



# THE FAILURE OF AIR FORCES

BASED ON THE BOOK EDITED BY ROBIN HIGHAM AND  
STEPHEN HARRIS AND "THE INFLUENCE OF AIRPOWER  
UPON HISTORY" BY WALTER J. BOYNE





## **TWO VALUABLE LESSONS**

“The military mind always imagines that the next war will be on the same lines as the last. That has never been the case and never will be.”

— *Marshal of France Ferdinand Foch*

“The most important thing is to have a flexible approach...the truth is no one knows exactly what air fighting will be like in the future. We can't say anything will stay as it is, we also can't be certain the future will conform to particular theories, which so often, between the wars, have proved wrong.”

— *Brigadier General Robin Olds, USAF*



## INTRODUCTION

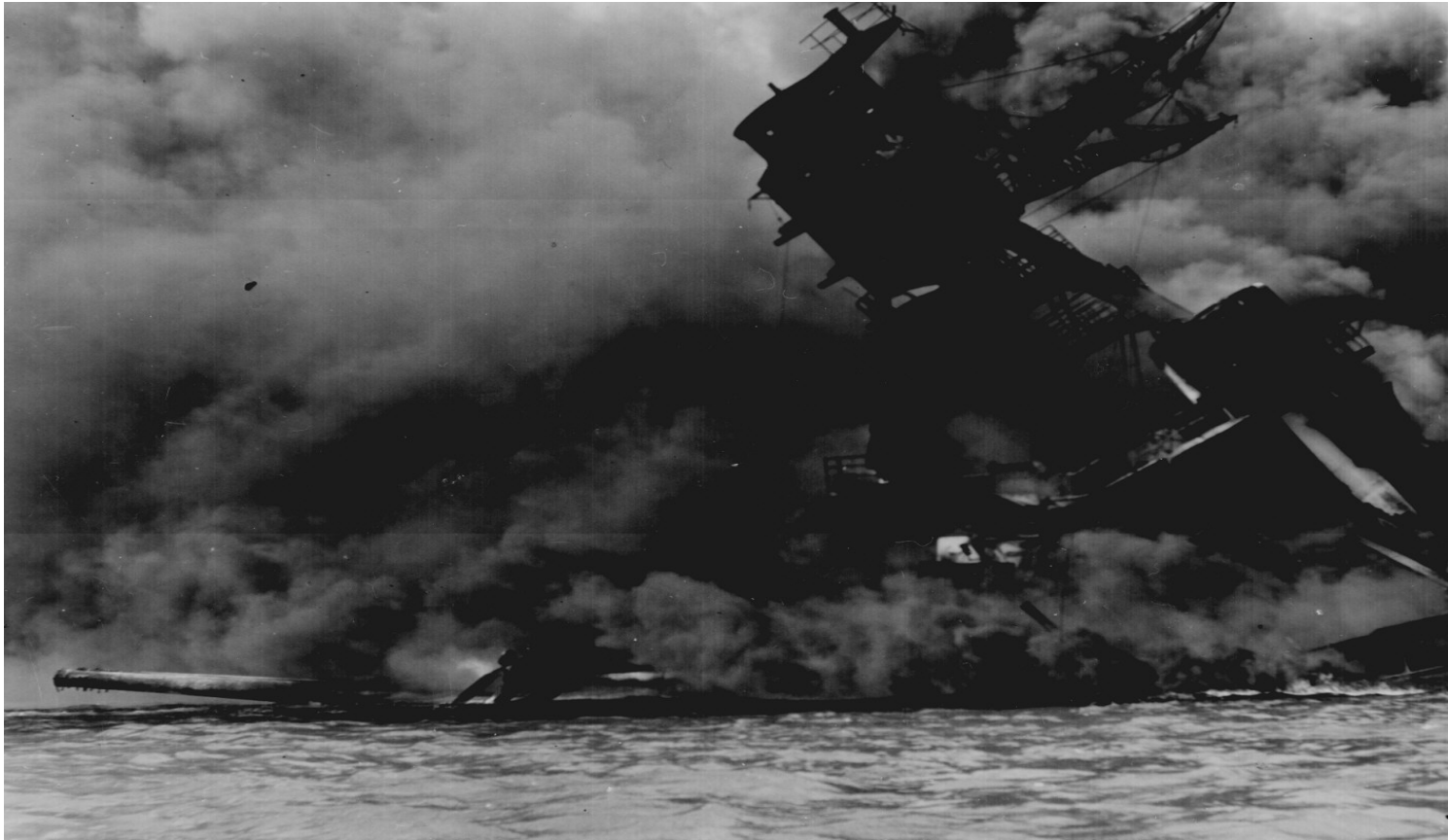
This briefing encapsulates some of the principal reasons that some Air Forces failed and why some failed initially only to eventually succeed.

