

# AIR UNIVERSITY



## The Nature of Air and Space Power

*Nowadays, anyone considering land and sea operations of any importance must of necessity remember that above the land and sea is the air.*

—Giulio Douhet

### The Third Dimension

**1. The aerospace environment can be most fully exploited when considered as an indivisible whole.**

Air and space provide access to all of the earth's surface.

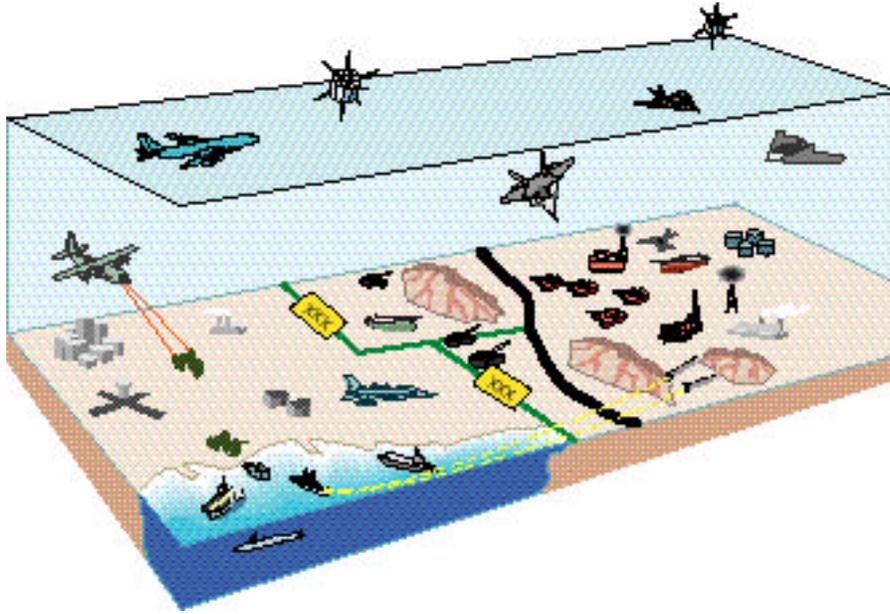
**2. Air and space power grows out of the ability to exploit the aerospace medium for military purposes.**

Airpower is the projection of military force by or from craft operating above the surface of the earth.

- Air and space forces can quickly concentrate on or above any point on the earth's surface.
- Air and space power can apply force against any facet of enemy power.

Space and information systems are critical components of modern warfare.

**3. The air and space medium lies over and above the land and sea—encompassing all—and all are accessible by air and space forces.**



**4. Gen Henry H. “Hap” Arnold noted that airpower is the total aviation activity of the nation, civilian and military, commercial and private, potential as well as existing.**

Today, when we say airpower we mean air and space power.

### Core Competencies of Airpower

**1. The global awareness provided by space and information systems allows air and space forces to realize the core competencies of *air and space superiority, rapid global mobility, global attack, information dominance, and agile combat support.***

Air and space systems can fix, track, and target nearly anything on or above the surface of the earth.

Global perspective provides a refined understanding of the challenges and opportunities facing national leaders and military commanders.

- Air Force operations are global in nature. They provide continuous information on global developments and timely warning of threats to US interests worldwide.

**2. Control of air and space enhances all military operations whether air, land, sea, or space.**

Air and space superiority provides military forces freedom from attack and freedom to attack.

**3. Global mobility provides the means to employ lethal and nonlethal combat power anywhere on the earth's surface in a matter of hours.**

Rapid global mobility is the timely positioning of forces through air and space to perform military operations.

**4. Global attack provides the United States with a unique means of power projection and presence.**

Global attack is the ability to strike rapidly anywhere on the globe at any time.

**5. Information superiority is not the Air Force's sole domain but depends heavily on air-, ground-, and space-based assets to provide global awareness, intelligence, communications, weather, and navigation support.**

Information dominance is the ability to control operations in the information medium.

**6. Agile combat support is central to the responsiveness, deployability, and sustainability of air and space forces.**

Agile combat support is the prompt sustainment of military forces responding to crises.

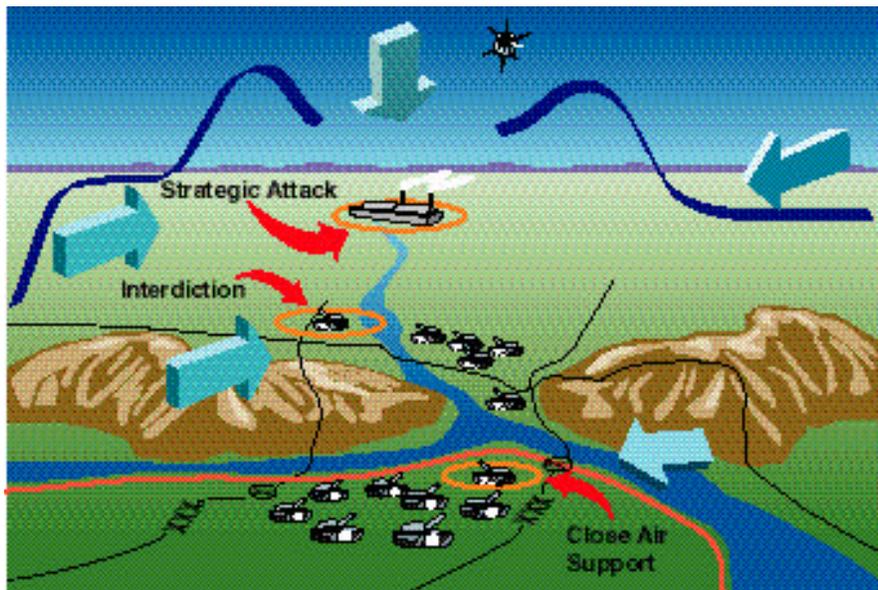
## Characteristics of Airpower

**1. “The inherent flexibility of air power is its greatest asset. This flexibility makes it possible to employ the whole weight of available air power against selected areas in turn; such concentrated use of the air**

Air and space power can now conduct simultaneous, parallel operations with decisive effect.

