of world war by their prowess and by their devotion. Never in the field of human conflict was so much owed by so many to so few."

Later, while delivering the Mid-Century Convocation Address of the Massachusetts Institute of Technology in Boston on March 31, 1949, Winston Churchill, then the leader of the Opposition in the British House of Commons, made the following forecast on the growing impact of air power, a symbol of the cutting edge of high technology, on the nature of warfare:

"The conquest of the air and the perfection of the art of flying fulfilled the dream which for thousands of years had glittered in human imagination. Certainly it was a marvelous and romantic event. Whether the bestowal of this gift upon an immature civilisation

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composed of competing nations whose nationalism grew with every advance of democracy and who were devoid of international organisation, was a blessing or a curse has yet to be proved. On the whole, I remain an optimist. For good or ill, air mastery is the supreme expression of military power, and the armies and fleets, however necessary and important must accept a subordinate rank. This is a memorable milestone in the march of man.''

Major Alexander P de Seversky, a leading proponent of air power before and after the Second World War, whose books, Victory Through Air Power, and Air Power: Key to Survival, have been widely read and discussed, defined air power as follows:

'Air Power is the ability of a nation to assert its will via the air medium. The military instrument by which a nation applies its air power is an air force. In time of peace the very existence of an air force of proper size and capability - what is termed as an air force in being can be used by a country to implement its national policy.''

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The history of the Armies and the Navies is as old as the civilisation itself. Air power, which is still in its first century, and considered to be the leading edge of new technology, has transformed itself into aerospace power. Air power has truly revolutionised the nature of warfare on the land and at sea. Its inherent characteristics of surprise, concentration of firepower in time and space, mobility, reach, and flexibility make it ideally suited as a conventional deterrent, and a rapid reaction force to bring about a quick decision in conjunction with ground and naval forces.

After the Second World War, air power has played a key role in conflicts in Korea, Vietnam, West Asia, South Asia and the Falklands. The recent Gulf War between Iraq and the Multi-National Forces (MNF) led by the United States has proved Douhet's doctrine of winning victory by air power alone. A total of more than 110,000 sorties flown by MNF against targets in Iraq, achieved complete air superiority within the first two days, and neutralised the Iraqi war fighting machine by surgical and discriminate attacks on Iraqi air bases, air defence organisation, command and control centres and communications; thereafter, the land battle lasted just
100 hours with hardly any casualties.\textsuperscript{6}

The doctrine of "The Command of the Air" conceptualised by Giulio Douhet implied unrestricted air, ground, and sea operations without interference from the enemy air force, while at the same time preventing the enemy air, ground, and sea forces freedom of action by using own air power to deny them this freedom. Following "Command of the Air" an independent air force would be able to destroy an enemy nation by attacking transportation lines and population centres. Given the inherent capabilities and characteristics of air power and from the experience gained during World War II it was found that these objectives could be achieved by the air force in the following roles.

1. Air defence of home territories and tactical areas.

2. Counter-air operations.

3. Air offensive against strategic targets.

4. Interdiction operations.

\textsuperscript{6} Price T Bingham (Lt Col USAF), "Air Power in Desert Storm and the Need for Doctrinal Changes", \textit{Air Power Journal} Winter 1991, p. 44.
5. Air operations in support of the Army and Navy.
6. Strategic and tactical reconnaissance.
7. Air transport support operations.

**IMPACT OF NEW TECHNOLOGIES**

The roles of air power mentioned above have evolved from the experience during the Second World War. The capability of air power in these roles has been greatly enhanced due to the new technologies which have emerged since 1945. Of all the fighting services, air power has been the greatest beneficiary of this technology explosion caused by carbon-fibre materials, high-grade heat-resisting titanium alloys, integrated micro-chips, and mini-computers.

Some of the end-products of these new technologies, which have a force-multiplier effect, are as follows.

1. **Electronic Warfare (EW):** Electronic support measures (ESM), Electronic counter measures (ECM), and Electronic counter-counter measures (ECCM). These create a friendly or hostile "Electronic environment".

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2. **Airborne Warning and Control System (AWACS)**: Airborne radar platforms like E-3A (Sentry) and E-2C (Hawkeye) provide early warning, surveillance, control and air interception capability.

3. **Guided Missiles**: Surface-to-air, surface-to-surface, air-to-surface, and air-to-air. Most of these are IR/radar/laser guided and provide a high single shot kill probability.

4. **Stand-off Weapons**: These enable aircraft to attack heavily defended targets without coming over the lethal zone of ground-based anti-aircraft weapons.

5. **Precision Guided Munitions (PGMs)**: Because of their accuracy they drastically cut down the number of aircraft and weapons required to destroy a target.

6. **Inertial Navigation, target acquisition and Attack systems**: (Integrated micro-chip technology) These systems provide for all-weather, day and night combat operations and enable aircraft to reach target area, acquire target and release weapons without visual contact. (forward looking infra-red radar - FLIR, and low-altitude navigation and targeting infra-red for night - LANTIRN).

7. **Space Satellite Systems**: for navigation,
communication, electronic monitoring and reconnaissance.

8. **Stealth Technology**: B-2 bombers and F-117A stealth fighters cannot be detected by radar and thus avoid interception by enemy fighters or ground-based anti-aircraft weapons.

9. **In-Flight Refuelling**: Gives large increase in combat ranges of aircraft.

10. **Command, Control, Communication and Intelligence Systems**: (C'3'I). These provide real time intelligence, and command and control facilities to operational HQ, thus enabling quick reaction to emerging threats. For this function the US has developed Joint Surveillance and Target Attack Radar System (Joint STARS), and the Joint Tactical Information Distribution System (JTIDS).

11. **Remote Piloted Vehicles (RPVs)**: For electronic surveillance, communication, and electronic warfare. These are also known as unmanned air vehicles (UAVs).

The impact of new technology on weapons and equipment, some of which are briefly described above, provides new and enhanced roles and capabilities to air
The new technology makes air power the dominant force in modern warfare and, therefore, calls for a review of role capability, doctrine, and organisation of air power in particular, and the armed forces in general, in order to achieve political objectives during hostilities at a minimum cost.

Scheme of Study

It is proposed to conduct a critical evaluation and analysis of the air power employment in the Arab-Israeli War of 1973, also known as the Yom Kippur War. It was a war fought in the most explosive region of the world, and the air and tank battles were the most intense since the Second World War. Almost all the weapon systems produced by new technologies were used during this war for the first time. The Arab-Israeli conflict of 1967 as well as the subsequent ‘War of Attrition’ will be briefly examined to study arms transfers to the region and the evolution of air power strategy based on the lessons of the previous wars in the same region with the same participants.