- ***Forces that never had a chance to win;*** Poland, 1939; France 1933-1940  
Germany and Russia WW1, Italy, 1940-1943; Arab Air Forces 1967-2003
- ***Forces that started off victoriously but were ultimately defeated;*** Germany and Japan  
WW II
- ***Forces defeated in their early efforts yet rose to victory;*** Britain 1940-1943, United States 1941, Argentina 1982 (Argentina may have lost the war but their Air Force came close to pulling off one of the biggest upsets in Air Warfare).



# Air Force Association

...THE FORCE BEHIND THE FORCE



*"Those who cannot remember the past are condemned to repeat it."  
- Poet and philosopher George Santayana:*



## POLISH AIR FORCES PRIOR TO WW II

- Growing indigenous aircraft industry produced first all metal planes in early 1930s but were outmoded by 1939
- Inadequate reserves of planes and spares- Insufficient number of modern aircraft to combat the Germans
- Leadership downplayed importance of aviation
- Cavalry had bigger budget
- Favored bomber forces over fighters
- Frequent basing dislocations consumed time and resources distracting from operations and impairing maintenance and the effectiveness of aircraft—poor logistics planning
- Overwhelmed by two opposing forces—outmatched, outgunned



*“Aviation is to serve only for reconnaissance and only in this direction should it be used.” — Marshal Josef Pilsudski, 1929*



## FRANCE – 1933-1940

- Failed to make the investments in aircraft production—handicapped by budget
- Army and Navy resisted Air Force effort to integrate into doctrine
- Each Army unit wanted its own air element--not enough forces could be gathered to meet the enemy air forces—defensive role, no centralized command
- No unity of command focused on directing full range of airpower capabilities-underestimated importance of airpower
- Few specialized Aircraft built
- Thought next war like the last
- Failed to recognize “near-peer” competitor



*A line-up of Morane-Saulnier MS.406 fighter planes of the Armée de l’Air at Rayack airfield in the Lebanon at about the time of the Armistice in June 1940.*



## ARAB AIR FORCES, 1967 - 2003

- Lack of indigenous aircraft industries
- Little investment in the air forces and in training
- Consistently defeated by better trained, more flexible, and centrally controlled opponents
- Soviet welded-wing formations no match for western fluid-pair tactics—no theory of air combat—never trained to fight the IAF
- Rigid adherence to Soviet air doctrine
- Egyptian pilots initially trained for high altitude combat only—unlike opposition
- No clear air combat doctrine of their own
- Lack of initiative and flexibility in air combat
- NCO element hard to recruit and retain
- Bright Spots—Egyptian AF early surprise in 1973 and modernization today

