LEN DEIGHTON & ARNOLD SCHWARTZMAN

AIRSHIPWRECK

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The age of the commercial airship was short-lived – scarcely more than a quarter of a century. In that time, the incidence of disastrous failure was high. Although comparatively few fare-paying passengers lost their lives in airship wrecks, fatalities among the machines out-number the airships that survived to pass into honourable retirement. Yet Len Deighton calls the airship one of the greatest triumphs of structural engineering the world has seen. Through this remarkable collection of photographs, many of them never published before, he bears witness to the magic of those gentle, awesome giants of the sky – 'cathedral arches twisted into a tracery of aluminium'.

No more than forty years ago, just two years before World War II and the demise of the airship, the only regular passenger flights between Europe and North America or Brazil were by luxuriously appointed and noiseless airships, sauntering gracefully at low enough altitude for navigation by road maps. Even as early as 1912, passengers could relax in their wicker armchairs on the carpeted flight deck after an excellent cold lunch aboard the postal delivery Zeppelin and watch the German countryside unroll beneath them at a steady 45 miles an hour. That, in turn, was but fifteen years after a Berlin clergyman had made the first-ever manned and motor-propelled balloon flight.

So where did the dream go wrong? One answer was provided by C. G. Grey, who wrote in 1926 that 'airships breed like elephants and aeroplanes like rabbits'. If that is less than a complete explanation, the allusion is not without its apt overtone of comic absurdity. Consider the tale of the captain of the L6, blown off course in a gale as darkness fell, holding conversation with his supposed rescuer on the ground below, and discovering that he was talking to his own petty officer who had tumbled unnoticed out of the airship's flight gondola. Or the family who found their isolated house dwarfed by the skeletal remains of a giant beast which had quietly died in the night.

There were, of course, those who perished painfully in their enthusiasm for airships. Yet no morbid or mournful note is struck in the astonishing story of simple pioneering faith which Len Deighton unfolds. Nothing is so apparent in his pictures as the air of gaiety and festival that often attended scenes of rescue and salvage. Superficially it might seem that airships were a folly, a passing fad, a brief interval between centuries of slow, muscle-bound, earthly travel and the age of rockets in space. That would be to overlook the mystique of the airship, enshrined in this book as a sort of divine catalyst, a spark burning bright and extinguished in the instant, having enabled men to cross a threshold and move out to the far reaches of the universe.

Len Deighton visits the site of the R101 crash in 1977.

The R101 crash at Beauvais in northern France on the morning of 6 October 1930.

INTRODUCTION

The eyes of my two young sons search the skies looking for an airship. They have seen jet planes, double-decker buses, old cars and even an old sailing ship. They recognised them from the pictures that in my house clutter the walls, floors, tables and chairs. Our neighbour flies a replica of von Richthofen's red Triplane, so that is no less real to them than the steam-roller that arrives after the water pipes are laid for a new house in the village. But they will never see the great silver shape of a rigid airship floating in the sky, as they float on the walls of my room. The rigid airship has gone for ever.

And yet within living memory few men doubted that lighter-than-air craft were the only practical air transport for passengers and freight. The invention of the steam engine encouraged men to think that powered flight was possible. The development of the aeroplane was slow: the way in which these 'heavier-than-air' machines could lift into the sky was mysterious, and for most people it remains so. The problem of getting an airship to fly was obvious to all. Hydrogen is lighter than air; manufacture it and it will float upwards; hold on to it and you'll rise too. In 1887 the electrolytic production of aluminium provided girders from which a very lightweight rigid structure could be built. Inside it, hydrogen-filled gas bags could be fixed.

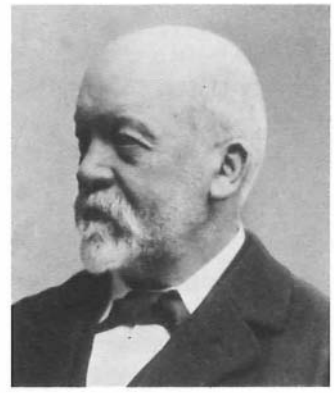
In 1888 Mr Daimler offered a two horse-power engine to an airship designer. It needed only the incredible Graf von Zeppelin and the airship – or Zeppelin – was a practical proposition. By 1914 air travel had become almost commonplace for Germans. The Zeppelins had by that time carried 37,250 passengers over 90,000 miles of air route without death or injury to any of them. There were regular scheduled flights during the summer months and for a brief period in 1912 a daily air-mail postal service was provided for several towns.