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The lessons learnt by Israel and the United States from the use of high technology weapons in the Arab-Israeli War of 1973 helped them to evolve suitable doctrines and organisation for conducting the air war in the Bekaa Valley in 1982 and the 1991 Gulf War. The employment of air power in the recent Gulf War between the Multi-national Forces and Iraq is considered to be an important milestone in the evolution of warfare during this century. It has brought about a total revolution in the nature of warfare.⁹

A critical analysis is needed of the use of air power in all its aspects to focus and highlight the impact of new technology weapons on the role performance, operational effectiveness of air power in war and to make wars less costly affair. It must, however, be emphasised that the primary objective of all armed forces, including air power is to act as a deterrent and to prevent wars by forcing opponents to seek peaceful solutions to disputes.

It is the view of many military thinkers that the new technology weapons have brought about a ‘‘military revolution’’ and changed the nature and dimensions of military conflict.\textsuperscript{10} And, therefore, for cost-effective employment of new technology weapons now available with air power, a new operational doctrine and a new organisational structure is required which could fully exploit the new performance capabilities.

A case study of the Arab-Israeli War of October 1973 would call for a brief review of the evolution of air power during the first and the second World Wars with a focus on the emergence of air power doctrines and organisations for its effective employment. Further, the employment of air power in West Asia during the same period would provide a suitable backdrop to the study of its use in the Arab-Israeli Wars. It would be necessary to examine the causes of political confrontation in the West Asian region so that the military conflicts could be analysed for their impact on regional politics.

In the second chapter of the study it is proposed

\textsuperscript{10} AGB Vallance (Gp Capt RAF) ‘‘Air Power in the Gulf War’’ \textit{Trishul} vol. IV, no I. July 1991, p. 88.
to consider the transfer of new technology weapons to
Israel and its Arab neighbours by the United States and
USSR. The Arab-Israeli War of 1973 will be covered in
its general aspects and in particular, the air strategy
on both sides and its influence on the progress of the
war and its outcome, and the lesson learnt in the next
chapter. The last chapter would contain an analysis of
the new technology weapon performance and the consequent
need for any doctrinal and organisational changes at
different levels of management in general and air power
management in particular in the backdrop of 1982 Bekaa
Valley operations and the Gulf War of 1991. And finally,
modern air power for India will be examined in the
context of South Asian Security environment.

Section Two -- Evolution of Air Power, its
Doctrine, and Organisation, 1914-1945

Air Power In the First World War

The first operational use of aircraft was during
the Great War of 1914-1918. At this stage of aircraft
development air power was still in its infancy and could
not have a decisive effect in its own right. Air Forces
were used mainly in support of the army for
reconnaissance, artillery observation and tactical close
cooperation. The composition of the Royal Flying Corps (RFC), a part of the British Army in March 1918 was as follows: of a total of 1,232 aircraft, 409 (33%) were earmarked for army cooperation, 610 (50%) for air superiority over the tactical area, and 213 (16%) for bombing missions.\textsuperscript{11}

On the American side, when the war ended, there were 45 US air squadrons with 740 aircraft and 767 pilots. During the war, American aircraft shot down 781 enemy aircraft and destroyed 73 enemy balloons; the losses suffered by the US were 284 aircraft and 48 balloons.\textsuperscript{12} The American aircraft flew 150 bombing raids and dropped 275,000 pounds of explosives. The American aircraft factories, during the war, had produced a total of 11,760 aircraft of different types, but in Europe the Allied Expeditionary Force had 6,284 aircraft of which 4,791 were French, 261 British, 19 Italian, and 1,213 American.\textsuperscript{13} Aircraft production by major powers between

\textsuperscript{11}

\textsuperscript{12}

\textsuperscript{13}
Ibid.
1932-1939 and between 1939-1945 is given on the following pages.

The great mobility of aircraft and its reach made it an ideal platform for observation and reconnaissance. Right from the beginning of the war it was extensively used in this role. However, in the tactical area, the enemy aircraft were waiting to spot it and drive it away, and the method to do this was to shoot them down. For this purpose machine-guns were fitted to the aircraft. So the observation and combat roles evolved together in the confines of the tactical area while giving close support to the land forces. Subsequently, bombing missions against supply depots, headquarters, railheads, were termed as interdiction missions. When German aircraft carried out bombing mission over Britain, there appeared a new and independent role for aircraft, that of strategic bombing of targets deep inside the enemy country.14 The Memorandum of Field Marshal Smuts, which gave birth to the Royal Air Force on April 1, 1918, presented aerial warfare as follows:

Table 1 Aircraft Production of the Powers, 1932-1939

<table>
<thead>
<tr>
<th></th>
<th>1932</th>
<th>1933</th>
<th>1934</th>
<th>1935</th>
<th>1936</th>
<th>1937</th>
<th>1938</th>
<th>1939</th>
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<tbody>
<tr>
<td>France</td>
<td>(600)</td>
<td>(600)</td>
<td>(600)</td>
<td>785</td>
<td>890</td>
<td>743</td>
<td>1,382</td>
<td>3,163</td>
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<tr>
<td>Germany</td>
<td>36</td>
<td>368</td>
<td>1,968</td>
<td>3,183</td>
<td>5,112</td>
<td>5,606</td>
<td>5,235</td>
<td>8,295</td>
</tr>
<tr>
<td>Italy</td>
<td>(500)</td>
<td>(500)</td>
<td>(750)</td>
<td>(1,000)</td>
<td>(1,000)</td>
<td>(1,500)</td>
<td>1,850</td>
<td>(2,000)</td>
</tr>
<tr>
<td>Japan</td>
<td>691</td>
<td>766</td>
<td>688</td>
<td>952</td>
<td>1,181</td>
<td>1,511</td>
<td>3,201</td>
<td>4,467</td>
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<tr>
<td>U.K.</td>
<td>445</td>
<td>633</td>
<td>740</td>
<td>1,140</td>
<td>1,877</td>
<td>2,153</td>
<td>2,827</td>
<td>7,940</td>
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<tr>
<td>United States</td>
<td>593</td>
<td>466</td>
<td>437</td>
<td>459</td>
<td>1,141</td>
<td>949</td>
<td>1,800</td>
<td>2,195</td>
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<tr>
<td>USSR</td>
<td>2,595</td>
<td>2,595</td>
<td>2,595</td>
<td>3,578</td>
<td>3,578</td>
<td>3,578</td>
<td>7,500</td>
<td>10,382</td>
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</table>

