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People and Planes: Technical versus social narratives in aviation museums

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Abstract

Redevelopment of two Second World War hangars at the National Museum of Flight in East Lothian provided an opportunity to re-interpret the museum collections. This short account of the project looks at the integrated incorporation of oral history recordings. In particular, it looks at the new approach taken to the interpretation of the museum’s Messerschmitt Me 163B-1a Komet rocket fighter. This uses oral histories from the only Allied pilot to make a powered flight in a Komet, and from a Jewish slave labourer who was forced to build aircraft for Nazi Germany. This focus on oral history, along with an approach to interpretation that emphasises social history, rather than technology, has proven popular with visitors and allowed the building of audiences.

1. INTRODUCTION

Traditionally, transport museums and collections have focused on the technological history of their objects, producing *Top Trump* displays which look at the fastest, biggest, most mass-produced, etc. Colin Divall and Andrew Scott noted in 2001 that ‘transport museums followed some way behind other sorts of museums in dealing with social context.’ These displays often include great detail about the engines and their performance, sometimes including extreme technical detail such as bore size, stroke length, etc. Such information certainly can have a place in transport displays, but has limited appeal to non-subject specialists and can be detrimental to any attempts to broaden audiences.

Recent years have, however, seen a change in transport museums with increasing moves towards greater social history stories. These look not solely at the vehicles, but at the people connected to them, whether it be designers, engineers, drivers or passengers. Introducing social history into transport history can produce displays that attract widely divergent audiences to everyone’s benefit. This paper will look at a single case study, the National Museum of Flight at East Fortune Airfield in Scotland, and demonstrate how embracing social history has transformed the museum.

The National Museum of Flight first opened to the public in 1975, as the Museum of Flight, an outstation of the Royal Scottish Museum (now National Museums Scotland), receiving 10,463 visitors in two weeks. It displayed a number of aircraft and rockets in a Second World War hangar, including a Supermarine Spitfire, a de Havilland Sea Vampire, a de Havilland Sea Venom, a Hawker Sea Hawk and a Blue Streak Intermediate Range Ballistic Missile. The displays were drawn from the Royal Scottish Museum’s aeronautical collection which was started in 1909, and included aero engines such as a Rolls-Royce Merlin V12 piston engine and a de Havilland Goblin jet engine, as well as other smaller objects. These formed a technological collection and were
interpreted in a purely technological way. This was a not unusual methodology and most comparator museums have taken a similar approach. Indeed, many still do.

2. CONCORDE AND THE START OF ORAL HISTORIES

In 2003 National Museums Scotland was allocated one of the British Airways’ fleet of Concorde supersonic passenger transport aircraft. It arrived at the National Museum of Flight in April 2004 by land and sea and after reassembly was opened to public display in March 2005. Figure 1 shows Concorde on display at the National Museum of Flight.

![Figure 1 British Airways Concorde at the Scottish National Museum of Flight](image)

Displaying such a large object required the reorganisation of the entire museum, with the main hangar emptied and the aircraft moved into the other three hangars. This gave an opportunity to create new interpretation, although this was largely limited to suspended banners with text and graphics. These banners did, however, include some personal stories bringing social history into the interpretation. Although The Concorde Experience largely looked at the technological evolution of Concorde, an audio-visual presentation provided, for the first time, moving sounds and images of individuals talking about their own experiences of the aircraft. This oral history was a new approach for the museum and was at that time a relatively unusual approach to interpreting transport collections. The film features Concorde crew, passengers and museum staff talking about the aircraft in service, as well as its final journey to the museum. The museum received 150,000 visitors during the first year of the Concorde display and this success encouraged the expansion of this social history approach.
3. FURTHER ORAL HISTORIES

The creation of a new exhibition about the history of East Fortune Airfield in 2009, called *Fortunes of War*, provided another opportunity to extend the inclusion of social history into the otherwise technological displays. Although parts of aircraft, and the airfield infrastructure to support them, feature in the exhibition, so do many objects telling personal stories. These include the small toy cat and shoe that belonged to the deceased child of a crewman of a First World War airship, and the log book of a pilot who took off on a training flight out over the North Sea and was never seen again, marked 'Missing presumed killed'. These objects are clearly designed to evoke an emotional response in visitors, but the accompanying film shown in the exhibition is perhaps more powerful still. Archive film tells the First World War story of the airfield, but oral history accounts from the Second World War, filmed especially for the exhibition, give an immediate and personal impression of what it was like to be there. The accounts include the navigator of an aircraft that crashed on take-off and was pulled unconscious from the wreckage, never knowing who his rescuer was.