**striking force is a battle winning factor of the first importance. Control of available air power must be centralized and command must be exercised through the air force commander if this inherent flexibility and ability to deliver a decisive blow are to be fully exploited.”** War Department Field Manual (FM) 100-20, *Command and Employment of Air Power*, 21 July 1943.

**2. Air and space power has the unique ability to exploit the third dimension above the earth, and because of this, air and space power has inherent strengths that differ from those of land or sea forces.**



- Greater speed, range, freedom of action, and perspective are characteristics that should be considered distinct strengths of airpower.
- Increased speed and range make airpower pervasive; it can operate across a far wider geographic area than surface forces.



- Broader perspective is a novel strength in that height above the surface allows air and space power to observe and dominate activities on the surface.
- Freedom of action makes airpower remarkably responsive; air forces can be rapidly deployed globally.
- Space power is unique, in that a variety of space assets are constantly on-orbit and immediately available.
- Airpower has inherent limitations as well as strengths.
  - Aircraft payloads are more limited than those that can be carried by land or sea vessels.
  - Air and space forces are dependent on technology and, as such, are expensive to procure.
  - Space platforms are sometimes limited in capability and flexibility because of orbital mechanics (orbit plane, coverage, altitude).

## Ten Propositions regarding Airpower

### 1. Whoever controls the air generally controls the surface.

“The future battle on the ground will be preceded by battle in the air. This will determine which of the contestants has to suffer operational and tactical disadvantages and be forced throughout battle into adopting compromise solutions.”

—Gen Erwin Rommel

- The first mission of an air force is to defeat or neutralize the enemy air force.

### 2. Airpower is an inherently strategic force.

- Airpower can routinely conduct operations that influence the outcome of campaigns and wars (it can achieve strategic effects).

Air and space power is a result of all the capabilities of the Air Force. Neither airlift nor combat aircraft, tankers nor spacecraft can by themselves provide for Global Engagement.

- Airpower has great strategic capabilities as both a lethal and nonlethal force.

### 3. Airpower is primarily an offensive weapon.

The Air Force mission requires an integrated total Air Force effort.

- The characteristics of airpower make it globally available and provide offensive capability any time and any place.
- Airpower is offensive even when it is used defensively; it must attack to prevail.

**4. Airpower is targeting, targeting is intelligence, and intelligence is analyzing the effects of air operations.**

- Airpower's ability to affect targets has always exceeded its ability to identify them.
- Because airpower *can* strike almost any target does not mean that airpower *should* strike every target.

**5. Airpower produces physical and psychological shock by dominating the fourth dimension—time.**

- When force is applied rapidly, it produces both physical and psychological consequences.
- Airpower increases speed of movement by orders of magnitude, thus compressing the opponent's decision-making time.

**6. Airpower can conduct parallel operations at all levels of war, simultaneously.**

- Parallel operations occur when different campaigns, against different targets and at different levels of war, are conducted simultaneously.
- Airpower can concurrently conduct different types of air campaigns at the same level of war.

Unlike surface forces that must fight sequentially and win tactical battles before they can move on to operational or strategic objectives, air forces can fight separate campaigns at different levels of war.

Airpower's speed and range allow it to strike targets across the entire depth and breadth of the theater.

**7. Precision air weapons have redefined the meaning of mass.**

- In the past, mass for surface and air forces meant large numbers.

Precision weaponry can now achieve the same effects that previously required massed forces.

- Mass for airpower must be viewed as an effect and not numbers, as one aircraft and one weapon can now produce the results previously achieved by massed formations.

Surface forces must generally mass in numbers before engaging the enemy, whereas air forces can mass over the target when numbers are required.

**8. Airpower's distinct characteristics necessitate that it be controlled by airmen.**

Air warfare is unlike surface warfare which is largely a linear affair defined by terrain.

- Air warfare has a larger focus than surface warfare which is primarily tactically focused.
- Air warfare is conducted at a faster tempo than surface warfare whose pace is measured in miles or kilometers per day.

Priorities for employment of air assets must be set with the overall campaign objectives in mind, thus requiring a single air commander skilled in air warfare.

**9. Technology and airpower are integrally and synergistically related.**

- Airpower has a synergistic relationship with technology that is not common to surface forces.
- The rate of change in air and space technology has outstripped that of technologies employed by land or sea forces.

**10. Airpower includes not only military assets but also the air and space industry and commercial aviation.**

- Airpower is more than just airplanes.
- Military aviation, the aerospace industry, and commercial aviation are interdependent.

The United States should consider itself an air and space nation and see its destiny in the air and in space.