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<th></th>
<th>1939</th>
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<th>1941</th>
<th>1942</th>
<th>1943</th>
<th>1944</th>
<th>1945</th>
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</thead>
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<tr>
<td>United States</td>
<td>5,856</td>
<td>12,804</td>
<td>26,277</td>
<td>47,836</td>
<td>85,898</td>
<td>96,318</td>
<td>49,761</td>
</tr>
<tr>
<td>USSR</td>
<td>10,382</td>
<td>10,565</td>
<td>15,735</td>
<td>25,436</td>
<td>34,900</td>
<td>40,300</td>
<td>20,900</td>
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<tr>
<td>Britain</td>
<td>7,940</td>
<td>15,049</td>
<td>20,094</td>
<td>23,672</td>
<td>26,263</td>
<td>26,461</td>
<td>12,070</td>
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<tr>
<td>British Commonwealth</td>
<td>250</td>
<td>1,100</td>
<td>2,600</td>
<td>4,575</td>
<td>4,700</td>
<td>4,575</td>
<td>2,075</td>
</tr>
<tr>
<td>TOTAL ALLIES</td>
<td>24,178</td>
<td>39,518</td>
<td>64,706</td>
<td>101,519</td>
<td>151,761</td>
<td>167,654</td>
<td>84,806</td>
</tr>
<tr>
<td>Germany</td>
<td>8,295</td>
<td>10,247</td>
<td>11,776</td>
<td>15,409</td>
<td>24,807</td>
<td>39,807</td>
<td>7,540</td>
</tr>
<tr>
<td>Japan</td>
<td>4,467</td>
<td>4,768</td>
<td>5,088</td>
<td>8,861</td>
<td>16,693</td>
<td>28,180</td>
<td>11,066</td>
</tr>
<tr>
<td>Italy</td>
<td>1,800</td>
<td>1,800</td>
<td>2,400</td>
<td>2,400</td>
<td>1,600</td>
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<tr>
<td>TOTAL AXIS</td>
<td>14,562</td>
<td>16,815</td>
<td>19,264</td>
<td>26,670</td>
<td>43,100</td>
<td>67,987</td>
<td>18,606</td>
</tr>
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</table>

'As far as can at present be foreseen there is no limit to its future independent war use. And the day may not be far off when aerial operations with their devastation of the enemy lands and the destruction of industrial and population centres on a vast scale may become the principal operation of war, to which the older form of military and naval operations may become secondary.'

Maj General Hugh M Trenchard was given the command of the Royal Air Force which emerged from the fusion of the Royal Flying Corps and the Royal Naval Air Service. In the history of the evolution of air power Lord Trenchard is regarded as the father of the Royal Air Force and a champion of an independent Air Force whose main task was to gain and retain the 'Command of the air'. Soon after, the US Government removed the responsibility of managing military aviation from the Signal Corps of the US Army and formed a new Army Aviation Corps.

Air Power Concepts 1918-1939

It is interesting to read in the same report of General Smuts predictions of great vision and insight about the growing importance of air power. The Report stated that, "It is important for the winning of the war that we should not only secure air predominance, but secure it on a very large scale; and having secured it in this war we should make every effort and sacrifice to maintain it for the future. Air supremacy may in the long run become as important a factor in the defence of the Empire as sea supremacy." 17

Subsequently, conceptual thinking about the doctrine of air warfare was crystallised by General Giulio Douhet, an Italian ex-cavalry officer, who wrote several books on the subject of air power and its effective employment. His views were the outcome of the experience gained of air warfare during the First World War. He predicted that like the land and sea, the sky had also become a vast and limitless battlefield. He felt that an independent air force, taking offensive action against the enemy could achieve decisive results. There were no

land frontiers or sea coasts to put any limitations to the movement of aircraft, and, therefore, a nation after obtaining 'command of the air' could mount aerial strikes against the population centres of the enemy to break the morale of the civilians. Recapitulating his views on the doctrine of air power, in his well known book, *The Command of the Air*, Douhet stated that, "the purpose of aerial warfare is the conquest of the command of the air. Having the command of the air, aerial forces should direct their offensive against surface targets with the intention of crushing the material and moral resistance of the enemy, and the only effective instrument for carrying out these purposes is an independent air force." 

When Italy joined the war in 1915, Douhet had already formed his basic ideas about air power and called for the bombing of the centres of population to break the morale of the people and thus force surrender. The military leadership in Italy, however, did not agree with his views, and for criticising that leadership Douhet

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18 Douhet, n. 2. p. 211.
19 Emme, n. 3, p. 168.
was court-martialed and sent to prison for a year. He was recalled to the service in 1918 and promoted to general officer in 1921 when he published his famous treatise *Command of the Air.*

Douhet's thinking postulated in his book had a tremendous impact on air power doctrine and organisation. His ideas were widely circulated and discussed in the higher echelon of the military services in the United States, Britain, France, and Germany. An American General called his book "'an excellent exposition of certain principles of air war.'" Commenting on Douhet's ideas on air power, after the Second World War, Bernard Brodie, a well-known American strategist gave the example of the Battle of Britain which "'resulted in an outright victory for the defence- and the attacking Germans were at that time quite literally following Douhet's precepts.'" Yet at the same time "'his insights are more impressive than his failures,'" and his "'thoughts are actually more valid

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20 Douhet, n. 2, p. viii
21 Futrell, n. 12, p. 35.
today than they were during his lifetime.' Brodie felt that compared to Billy Mitchell, Douhet's ideas did not become dated but remained valid even today.²²

Brig General William Mitchell of the United States was a contemporary of Douhet but a more active campaigner of the importance of air power. He agreed with Douhet, though not with the same confidence, about the effectiveness of attacking enemy's economic and industrial centres. Such attacks, he felt would affect enemy morale and bring about surrender of the enemy.

'In future the mere threat of bombing a town by an air force will cause it to be evacuated, and all work in the factories to be stopped. To gain a lasting victory in war, the hostile nation's power to make war must be destroyed, - this means the factories, the means of communications, the food producers, even the farms, the fuel supplies, and the places where the people live and carry on their daily lives. Aircraft operating in the heart of an enemy's country will accomplish this

object in an incredibly short space of time.''.  

General 'Billy' Mitchell was a military pilot with a great deal of experience of air operations in war and closely concerned with the problems of such operations. He, therefore, took full advantage of his experience, to develop doctrines of tactical air warfare. He was the first to think of using parachute troops behind enemy lines in 1918. Most of his predictions about the capability of air power came true during the Second World War and the new technology of today has made possible his dream of 'global reach: global power'.

Along with Douhet and Mitchell, Sir Hugh M Trenchard, first Marshal of the Royal Air Force was one of the leading proponents of use of air power as an independent arm and a dominant military arm of the future. Trenchard had to fight continuously for ten years to maintain an

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independent status during these years of his command of the Royal Air Force.

Writing after the Second World War, Trenchard stated that in modern times it was essential to control the air before effective operations on the land, on the sea, or in the air itself. He set out the four principles on the use of air power as follows:

1. To obtain mastery of the air, and to keep it, which means continuously fighting for it.
2. To destroy the enemy's means of production and his communications in his own country, that is, by strategic bombing force.
3. To maintain battle without any interference from the enemy, which means to enable the commanders to build up colossal supplies and reinforcements necessary for the battle, and to be able to maintain them without interruption by the enemy.
4. To prevent the enemy being able to maintain the battle, that is, to prevent him to build up adequate supplies for his armies or navies or air forces.\(^\text{25}\)

The last of the four, who made a valuable contribution to the basic ideas on the use of air power between the two world wars, was Alexander de Seversky, a Russian military pilot during the First World War and later an inventor, and an aircraft designer. He formed his concepts on the use of air power in war and articulated them with great effect.26

His ideas are very similar to those of Mitchell's and the main difference between him and the others is his vision of air power with global reach. He was the first to visualise the likely capability of aircraft for non-stop flight around the world.