In 2010 another new display, *The Jet Age* opened, based around the forward fuselage of a Boeing 707 airliner. Restored to its 1962 British Overseas Airways Corporation (a predecessor to British Airways) livery, the forward fuselage features a small exhibition inside and another short film of oral history. This time, it is even more closely integrated with the museum displays as not only do the crew and passengers talk about their experiences flying on 707s, objects from some of those interviewed are displayed inside the aircraft. One stewardess, who describes the 707 crews as 'the elite fleet', has one of her 1960s uniforms displayed in the galley near the film screen. This approach allows for strong interpretive integration between objects, oral history and archive film, telling a powerful social history story which is engaging to a wide range of audiences.

Despite the growing social history content in the displays, it was only with the redevelopment of two of the Second World War hangars between 2013 and 2016 that the museum was able to take a fully integrated approach to using oral history in its interpretation. The project budget included funding for a fixed-term post, a Communities Engagement Officer Digital Stories. This post allowed for the gathering of oral history accounts which could be used in the interpretation of the aircraft. As a result, each aircraft has content both on printed graphic panels but also on digital touchscreens, with each aircraft having at least one piece of oral history film or archive film, and in most cases both.

Whilst this methodology allowed for the presentation on the social history context to the material objects, the approach in one specific case was very different from previous interpretation. The opportunity to add levels of further information whilst keeping visible text lengths manageable is a vital benefit of screen-based interpretation.

4. THE MESSERSCHMITT KOMET

The Messerschmitt Me 163B-1a Komet was a small, rocket-powered interceptor aircraft developed in Germany during the Second World War. It entered service in 1944, designed to protect point targets against massed formations of bombers attacking by day. It was powered by a Walter HWK 109-509A rocket motor which burned two highly corrosive fuels; concentrated hydrogen peroxide.
and a solution of hydrazine hydrate and methanol. Although these fuels were extremely dangerous, and many pilots were killed by fuel explosions, they produced enormous thrust, giving the Komet a top speed of almost 600 mph. As such, this was the fastest aircraft to see combat during the Second World War. Previous interpretation at the museum focused on this technological approach. For the new displays it was decided to re-interpret the aircraft. Figure 2 shows the Komet on display at the museum before the creation of the new interpretation.

Figure 2   The original display of the Messerschmitt Me 163B-1a Komet

The new interpretative approach to the Messerschmitt Komet did not ignore the technological stories. However, the focus was placed on social history. Two particular aspects were of primary importance.

Firstly, as with all other aircraft in the new displays, the interpretation includes oral history accounts from someone associated with that aircraft type, such as a pilot, navigator, engineer, designer or passenger. As a single-seat interceptor, the Museum wanted to feature oral history from a pilot who had flown a Komet. As a German Second World War era aircraft, the challenge was to find someone who had flown a Komet some 70 years ago and was still alive to be interviewed in 2015. Brief consideration was given to using archive interview footage of German test pilot Hanna Reitsch, but this was quickly ruled out. Although part of the interpretation aims was to include as many female stories as possible, because she was an unrepentant Nazi and lifelong admirer of Hitler, it was inappropriate to focus on this particular individual. In contrast, an alternative candidate quickly became obvious.

Captain Eric Brown was a test pilot in the Fleet Air Arm. Towards the end of the Second World War he was part of a unit tasked with the capture and evaluation of German aircraft, particularly technically advanced aircraft such as jet and rocket-powered types. Although the British National Physical Laboratory had a very small supersonic wind tunnel in 1922 for tests of projectiles, and a larger one by 1942, during the Second World War German aeronautical research on high speed
flight was far in advance of any other nation. This research, the scientists and engineers who carried it out, and the aircraft that resulted, were the targets of Captain Brown’s searches. He was particularly interested in the Messerschmitt Komet and was keen to fly one. When the British captured the German airfield at Husum, one of the main Komet bases, Brown had his opportunity. Although British pilots were then banned from flying using the rocket motor because they were so dangerous, as a test pilot Brown was exempt from this ban, but he knew there was a narrow window of opportunity. Finally, on 10 June 1945, Brown flew a Komet and became the only Allied pilot ever to fly the aircraft using rocket power. The specific aircraft he flew that day, serial number 191659, is the aircraft on display at the National Museum of Flight.

Additionally, as a Scotsman born in Leith just to the north of Edinburgh, it was clear that Brown was the person to interview about this aircraft. He travelled to the museum to be interviewed in September 2015, at the age of 96, less than six months before his death in February 2017. During his visit, he saw the aircraft he flew that day for the first time in 70 years. Figure 3 shows Captain Brown standing beside the Komet at the museum. Captain Brown was able to describe the aircraft and the experience of flying it, and the fact the aircraft he flew is displayed makes this account all the more relevant.