These Zeppelin passengers could enjoy an excellent cold lunch, with fine wines, relax in their wicker armchairs, with their feet on the carpet, watching the German countryside unroll at a steady 45 miles per hour. When, in 1914, there came the news that the first passenger-carrying aeroplane service had started, the airship men were not impressed. Why should they be? The aeroplanes only operated from Tampa to St Petersburg, in Florida, USA, the passengers had to dress in heavy flying gear, and there was only one passenger per aeroplane. It was a dangerous, uncomfortable and unprofitable adventure.

For many years airships dominated the air routes. By 1936 the regular scheduled airship service between Germany and Rio de Janeiro and the airship service between Germany and New York were still the only transatlantic air routes. No aeroplane could perform such a task. The following year the *Hindenburg* burned and decades of accident-free airship flights were obliterated by awesome film and photo of the burning Zeppelin. And yet the aeroplane could still not provide air routes across the Atlantic. It wasn't until 1939 that heavier-than-air machines carried fare-paying passengers on the Atlantic route – a full twenty years after the R34 airship had crossed. Even then the aeroplanes could not equal the airship's flight; they had intermediate stops at Bermuda and the Azores (or Newfoundland and Ireland on the northerly route). It wasn't until the middle 1950s that airlines offered passengers a direct service across the Atlantic.

For me the airship has a magic that the aeroplane cannot replace. The size is awesome, the shape Gothic; a pointed arch twirled into a tracery of aluminium. And the reality is not disappointing. No one present ever forgot the day a concert pianist

Graf von Zeppelin.



Gottlieb Daimler.

sat down and gave his fellow passengers a recital while the airship moved through the cloudy skies of the Atlantic. There were special trips too. In 1929 the *Graf Zeppelin* took some lucky passengers from the very severe European winter for a gentle, non-stop flight round the eastern Mediterranean. The schedule was prepared so that they breakfasted over the Riviera, saw Athens at dawn and the Holy Land by moonlight. The airships usually flew very low: the ground was so close and the engines so quiet that it was not unusual to hear voices from below and dogs barking at the strange silvery shape.

And if the sights were memorable, the comfort was no less so. Famous chefs prepared the food in well-equipped, if cramped, galleys. On the Orient Flight in 1929 the twenty-four passengers consumed 160 bottles of spirits and 63 quarts of excellent wines.

The *Hindenburg* airship had over 5,000 square feet of carpeted passenger-space. There was a lounge, library and writing room and a promenade from which huge windows gave a view of the ground. After dark the promenade was curtained off so that the night landscape could be seen.

So where did the dream go wrong? No two experts exactly agree. Certainly time was the airship's enemy. 'Airships breed like elephants and aeroplanes like rabbits,' said C. G. Grey, editor of the *Aeroplane*, in 1928, rightly predicting that evolution must favour aeroplanes.

In another sense, time was the airship's enemy. The *Hindenburg* could move a 20-ton payload a distance of 8,000 miles. Thirty years later an aeroplane – the Lockheed C-130E Hercules – could move only 12.5 tons a distance of 3,400 miles. The superiority of the aeroplane lies in its cruising speed of 312 knots compared with the airship's mere 62 knots. Money invested in the aeroplane can be earned by several flights while the airship makes only one. This leaves aside the dangers of airship operations, the hazards of hydrogen, the cost of helium and the necessity to protect airships on the ground by means of gigantic hangars. (The twin hangar at Lakehurst, New Jersey, covers 8 acres of ground and is taller than either the Statue of Liberty or Nelson's Column, and it is not the largest hangar.)

But the airship remains one of the greatest triumphs of structural engineering the world has ever seen. Hydrogen is lighter than air, but only marginally so. It was almost impossible to make a rigid airship that was light enough to lift into the sky, yet strong enough to endure the forces of nature it would encounter there.

In this book, with the help of experts, I have told the story of the airship's failure. It shows the daunting task that the airship designer faced. Perhaps all simple acts of faith bear an imprint of absurdity, and you'll find it here. But the book is intended as a tribute to the master builders and their aluminium marvels. This generation of engineers dared to build their cathedrals in the sky; no wonder then that so few of them stayed there.

Len Deighton
1978

Left: *Hindenburg* over New York, 1937.