"From every point of the compass—across the two oceans and the two Poles—giant bombers, each protected by its convoy of deadly fighters, converge upon the United States of America. There are thousands of these dreadnoughts of the skies. Each of them carries at least 50 tons of streamlined explosives and a hailstorm of light incendiary bombs.... With the precision of perfect planning, the invading aerial giants strike at the nerve

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Alexander P de Seversky, *Victory Through Air Power* (New York, 1942)
centres of a great nation. Unerringly they pick their objectives....The havoc they wreak is beyond description. New York, Detroit, Chicago and San Francisco are reduced to rubble heaps in the first twenty-four hours. Washington is wiped out before the Government has a chance to rescue its most treasured records.'''

Almost all the advocates of air power were great visionaries. They claimed capabilities for air power which were not a possibility at that time because of the then state of technology, though air power itself remained the cutting edge of new technology from its origin to the present day. Their vision which appeared unduly optimistic in 1952, has now been realised as evident from the air power operations in the Gulf War of 1991.28

Air Power in the Second World War

The ideas and concepts of Douhet, Trenchard, Mitchell and Seversky on the employment of air power in war had a tremendous influence on the organisation and conduct of air warfare during the Second World War. The Air

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  ibid, pp. 7-8.
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Forces were in most cases organised independently of the Army and the Navy. The United States also organised an independent Air Corps before the war which became totally independent after the war ended in the form of United States Air Forces. The primary roles of air forces during the Second World War were also generally based on the ideas of air power advocates. Strategic bombing of population centres, industrial complexes, and communication networks became the primary role for all the air forces. Air defence against such attacks obviously became the role next in importance. The bombing raids over Germany and Japan by the Royal Air Force and the American Air Force and the bombing raids over Britain by the German Air Force as well as the air defence measures taken against these raids by both sides were aimed to achieve the 'command of the air' as advised by Douhet and others. A great deal of data was collected after the war regarding the results of strategic bombing which was later used in the British and American Strategic-Bombing Surveys. The claims made for the effectiveness of strategic bombing, on the whole were not inflated.\(^\text{29}\)

The British Bomber Command "made a contribution to victory which was decisive." The word "decisive" was used also by the American survey. In a report on the Pacific campaign, there was an interesting comment about the impact of strategic bombing on Japan: Even if there had been no atomic bomb and no Soviet declaration of was against the Japanese, "air Supremacy over Japan could have exerted sufficient pressure to bring about unconditional surrender and obviate the need for invasion."

But the Strategic Bombing Survey also revealed that the morale of German and Japanese workers was not shattered and that they worked harder than before. The results of strategic bombing were a bit ambiguous. Later claims of the American Air Force were at last partly self-serving-related to the post-war defence budgets. It is the view of many experts that it is the atomic

31 Wesley Frank Craven and James Lea Cate (eds), The Army Air Force in World War II 7 vols (Chicago, 1958) V, p. 756.
bombs which rescued strategic bombing from the oblivion it deserved.

The air defence role of air power was demonstrated during the Battle of Britain when RAF Fighter Command along with air defence artillery, a chain of radar stations and the Royal Observer Corps foiled the German strategic air offensive against Britain and prevented Germany from obtaining air supremacy necessary for launching the invasion of Britain. According to Winston Churchill, "Our fate now depended upon victory in the air. The German leaders had recognised that all their plans for the invasion of Britain depended on winning air supremacy above the Channel and the chosen landing places on our south coast. For the actual crossing and landings complete mastery of the air over the transports and the beaches was the decisive condition. The result, therefore, turned upon the destruction of the Royal Air Force and the system of airfields between London and the sea." During August and September 1940, the German Air Force was decisively defeated by the RAF Fighter Command and Churchill could inform the House of Commons: "Never in

the field of human conflict was so much owed by so many to so few'.

In addition to these two major roles, air power played a crucial part in support of the army and the navy in several theatres of war. The Battle of the Atlantic against the German U-Boats demonstrated the ability of air power to operate effectively at long ranges at sea. During February-May 1941 a total of 18,709 fighter sorties were flown against German U-boats operating in the Atlantic. Consequently the volume of merchant shipping sunk in the United Kingdom waters fell from well over half a million tons in the first half of 1941 to less than a quarter of a million in the second half clearly demonstrating the value of strong fighter protection.\(^{34}\)

While tactical air operations in the Western Desert during 1941-43 in support of the army were not effectively organised due to a lack of joint planning in the early phases and the army felt neglected, this situation was soon improved upon by Air Marshal Tedder who took over

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\(^{33}\) ibid, p. 352.

\(^{34}\) Collier, n.16, p. 187.
command of all air forces as Deputy Commander of the Royal Air Force, Middle East. He created a separate organisation for planning and conduct of joint army-air operations which proved highly successful during the rest of the war and still forms the basic structure for army-air co-operation.35

The impact of air power on the allied victory during the Second World War confirmed the ideas held by early air power advocates that air power had become a dominant and decisive force in warfare and gaining and maintaining 'command of the Air' or air supremacy in the theatre of operations was vital to the success of all operations whether on land or at sea or in the air. Almost all the air forces followed the doctrine of the strategic bombing prescribed by Douhet but the results were not commensurate with the amount of effort employed. In the words of Lee Kennett, 'the bomber was an idea long before it was a reality, and this discrepancy, if one may call it that, has remained a feature of its history. The realisation would always lag behind the conceptions. British official history of the strategic bombing says

that the potential of the strategic air offensive was greater than its achievement. This was the judgement that Bomber Command's official historians rendered on its operations against Germany, but the same might serve as an epitaph for almost any strategic bombing campaign in either world war. Perhaps it was not until the B-29 bombers armed with atomic bomb appeared over Hiroshima that strategic bombing met and exceeded the expectations of those who placed faith in it.\textsuperscript{36}

\textbf{New Technology and Air Power}

Since the end of the Second World War, the rapid progress in military technology leading to all-weather day and night capability of aircraft operation and precision-guided weapons has closed the gap between expectation and performance. Writing about the impact of new military technology on warfare, Quincy Wright says that it had maximum impact on weapons (for example the atomic bomb), less impact on organisation and operations, and uncertain impact on policy and strategy. But new technology, according to him, has caused intensification of military operation in time and extension in space.