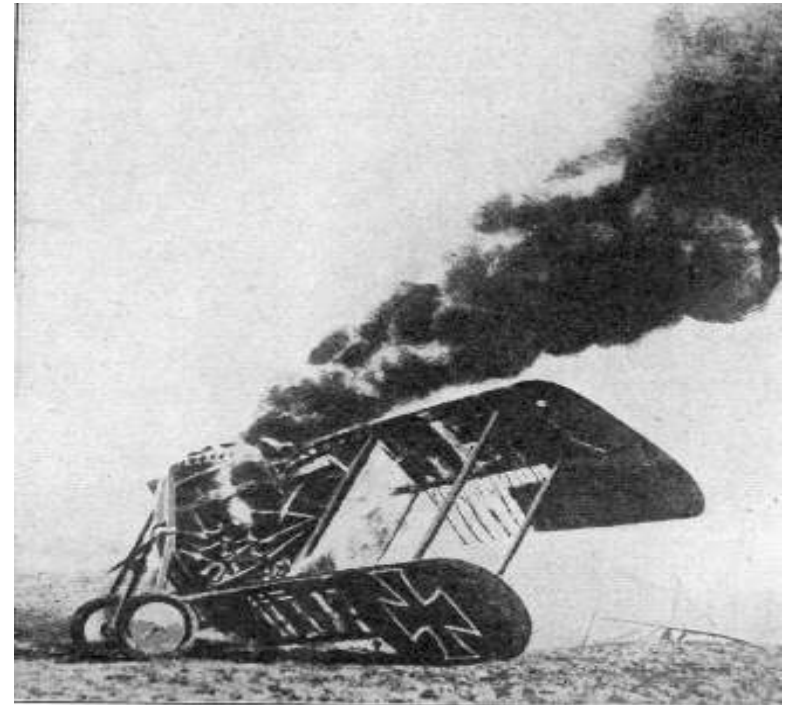


**Egyptian planes destroyed by the Israel Air Force (June 1967)**



## GERMANY-AUSTRIA-HUNGARY 1914-1918

- German Army preferred Zeppelins for reconnaissance
- One Zeppelin in cost equal to 34 airplanes
- Produced airplanes for short missions, reconnaissance, communications and artillery spotting – limited manufacture to one type
- Austria lacked the industrial capacity for mass production
- Germany failed to produce high quality engines (due to material shortages) and failed to initially bring in other engine manufacturers—relying only on one company
- Germany had to supply Austria and Ottoman Empire engines, airplanes, manpower and training
- Germany planned on short war



Air control can be established by superiority in numbers, by better employment, by better equipment, or by a combination of these factors.  
— General Carl A. 'Tooey' Spaatz



## ITALIAN AIR FORCE IN WW II

- Did not learn from experience in Spanish Civil War
  - lack of fuel, munitions, parts, and replacements
  - Chose to invest more in CR. 42 biplane
- Inter-service rivalry
- Small budget for Air Force
- Misallocation of funds prevented purchase and development of mass quantities of aircraft
- Few modern aircraft
- No central command structure
- Incoherent air-war doctrine
- Limited engine and aircraft industry capacity
- Not prepared for the defensive and long war it was forced to fight



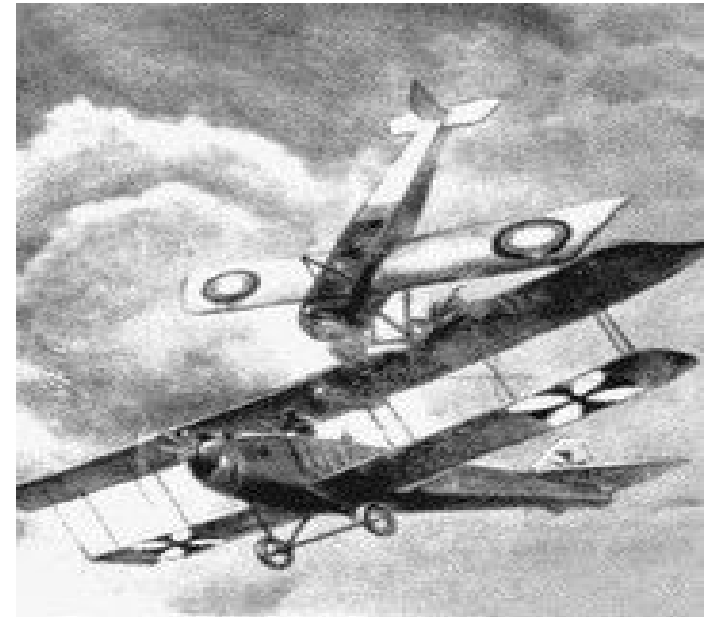
In order to assure an adequate national defense, it is necessary — and sufficient — to be in a position in case of war to conquer the command of the air.

