



A CENTURY OF AIR POWER THINKING PART I: FLOUNDERING IN THE DARK

'Objectives vary considerably in war, and the choice of them depends chiefly upon the aim sought, whether the command of the air, paralysing the enemy's army and navy. Or shattering the morale of civilians behind the lines. This choice may therefore be guided by a great many considerations—military, political, social, and psychological.'

Giulio Douhet,
The Command of the Air

Ever since Giulio Douhet wrote and published his seminal work *The Command of the Air*, air power enthusiasts have struggled to meet the exaggerated claims that were put forward in that futuristic tome. Douhet claimed that a force operating in the third dimension was capable of 'defeating' an adversary, protecting national interests, and in the final analysis ensuring national security by realising the desired national ends. However, these assertions were made without sufficient background history to develop the necessary concepts, and more importantly, the technological advances necessary to achieve these goals not having been realised.

The appalling casualties suffered in the trench warfare of World War I heavily influenced the thinking of the early air power theorists—in particular Douhet, Mitchell and Trenchard. They believed that employing air power in an attack/bombing role could spare nations from another war of attrition like World War I. Following this development, it was logical to select as the main target the will of the people, making it necessary to attack civilians as targets of choice. Technology supported these theories with the development of heavier-than-air bombers, although strike accuracy was never assured. The belief was that civilian morale could be 'broken' by bombing adversary cities.

Two fundamental drawbacks detracted from the implementation of this theory in the manner in which it was conceived. One was that there was no empirical evidence to support the suggestion that civilian morale could be broken by 'indiscriminate' bombing. The second, air dominance,

termed 'command of the air' at that time, was taken for granted in formulating this theory. The necessity to fight to obtain and maintain adequate control of the air, upon which the success of all other operations depended, was not considered as a prerequisite. The employment of this theory during World War II, proved to be less than optimum and is still the source of disconcerting debates and opinions regarding the legal, moral and ethical impact of the bombing campaign of that war.

During the inter-war years, technology continued to enable developments in the physical capabilities of aircraft. There were also contests for the control of air power and also for its ownership, between the two existing domain-centric services. However, independent

air forces came into being and different experimental organisational structures were attempted, especially in democracies.

At the same time that strategic bombing was being considered the panacea for the evils of an attrition-led



Giulio Douhet

surface war, the US Army Air Forces were developing the concept of attacking the enemy's capacity to fight, which was not merely providing close air support to troops in contact. They developed the industrial web theory as a practical concept to defeat the adversary from the air. This was a novel idea that espoused the employment of air power to strike at centres of gravity deep inside adversary territory in order to disable their capacity to wage war. It was advocated that removing the capacity to fight through systemic paralysis would be far easier than attacking and defeating the will of the people.

The British and American bomber fleets followed these two different conceptual developments and their operations in World War II demonstrate the difference between attacking the will or morale of the enemy population, and targeting the adversary's ability to make war. The British resorted to night saturation bombing raids, burning down German cities and other urban targets in an effort to weaken the will of the German people, while the Americans resorted to daylight 'precision' bombing of German industries and factories. Here the term 'precision' is being used in a relative manner, since technology did not permit accurate bombing that precluded any collateral damage. Both the approaches produced enormous collateral damage that amounted to punishing the civilian population of Germany and German-occupied territories.

The implementation of theories developed in the inter-war years were seen to be problematic since technology had not yet developed the wherewithal to ensure sufficient accuracy in being able to neutralise the selected target without undue collateral damage. Further it was also seen that 'breaking the will' of the people through aerial bombardment would require the use of catastrophic force, which was not readily available at that time. Only with the advent of the atomic bomb did air power have the capability to apply such force. However, the early atomic bombs also indicated the employment of air power in total war as well as an element to end total war.

The advent of nuclear weapons had a detrimental effect on the conceptual development of air power theories. The thinking was that nuclear weapons would dictate the next war and therefore there would not be any necessity to develop either futuristic concepts of operations or air power capabilities that could operationalise them. This state of affairs continued for almost two decades of the Cold War, when it was conclusively realised that the Mutual Assured Destruction (MAD) that nuclear weapons promised would ensure that they only provided a deterrent

factor and would not be actually employed; no 'victory' could be achieved within the concept of MAD. Only then did air power theorists turn their attention to the development of conventional air power.

The overwhelming influence of air power in World War II, brought it to centre stage. There was understanding that air power had to be organised, generated, applied and sustained by an independent, full time body—the Air Force.

Even though nuclear weapons imposed their pervasive might on the thinking regarding the application of air power, scientists continued to improve all aspects of aviation through technological innovations that enhanced fundamental air power capabilities. The technology-enabled capability augmentation also needed the development of theories and concepts for their optimised application. In the conceptual development of air power it is seen that during times of war and conflict, concepts and warfighting necessities led the scientists to employ technology in novel and even revolutionary ways to provide the capability being demanded by the theorists, strategists and tacticians. However, during times of relative peace, the scientists produce or invent cutting-edge technology that is then given to the operators to develop appropriate methods of employment. The development of concepts of operations, tactics and procedures follows at a slower pace behind the technology development process.

In the past two or so decades, there has been an attempt to ensure that technological innovations and conceptual developments take place in conjunction with each other and not in separate stovepipes. By adopting this methodology, wastages—in developmental and operationalisation time, as well as in resources—can be avoided and new capabilities brought on board at a faster pace. Considering the expansive nature of state-of-the-art air power capabilities, this is a step in the right direction.

Key Points

- *Early air power enthusiasts made assertions without either the background history to develop the necessary concepts, or the technological advances necessary to achieve these goals.*
- *During the inter-war years there were contests for the control of air power and its ownership, between the two existing domain-centric services.*
- *At the end of World War II it was clear that air power had to be organised, generated, applied and sustained by an independent, full time body—the Air Force.*



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