\textsuperscript{36}
Kennett, n. 29, pp. 178-179.
These characteristics have tended towards total military organisation and total military operations, that is, the concept of a 'nation at war'. Writing after the Second World War (1964), he contends that the advent of aerial war in the twentieth century made 'total war' possible. Aircraft introduced the 'third dimension' into warfare, and military action became possible behind the front, over vast areas, and across all barriers of terrain.

The evolution of air power from World War I to the present is shown on the next page.

Section - 3 : Air Power in West Asian Security

Air Power Employment in West Asia, 1914 - 1939

The earliest use of aircraft for military operations in West Asia was during the First World War when German and British planes fought it out in the first Arab guerrilla type movement inspired by T.E. Lawrence. These aircraft were used for reconnaissance over the enemy

38 ibid, pp. 64, 69, 70.
Evolution of Air Power in War

movement, bombing of the railway bridges and trains, and aerial combat to prevent the other side from gaining air supremacy. Describing the impact of air raids Lawrence says, 'by air raid we had perturbed the Turks. By irritative raids we were luring them towards a wrong objective. Turkish planes drop three bombs over Guweira to attack our caravans, no damage. This was a daily air raid affair when a few bombs were dropped over the camp.'\textsuperscript{39} At another place he says: 'We took the opportunity to ask for repeated air raids on the Hejaz railway. General Salmond was called in and proved as generous in word and deed, as the C-in-C. The RAF kept up a dull, troublesome pressure on Amman from now till the fall of Turkey. Much of the inactivity of the enemy in our lean season was due to the disorganisation of their railway by bombing.'\textsuperscript{40} At another place, 'It was the RAF, which had converted the Turkish retreat into rout, which had abolished their telephone and telegraph connections, had blocked their long columns, and scattered their infantry units.'\textsuperscript{41}


\textsuperscript{40} ibid, p. 526.

\textsuperscript{41} ibid, p. 616.
Between the two world wars, the RAF was employed in West Asia for defence and internal security in Palestine and Transjordan. This method came into being when it was found that large numbers of British troops had failed to prevent a costly and serious rebellion in Iraq. The British Government decided to hand over to the RAF the responsibility for maintaining law and order in that country. This was to be accomplished by eight RAF squadrons with the help of a small contingent of Assyrian troops and a few armoured cars. This method came to be known as the Air Control, and was employed on several occasions on the North-Western Frontier of India as well. According to Sir John Slessor. "It may be that, in the modern world, Air Control is a thing of the past; but some of its features may be adaptable to the future, very different, conditions, and for that reason it may be worth a brief review."

Air control method was devised to replace control of tribal disorder by troops who had to engage the enemy in ground combat and occupy their villages till order was restored. In this process of ground action, there were casualties on both sides. On the other hand, in the air control method, a few squadrons of aircraft based on airfields in the security of military cantonments could
exercise control over the tribal population without the hazards of physical occupation and resulting casualties. Here the aim was not to kill the tribesmen, but according to the RAF War Manual "to interrupt the normal life of the enemy people to such an extent that the continuance of hostilities becomes intolerable." The British Royal Air Force in these operations imposed an inverted type of blockade thus denying the enemy peaceful life and other productive activities in the villages.42

Air Operations in the Western Desert, 1941-1943

During the Second World War, air power played a decisive role in the operations in desert warfare where fortunes changed frequently in the early years of the war. In November 1941, Air Marshal Lord Tedder took over the command of the Air Forces in the Middle East, and

42 Sessor, n. 11, pp. 56-58;

A type of air control method is being employed in the air exclusion zones of northern and southern Iraq, in Bosnia, and by Israel in southern Lebanon. This method needs further study as a counter terrorist operation in the backdrop of improved C'I capability and precision guided weapons.
formed the Western Desert Air Force to support the British Eighth Army. The new formations main role before the major offensive was to attack German and Italian concentrations at Tripoli, Benghazi, airfields, and ports of embarkation in Sicily and Italy, and supply dumps in the enemy's forward area.

According to Basil Collier: "In the air British had the advantage in the Western Desert war. With more than 600 serviceable aircraft in Egypt and Malta, they could reconnoitre freely and maintain a heavy scale of attack on the enemy's system of supply and forward installations." On the other hand, the German and Italian aircraft were running short of fuel because of RAF strikes on their fuel supply depots and fuel tankers. Further, Air Marshal Tedder had set up a very effective joint organisation for army-air cooperation in the desert, which became the model for subsequent organisations for joint air warfare in other parts of the world.

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43 Collier, n. 16, pp. 220-221.
Section - 4 Political Dimensions of West Asian Security

ORIGINS OF ARAB - ISRAELI CONFRONTATION

Before describing the employment of air power with new technology weapons in West Asian conflicts, it would be useful to examine the roots of Arab-Israeli confrontation in the region and the part played by outside forces.

Modern history began with most of West Asia and North Africa under the formal tutelage of the Ottoman Empire. During the nineteenth and early twentieth centuries, the Ottoman Empire had begun to lose its hold over the regions away from its centre due to internal forces of mis-government and external pressures exerted by rising powers like Russia, the Austro-Hungarian Empire, Germany, France and Britain. These pressures and forces were the cause of constant conflictual situations in most parts of the Ottoman Empire, which gave it the name of the 'sick man of Europe'. The First World War brought about the final disappearance of the Empire and from its ruins emerged a new state of Turkey. Its Arab regions were given to Britain and France as mandated territories.
The encouragement given by the British government to the creation of a Jewish home in Palestine created a situation which was to affect nationalist opinion in all Arab-speaking countries.44

A few documents in connection with the origins of the Arab-Israeli dispute leading to military confrontations on several occasions are worth quoting. The important ones were the following: (Copies of original documents are at Appendices 'A', 'B', 'C'.)

1. McMahon Letter of (October 24, 1915). This letter written by a British official indicated Britain's preparedness to recognise and support the independence of Arabs except for three reservations, namely, (a) existing treaties with Arab chiefs in Persian Gulf area would not be affected (b) coastal areas of the Mediterranean which were not purely Arab would be excluded, and (c) regions of interest to her French ally would be protected. The promises made in this letter to the Arabs were designed to enlist their support to the British against their war with Turkey.