— *General Giulio Douhet*



## IMPERIAL RUSSIAN AIR FORCE IN WW I

- Believed war would be short
- Initially, Russians used aviation only for reconnaissance and coordination of artillery fire but soon turned to fighters and bombers
- Industrial capability inadequate for mass production—negated skill of its pilots
- Depended early on foreign aircraft and engines
- Shortage of replacements, spare parts and engines
- Shortages in air and maintenance crews
- Indigenous military aircraft production fell far behind rival Germany.
- Due to defeats by Army in West aircraft production decreased.
- Enemy blockade on imports



**Подвиг штабс-капитана  
П.Н.Нестерова**

*Pictured: Russian ramming attack on German plane.*



## SOVIET AIR FORCES WW II-EVENTUAL SUCCESS

- Most of Soviet Air Force destroyed in initial German invasion
- Airpower was cast in a “use when needed” approach - sometimes essential, other times, not required at all
- Due to purges, a shortage of pilots and ground crews initially existed
- Air Forces assumed only a tactical role
- Created strong industrial complex
- Leaned on reconnaissance, attacked communications, massed troops and aircraft on the ground
- Recognized value of mass attack formations
- Attained air supremacy prior to launching ground counter- offensive

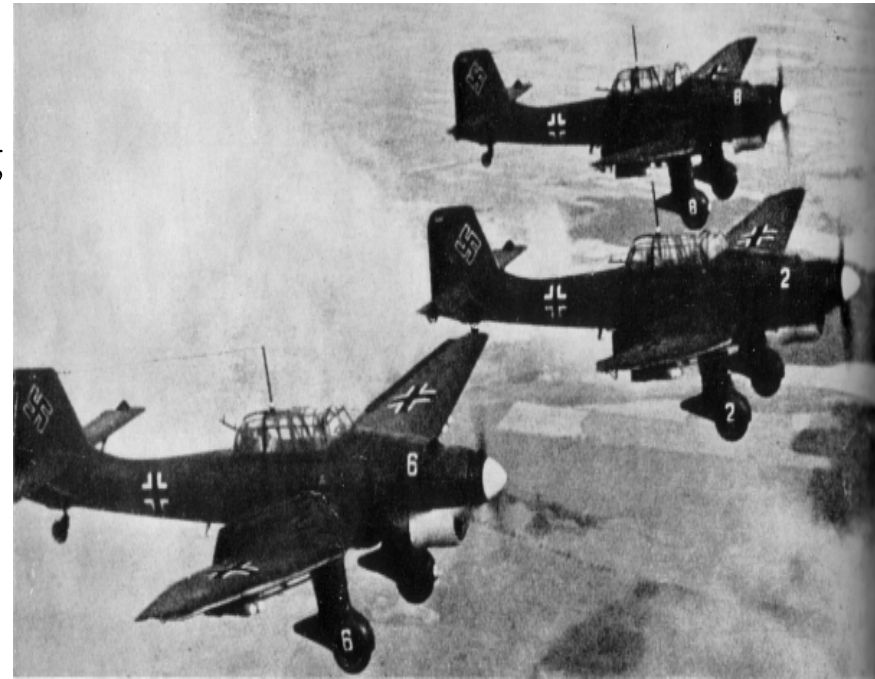


*Pictured: The Yakolev Yak-1 Soviet fighter aircraft was the first among the war's many successful designs.*



## GERMAN LUFTWAFFE

- Strong, doctrinally advanced, and battle-experienced
- Operated in tactical close air support role
- Could not operate strategically—lack of long range bombers and fighters
- Forced into strategic defensive posture due to Soviet air force numbers, geography
- Forced into war of attrition due to allied bombing of industry, resurgent British airpower and entry of American forces
- Recognized the scale of operations needed too late—tried to increase production under disruptive conditions
- Pulled flight instructors from training schools
- Growing fuel shortages



Junkers Ju 87 Stuka dive-bombers in formation circa 1939–1940.