![Figure 3](image-url)  
Captain Eric Brown beside the Messerschmitt Me 163B-1a Komet

There was, however, a second aspect to the re-interpretation of the Messerschmitt Komet which was considered of major importance. The aircraft was built by a number of different companies, before the various component parts were assembled by Junkers Flugzeug und Motorenwerke AG. Several of the sub-contractors, as well as Junkers themselves, used slave and forced labour. Graffiti, as well as evidence for attempted sabotage, left inside the fuselage of one Messerschmitt Komet by a French forced labourer still survives. The Messerschmitt Komet is a product of the Holocaust, yet most examples are displayed as technological achievements, with no reference made to the human cost of
Development and construction. It was an imperative to tell this aspect of the aircraft’s history, giving visitors a fuller understanding of the aircraft’s history.

Ideally, an interview with a slave labourer who had built Messerschmitt Komets would have been recorded, but it proved impossible to trace any such individuals. The Forced Labour 1939-1945 archive held by the Freie Universität Berlin contains a huge resource of interviews with forced and slave labourers exploited by the Nazis during the Second World War. Amongst the numerous recordings was an interview with Zahava Stessel, a Hungarian Jewish woman. Along with her sister, she had been forced to work as a slave labourer in a Junkers aircraft factory whilst held at the Markkleeberg labour camp. Her brief description of conditions in the factory which can be viewed beside the Komet in the museum displays, makes compelling viewing and shows the aircraft in an entirely different way to previous interpretation. The immediacy of seeing and hearing someone who worked in very similar conditions to those slave and forced workers who built Komets, gives visitors a personal connection not possible with printed text.

5. EFFECT OF THE NEW INTERPRETIVE APPROACH

This new interpretative approach at the National Museum of Flight has been an immediate success. Visitor numbers in the first twelve months after the new displays opened were up 20%, despite an increase in the museum admission price of up to 25%. Visitor feedback has been overwhelmingly positive with comments such as ‘First visit here for years and it has come on in leaps and bounds. Tidier and better insulated the exhibits are better presented and supported with films and audio. These provide the commentary of the men and women who got the craft in the air, witnessed the triumphs and crashes but kept pushing manned flight forward’ and ‘The museum has a lot to offer and a variety of ways in which to share information. For me, I did enjoy the video footage, definitely the best way for me to understand what I was seeing’, just some of the comments on Tripadvisor about the new interpretation. Summative evaluation confirmed this positive response to the new interpretation, noting that ‘the touchscreens and videos within the two new hangars at the National Museum of Flight [are] proving very popular with visitors as well as text labels and panels’ and ‘Participants provided very positive feedback on the touchscreens’ usability and content. Clearly they have added to the visit experience and created learning outcomes’. Peer review has also been excellent with the Museums Journal noting: ‘One of the main aims of the interpretation is to present a tangible, personal connection to the aircraft on display. Most of the touchscreens contain interviews with people whose lives have been affected by flight. These stories fulfil the exhibition’s aim, helping to bring the aircraft to life’. As with all major projects, there were challenges. One significant one was the limited data connectivity to the site, with only a 2MB data link for the entire museum. This made it impossible to upload and download very large oral history video files for editing over the museum’s data network. The solution was to have face-to-face meetings where the files were edited using a laptop, and then the final edited files uploaded to the network. Although this solved the problem of editing the raw footage into the finished films, the slow network speed made uploading the films to the networked touchscreens difficult, and required the content to be uploaded overnight when there were no other demands on the data network.
Despite such challenges, the end result is an innovative interpretation of transport collections with an emphasis on the social history context. There are many transport museums in the UK which incorporate social history into their display, including the Royal Air Force Museum, Imperial War Museum and National Railway Museum. However, to include oral history footage on a touchscreen beside every single large object takes this social history context farther than comparable museums and provide a new approach to the interpretation of transport technology.

We hope to continue to incorporate oral history within future displays at the National Museum of Flight, allowing a wider range of visitors to have a fulfilling and engaging experience with the subjects covered by the museum collections. There are clear benefits for engaging non-specialist audiences with such an approach, as opposed to the previous, largely technological methodology, and it is hoped that other museums within the sector may choose to embrace the benefits that this form of re-interpretation can bring.

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REFERENCES

5. Unpublished logbooks of Captain EM Brown, now held by Fleet Air Arm Museum.


THE AUTHOR

The author is a graduate of the University of Stirling and the University of Leicester. He has worked for National Museums Scotland since 1999, for the last 13 years in his current post at the National Museum of Flight. Ian has worked on a number of exhibition projects, including The Concorde Experience and The Jet Age at the National Museum of Flight, and See Scotland by Train at the National Museum of Scotland in Edinburgh. He was the lead curator on the Phase 2 development at the National Museum of Flight, which saw two of the site's Second World War hangars restored and entirely new interpretation created. This was completed in 2016. The author’s research interests include the history of radar and military aviation in Scotland, subjects on which he has spoken and published widely.