44
2. Sykes-Picot Agreement, (May 16, 1916). This secret agreement divided the entire region of Mesopotamia and Palestine between Britain and France. Britain was to have control over southern Mesopotamia and over Haifa and Acre. France was to have control over the coastal zones of Lebanon and Syria and provide French advisers for Syria. Palestine was to have international administration.45

3. Balfour Declaration, (November 2, 1917). This document stated that the British government viewed with favour the establishment of a Jewish national home in Palestine, provided that this did not prejudice the civil and religious rights of other inhabitants of the country.46

The Sykes-Picot Agreement was in direct contradiction to the promise given to the Arabs in McMahon's letter. Even the Sykes-Picot agreement, however, was not fully implemented because Palestine did not get international status as provided in the agreement but was given to

46 Hourani, n.44, p. 318.
Britain as 'mandated' territory under Zionist pressure. According to Elizabeth Monroe, the Balfour Declaration was measured by British interests alone, and it was one of the greatest mistakes in British imperial history.47

After the end of the Great War, the Treaty of Versailles was signed and gave the Arab countries which had been under the Ottoman Empire a provisional recognition of independence. But these countries were made subject to the rendering of assistance and advice by another state charged with the 'mandate' for them. 'Under the term of the mandates, formally granted by the League of Nations in 1922, Britain was to be responsible for Iraq and Palestine and France for Syria and Lebanon.' 48

The British mandate in Palestine found it difficult from the beginning to reconcile the interests of the local Arab population and the Zionist immigrants. The Jews were keen that the door for immigration into

47 Monroe, n. 45, p. 43.
48 Hourani, n. 44, p. 318.
Palestine should be kept fully open while the Arabs resented this policy. The Zionists wanted Britain to remain in Palestine till the Jewish population was large enough in relation to the Arabs to look after its own interests. The British government tried to steer a course between these two pressures and while assuring the Arab population that their interests will not be compromised, they allowed controlled immigration of Jews into Palestine and helped their economic growth. Between the two communities the British showed a definite tilt in favour of the Zionists. This was perhaps inevitable because of the pressures of the Zionist movement in Britain and America which had a great deal of influence in both these countries.\textsuperscript{49}

In 1937 a Royal Commission - the Peel Commission - was appointed by the British Parliament to examine the possibility of partition of Palestine between the Arab and Jewish communities. It recommended a plan to divide the country, which, though acceptable to the Jews, was not accepted by the Arabs. The Palestine White Paper released by the British government on May 17, 1939 fixed

\textsuperscript{49} ibid, p. 331.
an annual quota for Jewish immigration into Palestine for the next five years and stated that further increase in immigration would be decided in consultation and agreement with the Arabs. The Jewish population in Palestine rose from eleven per cent in 1922 to twenty-nine per cent of the total population in 1939.

The central issue underlying the Arab-Israeli conflict in West Asia is the conflict between Arab nationalism or Pan-Arabism and Zionism. These two doctrines are, in their original form, irreconcilable. This conflict began in the early years of this century between the Jews and the Arabs of Palestine. While the Zionist aim was the recreation of a Jewish state in Palestine helped by the West, the Palestinian Arabs wanted to prevent this. The main issue of the conflict now is the struggle of Palestinian Arabs to regain their state and the Jewish claim of a sovereign state of Israel without Palestinians and non-Jews. The main actors in this conflict are the Palestinians who have been dispossessed after being the inhabitants of the land for 1300 years and the Jews of Israel who have by force occupied their territory and

50 Monroe, n. 45, p. 88.
proclaimed the birth of Israel in 1948.\textsuperscript{51}

Hitler's systematic persecution of the Jews and the bitter memories of the 'holocaust' steeled the determination of all Jews to have their own state at any cost, including the driving out of the Palestinians who had no role in the anti-Jewish persecutions. The Western Powers smarting under a sense of guilt (they had not attempted to rescue the Jews from Hitler's clutches) now adopted a pro-Israeli policy.

In September, 1947 Britain announced its decision to abandon its mandate in Palestine, and referred the issue to the United Nations. In November of the same year the UN Special Committee on Palestine, by a majority recommendation, advised partition of Palestine into Arab and Jewish states with international trusteeship for Jerusalem.\textsuperscript{52}

\begin{itemize}
\item \textsuperscript{52} ibid, p. 641.
\end{itemize}
Mrs Golda Meir, a former Prime Minister of Israel, describes the events of 1947-48 in her autobiography as follows:

"On August 31, 1947, United Nations Special Committee on Palestine, convened in Geneva turned in their report. Majority of the members recommended partition of Palestine into an Arab and an Israeli state and an international enclave for Jerusalem and its vicinity. A minority of members-India, Iran and Yugoslavia- suggested a federal Arab-Jewish state. Jews accepted the plan-Arabs rejected it. The UN resolution on partition of Palestine was passed on November 29, 1947 with 33 for, 13 against, and 10 absences." On Friday May 14, 1948, the Jewish State of Israel came into being with a population of 650,000."\(^5\)

First Arab - Israeli War, 1948 - 1949

Britain had withdrawn from Palestine earlier on the day the Jewish community declared the birth of the State of Israel. This was a unilateral declaration but the new-born state was immediately recognised by the United

\(^5\)
States and several other countries. All the Arab states declared that since peace and order had collapsed there was a direct threat to Arabs themselves and so they intervened on behalf of the Arabs of Palestine.\textsuperscript{54}

According to Mrs Golda Meir, "by the morning of May 15, Israel was already under armed attack by the Egyptians in the south, the Syrians and the Lebanese from the north and north east, the Jordanians and the Iraqis from the east."\textsuperscript{55}

And thus began a period of conflict which has continued to cause military confrontation and resulted in the Arab-Israeli wars of 1956, 1967, and 1973. It is a conflict which has its roots in the British West Asian policy between the two world wars.

Commenting on the Arab-Israeli conflict, Henry Kissinger, the US Secretary of State during Nixon’s Administration, says,

"The conflict has not lasted for thousands of years, as is often said. It is very much a product of twentieth

\textsuperscript{54} Bassiouni and Fisher, n.51, p. 641.
\textsuperscript{55} Golda Meir, n. 53, p.189.
century. The movements of Zionism and Arab Nationalism, to be sure, were spawned in the late 1890s but were not directed against each other. Only when the centuries of Ottoman rule had given way to the British mandate, and the prospect of self-determination of Palestine emerged, did the Arab and the Jew, after having coexisted peacefully for generations, began their mortal struggle over the political future of this land. The modern era, which gave birth to this communal conflict, then bestowed all its malevolent possibilities upon it."

The Arab-Israeli War of 1948-49, in which about 6,000 Israelis were killed, ended in the defeat of Arab forces. "'Israeli victory in the 1948-49 war in turn fueled the fires of Arab nationalism as traditional regimes, discredited by defeat, came under the sway of radical ideology: Pan-Arabism and socialism. Then the region became the focal point of the Cold War rivalry which both exacerbated local conflict and posed the danger that outside powers could be dragged into major confrontation.'"  

57 ibid, pp. 342-43.
Despite efforts of the United Nations, fighting continued till January 1949, and only by July the armistice agreement between all the belligerents could be signed. After the war, Israeli territory included nearly 80 per cent of the mandated Palestine. There was sharp decrease of Arab population within the Israeli territory which decreased from 750,000 to 150,000. The Arab defeat in the war and the fate of Palestinian refugees made the Arabs very bitter against Israel and the two western powers friendly to it.58

British historian Arnold Toynbee fairly blamed Britain for the Palestinian problem and Arab-Israeli confrontation. According to him,‘’ Britain was in control of Palestine for thirty years... and during these fateful three decades she never made up her mind, or at any rate never declared, what her policy about the future of Palestine was.’’ During these 30 years, Britain allowed immigration of Jews into Palestine, the rate of immigration varying with Jewish and Arab pressures on the British Government, till the Jewish population in Palestine had became large enough to look after itself against any threat from the Arabs.