## IMPERIAL JAPAN AIR FORCE

- Army and Navy did not cooperate on aerial matters -- Army lagged behind Navy in aircraft numbers, training and budget
- Narrow aerial doctrine, insufficient numbers of aircraft, too few aircrews and inadequate logistics for a war of attrition.
- Failed to develop the airfield construction techniques and equipment, as well as the units, necessary to build air bases, maintenance, supply
- Army had developed its air forces for continental warfare with the Soviets.
- Were not prepared for a long war
- Depended on surprise and skilled pilots
- Took a dim view to airpower possibilities



Ki-43 III-Ko, carrying a 250 kg bomb, sets off from a Japanese airfield



## BRITAIN IN WW II

- Saw peaceful future after WW I—ignored calls from service chiefs to rearm until 1935
- Priority given to air defense
- Limited production of Spitfire and Hurricane
- Hampered by commitments, after the entry of Italy (1940) and Japan (1941) extended war to north Africa and the Pacific.
- Failed to understand infrastructure requirements of deployed squadrons
- Thought Battle of Britain could be repeated overseas w/o radar, comm, top fighters & logistics
- Planned as if they knew how enemy would act—lack of intelligence--unprepared
- Hoarded the best fighters in the United Kingdom



An RAF Spitfire before World War II



## ARGENTINA AND FALKLANDS WAR

- Subordinate to army and navy
- Not allowed to conduct maritime operations or training
- Prepared for counter-insurgency/ war with Chile only
- No long range capability
- Not included in Invasion planning
- Had can do attitude and well trained pilots and air crews
- Scattered their air forces to several bases close to islands
- runways inadequate-not allowed to attack troop transports



If we lose the war in the air, we lose the war  
and lose it quickly.

— *Field Marshall Bernard Montgomery*



## UNITED STATES AND THE PACIFIC WAR 1941

- Failure of intelligence, radar, aerial reconnaissance
- Aircraft parked in tight rows
- Underestimated Japanese capability
- Industrial base allowed to atrophy
- Battleship was “Coin of the Realm”
- Budget constraints in Philippines-  
obsolescent aircraft, low numbers of  
aircraft, trained pilots and air crews,  
bad airfields and no warning system
- Saw need to reinforce Philippines  
too late
- Thought war would not come



In the development of air power, one has to look ahead and not backward and figure out what is going to happen, not too much what has happened.

— *Brigadier General William 'Billy' Mitchell, USAS*



## COMMON FAILURES – FAILURE TO:

- Anticipate the future and learn from the last war
- Incorporate Air Force capabilities into planning
- Develop and apply appropriate Air Force Doctrine
- Maintain a strong military industrial base to support needs
- Ensure well trained pilots, and maintenance crews in sufficient quantities
- Build the right planes, for the right missions in the right quantities
- Properly estimate enemy capabilities
- Replace old aircraft with more capable ones

Not to have an adequate air force in the present state of the world is to compromise the foundations of national freedom and independence.

— *Winston Churchill, House of Commons, 14 March 1933.*



## HYPOTHETICAL FAILURES OF THE FUTURE

(CIRCA 2025)

- Failure to Plan for the future
- Failure to heed warnings from Airpower advocates
- Assume threats will be the same as the present
- Failure to keep a strong military industrial base
- Assume no near-peer competitor in the future
- Thinking control of the air is a “God given” right
- Neglecting to counter adversary advances in space and cyberspace
- Investing more in social programs at expense of defense
- Failure to replace aging aircraft in sufficient numbers
- Failure to conduct research and development and incorporate new technologies

*"We better be prepared to dominate the skies above the surface of the earth  
or be prepared to be buried beneath it."*

**General Carl A. "Tooe" Spaatz**

1st Chief of Staff U.S. Air Force