58
'The reason why the State of Israel exists today and why over 1,500,000 Palestinian Arabs are refugees is that, for thirty years, Jewish immigration was imposed on the Palestinian Arabs by British military power until the immigrants were sufficiently numerous and sufficiently well armed to be able to fend for themselves with tanks and planes of their own...','59

However, according to an account of the refugee problem given by Chaim Herzog, it involved about 800,000 persons on each side, including the Palestinian refugee problem created upon the establishment of the State of Israel when the Jewish populations in Arab countries were exiled from their countries: 'The Jewish people and the State of Israel solved the Jewish refugee problem rapidly and re-established the refugees primarily in Israel. But the Arab Governments chose to perpetuate the refugee problem, to use the Arab refugees as political pawns over the years, and to allow generations to be born and grow up in miserable refugee camps supported by international charity.' ,60

59 Arnold Toynbee's introduction to Samy Hadawi, Palestine Dairy (Beirut, 1969), vol I pp. XII-XIV.

During the Arab-Israeli War, 1948-49, the air operations played a minor role in the outcome of the war. The main reason for this was the fact that none of the participants had a properly equipped air force and trained pilots in sufficient numbers to be able to take part in intensive air operations. In the initial stages Israel had a few light aircraft of army observation type and about twenty trained fighter pilots who had experience of flying with the Royal Air Force during the Second World War. However, during the war Israel received some Messerschmitt fighters from Czechoslovakia and three B-17 American bombers. While the fighters flew air defence missions and shot down some Egyptian Dakotas, the B-17 bombers flew bombing missions over Cairo and Damascus. Toward the end of the war Israeli planes shot down a few Spitfires and Tempests flying over Israel from Egyptian bases. 61

The Sinai Campaign of 1956; Political and Military Dimensions

After their defeat in the Arab-Israeli War of 1948-49, there was a great deal of Arab social unrest and

61 ibid, pp. 21-23, 48, 69, 72-73, 75, 87.
discontent. This caused domestic upheaval in most of the Arab countries. The Egyptian King was overthrown and the governance of the country was taken over by a group of military officers under the leadership of Nasser. King Abdullah of Jordan was murdered. In Syria also a military regime took over the reins of the government.

After the formation of the Baghdad Pact in 1955, which included Turkey, Iraq and Pakistan, with the aim to contain further expansion of Soviet influence, the Soviet Union became interested in the region which formed its soft under-belly in the south. Therefore, when Egypt was refused arms by America and Britain, the USSR origin weapons were supplied to Egypt by Czchoslovakia in September 1955.

The final blow to Britain and France came when President Nasser of Egypt nationalised the Suez Canal on July 26, 1956, after being refused a loan for the Aswan High Dam by the United States, Britain and the World Bank. Now all was set for the tripartite attack on Egypt by Israel, Britain and France.62

Tension had continued to grow between Israel and Egypt since 1949. There were frequent raids into Israel by Palestinian guerrilla groups based and trained in Egypt. Egypt was also training and equipping the fighters of the Algerian Liberation Army thus annoying French government which was facing problems with them in Algeria, and by nationalising the Suez Canal Egypt had struck a final blow to the British imperialism in West Asia.

In this politically deteriorating situation, Israel was the first to act, when its troops supported by armour crossed into Sinai on October 29, 1956 and made a dash towards the Suez Canal. After fighting for eight days the Israelis were in possession of the entire Sinai as well as the Gaza Strip. The Egyptian Army of more than two division strength which had fought the Israeli forces in the Sinai campaign was routed; about 1,000 to 2,000 Egyptian troops were killed and 5,881 were taken prisoners by Israelis.63

Just twenty-four hours after the fighting began in the Sinai, Britain and France issued an ultimatum on

October 30 to both sides to withdraw from the Canal. While the ultimatum was accepted by Israel, Egypt refused to accept it. This led to British and French invasion of Egypt by land, sea and air, and their forces occupied the Canal Zone. However, the British and French aggression against Egypt was condemned by the United States, the Soviet Union, the Arab States and all the non-aligned countries. Because of this adverse international reaction, Britain and France as well as Israel withdrew their forces back to the lines before the commencement of hostilities. This was done under strong Soviet and American pressure and the danger of financial collapse of Israel without American support.\textsuperscript{64}

During the Sinai Campaign, the air operations were fairly intensive. General Dayan's dash into Sinai was directly supported by the French Air Force which provided sixty fighter bomber jets and forty Nordatlas transport aircraft for dropping supplies airlifted from Cyprus to Sinai. The French fighter jets provided air support to the advancing Israeli troops, and ensured air superiority for the Israeli forces against Egyptian Air Force which

\textsuperscript{64}
Hourani, n. 44, p. 368.
had about 100 MIG-15s, 50 IL-28 jet bombers, some Vampires and Meteors and some World War II combat aircraft. However, at this stage it was well known that Egypt had only a limited number of trained pilots to fly the MIGs and the Illushins; other pilots were still under training in Russia.

The operational element of the Egyptian Air Force comprised only 30 MIG-15s and 10 IL-28 with about forty pilots trained but not experienced on these types. As against this, the Israeli Air Force had about 60-70 Mystere jet fighters slightly better in performance than the Egyptian MIGs. They had some Ouragons, Meteors and Vampires also of World War II vintage. In the event, air operations between the Israeli Air Force and the Egyptian Air Force were limited as the Royal Air Force operating from Cyprus and naval aircraft from an aircraft carrier in the Mediterranean bombed all the Egyptian airfields and destroyed almost all operational aircraft of the Egyptian Air Force on the ground.65 The Egyptian Air Force flew more than 150 operational missions during the first two days with some success in shooting down

the enemy, but due to very heavy losses of aircraft on the ground and shortage of experienced pilots, the Egyptian Air Force was asked not to fly for the rest of the campaign.

The air operations during the Sinai Campaign, with Britain, France and Israel on one side and Egypt on the other, were totally one-sided. The balance of air power was in favour of the attacking forces. The Egyptian Air Force with few aircraft and fewer pilots stood no chance against them. Basil Collier, commenting on the use of air power in the Sinai campaign and the British, French, and Israeli attack on Egypt, has this to say:

"In the context of air power, the most interesting feature of the Suez affair is the ease with which the British, the French and the Israelis gained complete control of the air over Egypt by using their fighters and bombers in a tactical role to support an Israeli advance into the Sinai peninsula and British and French airborne landings in the Canal Zone. The Egyptian Air Force was virtually annihilated in 48 hours. In another 48 hours the British, the French and the Israelis could have conquered the whole of Egypt."

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66 Collier, n. 16, p. 327.
After the Suez war of 1956, the border between Israel and Egypt remained fairly peaceful because of the presence of a United Nations Peace Keeping Force. However, on the northern borders of Israel, Arab guerrillas from Syrian bases continued attacks into Israeli villages disrupting farming operations. In early 1967 long-range Syrian artillery fired on the Israeli villages near the border. In order to silence these guns the Israeli Air Force aircraft attacked them and in turn were attacked by Syrian fighter aircraft. In an air battle between Mysteres of the Israeli Air Force and the Syrian MIGs, six Syrian MIGs were shot down. This caused a further escalation of tension on the Israeli-Syrian border, with Israeli warnings to Syria that Israel would take much stronger military measures if Syria did not prevent Arab guerrillas from carrying out sabotage operations inside Israel. Since Egypt had signed a defence treaty with Syria and it had to open a second front in the south in case of Israeli attack on Syria, Egypt asked the UN Secretary-General to withdraw the United Nations Emergency Force (UNEF) from Sinai which was based on Egyptian soil.

67 Herzog, n. 60, p. 148.
The UNEF was withdrawn and the way was now clear for another round in the Sinai. In another hostile move Nasser closed the Straits of Aqaba to Israeli shipping. Further, the Arab countries had joined to form a ring around Israel with some 250,000 troops, over 2,000 tanks and some 700 front-line fighter and bomber aircraft. It appeared that this time Israel's destruction was certain. To Israeli government it appeared that the Arab forces were poised for attack.

Chaim Herzog describes the Israeli assessment of the Arab intentions and the Israeli decision to launch a pre-emptive air strike as follows:

''The morning of 5 June 1967 found Israel's armed forces facing the massed Arab armies around her frontiers. Israel's citizen army had been quietly and efficiently mobilised over several weeks to defend the country against the impending Arab attack which every Arab medium of mass communication announced as imminent.''

In view of this critical situation Israel decided to mount a pre-emptive air strike on Arab air forces, and beginning

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68 Mansfield, n. 58, p. 334.
from 07.45 hours on Monday June 5, launched air attacks on Egyptian Air Force bases and later followed up with air attacks on Syrian, Iraqi and Jordanian air bases.

"In the main attack, nineteen Egyptian air bases in the Sinai, in the Nile delta, the Nile valley and Cairo area were attacked in some 500 sorties, destroying 309 out of 340 serviceable aircraft including all 30 long-range Tu-16 bombers, 27 medium-range Illushin Il-28 bombers, 12 Sukhoi Su-7 fighter bombers, some 90 MiG-21 fighters, 20 MiG-19 fighters, 25 MiG-17 fighters, and a further 32 transport aircraft and helicopters." \(^{69}\) (See map on the next page.)

Later the same day the Israeli Air Force attacked Jordanian, Syrian and Iraqi air bases. Jordanian Air Force lost all its aircraft which included 22 Hunter fighters, 6 transports and 2 helicopters. During the air attacks on Syrian air bases, Syria lost two-thirds of its total strength which included 32 MiG-21, 23 MiG-15 and MiG-17 fighters, and two Illushin IL-28 bombers. At the end of the second day of the war the Israeli Air Force had

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\(^{69}\) Herzog, n.60, pp. 151-153.
destroyed 416 Arab aircraft of which 393 were destroyed on the ground and 58 in aerial combat. The Israeli Air Force lost 26 aircraft during these two days of air operations. This strategy of pre-emptive air offensive against the Arab air forces gained Israel total air supremacy in and around Israel so that its ground forces and air forces could now operate unhindered during the remaining period of the war.\textsuperscript{70}

The Israeli strategy was well formulated to take advantage of its superior air power. Its aim was firstly to gain control of the air by sudden and massive attacks on Arab air power so as to destroy its aircraft on the ground and put all their runways out of commission. This was to be followed by combined air-land and air-sea operations to bring about the defeat of enemy ground and sea forces. These aims were achieved by the brilliant performance of the Israeli Air Force during the first two days of the war. The Arab air forces and their higher command were totally surprised by the Israeli air offensive.\textsuperscript{71}

\textsuperscript{70} ibid, p. 153.

Taking full advantage of total 'command of the air' over all fronts, the Israeli land forces advanced rapidly into Sinai and took control of the Gaza Strip. In the north and the east they had gained control of the West Bank and the Golan Heights after defeating the Jordanian and Syrian forces. The entire city of Jerusalem fell into their hands during this campaign.

During the six-day war, the loss of military equipment suffered by all the combatants was estimated to be as follows: 72

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<thead>
<tr>
<th>Country</th>
<th>Tanks</th>
<th>Aircraft</th>
<th>Ships</th>
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<td>100</td>
<td>40</td>
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</tr>
<tr>
<td>Egypt</td>
<td>600</td>
<td>340</td>
<td>4</td>
</tr>
<tr>
<td>Jordan</td>
<td>150</td>
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<td>Syria</td>
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<td>Iraq</td>
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Israel's Air Strategy

In an analysis of Israeli air strategy, Frank Futrell says: 'In the 1967 Middle East War the Israeli Air

Force was able to destroy the Arab air forces on the first day with a lightning-fast, low-level air attack against airfields in a pre-emptive beginning to the conflict launched while the Arab adversaries were poised to attack. After this, the Israeli Air Force decimated Arab tank forces, permitting Israeli armour to wage blitzkrieg assault.'\(^73\)

After the 1967 war, Egypt built up concrete shelters for its aircraft and, in addition, was supplied more advanced surface-to-air missiles of SA-2, SA-3, and SA-6 types. Egypt's air defences were further beefed up by 23 mm ZSU-23-4, Soviet made anti-aircraft guns, which were mobile, radar controlled, and had a high rate of fire.

The 1967 Arab-Israeli War was mainly fought with conventional aircraft and weapons without using electronic medium and missiles. In fact, the Six-Day War was the last great pre-missile era air war, for even though Egypt and Israel had some missile batteries, these were not used.\(^74\)

\(^73\) Futrell, n. 7, p. 484.
The lessons of the 1967 Arab-Israeli War, in particular those related to the use of air power, and its offensive and defensive strategies, were not lost on the Arabs and the Israelis. These were carefully analysed by other air forces as well. During the next five years, with escalating tension in West Asia between the Arabs and Israel, a state of no war and no peace could not continue for long. The Arabs had suffered a severe defeat and a large portion of their territory had been occupied by Israel. Israeli forces were sitting on the east bank of the Canal, on the Golan Heights and in east Jerusalem. The arms race in the region, fueled by the "War of Attrition" of 1969-70, caused the induction of new technology weapons in the area, which were used in the next round, the most intensely fought war of 1973. The next chapter describes this phase of the arms race in the region, the "War of Attrition" and the type and number of new technology weapon systems procured by the Arabs and Israel.