

Museum International

Air and space museums

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Air and space museums come of age

Michael A. Fopp

A brief look at the story of flight and the growth of aviation museums is provided by Michael A. Fopp, director of the Royal Air Force Museum, Hendon, London.

I am delighted to have been asked to co-ordinate this, the first special issue of *Museum International* about air and space museums. As a director of one of the finest and president of the International Association of Transport and Communications Museums I have leaned heavily on the experience and knowledge of colleagues throughout the world for contributions, and they have not failed me.

Man's first thoughts of flying probably go as far back as the first glimpse he had of other creatures that could achieve what was then, to him, the impossible. As the ages passed he yearned to soar with the birds and his intelligence and innovation searched for a practical means of making flight a reality. For centuries men of genius in the four continents put their thoughts on paper but failed, not through any lack in their initiative, but by the limitations of technology. The first tentative attempts were uncontrolled balloon or glider flights with no real practical purpose other than to take to the air.

Most of the history of flight can be traced to the present century – the span of a person's lifetime. This has an interesting and special effect on museums of flight. The first is they are quite young, most having been founded in the past thirty years. The second is that they are preserving objects that can be very large, fragile and made of materials which have been developed for the purpose of flight over a predetermined lifespan, which was often estimated to be short. That is to say, aircraft are not built to last for ever or for anything like a long time in museum terms. They are machines designed to be maintained and altered as and when required. This makes the job of curatorship all the more difficult. Some of the materials used in the machines, or the clothing worn by crews, are at the leading edge and there are no

established processes for their conservation. Some of the objects have a history of combat or have travelled in outer space, others have spent their working lives dropping chemicals or carrying passengers. All these various uses contribute to the difficulties facing those responsible for their long-term preservation.

Many of us who have worked in museums of flight for many years continue to marvel at the ground-breaking work we are having to do in the areas of conservation and catalogue terminology. We may once have naïvely thought our colleagues in other types of museums had been this way before, but they had not. Air and space museums are representing a new frontier of technology and human achievement and there are few benchmarks for us to follow.

I hope that a little of this innovation comes through in the contributions I have assembled for this issue. My colleagues have eloquently described many of the problems facing air and space museums. The broadness of the contributions signals the burgeoning interest in aviation museums throughout the world. In many ways the last decade of this century has seen the coming of age of both the science and technology of aviation but also of the museums that serve and interpret the subject.

The catalyst of war

It is difficult to be precise about the early history of aeronautical museums. Certainly the established museums in France and the United Kingdom were collecting artefacts associated with flight some years before the aeroplane became a practical proposition. There is evidence of engines, kites and balloons being collected in Europe

and the USA towards the end of the nineteenth century. The oldest actual aeroplane (the Wright Flyer of 1903) did not find its way to the Science Museum until the late 1920s and by that time other aircraft had already been displayed in some countries. However, as is so often the case, the tragedy of war provides the catalyst that causes consideration to be given to the preservation of what might otherwise be just 'junk'. Following the First World War there was a desire both to commemorate and to satisfy the curiosity of the public. In some cases the participants had travelled huge distances to take part in the 'war to end all wars' and they took not only themselves home but also their equipment – as evidence of their deeds and as reminders of their sacrifice. Countries like Australia, New Zealand and the USA shipped large amounts of material home to become first memorials and then museums. Countries like Belgium and France merely transported what was left behind to the nearest shelter. Most of this active preservation was carried out with little formality, and where there were formal agreements, treaties or ceasefires, these were often counter-productive to the preservation of artefacts, as they required the absolute destruction of enemy material.

As the years between the two world wars began, the world slowly settled back into a short-term equilibrium which had little time for preserving too many memories of the past. In aviation the situation must have been similar to that of information technology today, where computer hardware and software are advancing at such a prodigious rate that it is difficult to see any merit in attempting to save or use last year's model, and anything older than five years is pre-historic! In the 'roaring twenties' it is clear that aviation was entering a golden age with advances in almost every area. Against this background some of the sur-

viving artefacts were disposed of as nothing more than redundant scrap. A few far-sighted individuals and institutions were exceptions, and when Paul Garber telegraphed Charles Lindbergh immediately after his epic crossing of the Atlantic in 1927, and asked for the *Spirit of St Louis* to be donated to the Smithsonian Institute in Washington D.C., he set the benchmark for ensuring that the world's aviation heritage was both preserved and, more importantly, recognized as worth preserving.

The burgeoning aviation industry and the general interest shown by the public in anything that flew also contributed to the impetus needed to generate displays which were in part curatorial, part promotional and also exhibited a nation's pride in its own technological prowess. Aviation was (and still is) one of the most complex emerging technologies. In some countries the creation of a national museum of aviation was part of a wider remit to restore pride and loyalty to a particular political ideology. Undoubtedly the finest collection ever assembled at that time resided in the capital city of Nazi Germany.

The interwar period also created a new form of autonomous military power with the creation of the first independent air forces in Europe and South America. These fledgling and very junior forces required mechanisms that would instil pride and tradition for the purposes of promoting and maintaining high morale. One of the ways to do this was to concentrate on the historical achievements of the past, and the preservation of obsolete or redundant equipment was one of the means of making this possible. Thus we have the foundation of a desire to collect items relating to aviation with both civil and military applications, for in those days it was often very difficult to distinguish between the two.



In spite of all these factors the interest in and the collection of historic aircraft was minimal when war once again ravaged the world for a second time (1939–45). As had happened in history so many times before, technology was forced ahead by all sides as a military imperative, but any thoughts of preservation or curatorship were less than secondary. In addition, the aeroplane became a 'tool' much like any other. From being a novelty it became commonplace; from being a curiosity it became a symbol of freedom; from being a rarity it became a regular delivery system for death and destruction. For a time aviation lost its wonderment and, in any case, there were more important things to worry about.

A young heritage

As in previous years, when the war was over, the world took stock, and the same mistakes with regard to preserving the past were made again. What had been so commonplace – military equipment – was changed into something much rarer to those who had suffered. People needed other things and they got them partly as a result of the wholesale destruction and recycling of the materials of war. Many profligate examples of wartime equipment were literally rendered extinct in mere months. While the wheel of time was turning full circle, interest in all things relating to aviation was changed by the postwar boom in consumer goods and the peaceful products of wartime invention. The jet engine made world travel a reality for almost everyone and the rocket made citizens of the world marvel as men flew in space and walked on the moon. With this interest in and acceptance of aviation the time was now right for the realization of dreams to create museums to collect, preserve and interpret the heritage which, while still young, was now substantial.

During the 1950s some attempts were made to create museums, but more success was achieved in ensuring that collections were established. However, by the 1960s many countries were planning public buildings and raising the funds by whatever means necessary. In most cases the interest of military veterans was sufficient but in many the commitment of the general public was required. It was not found wanting and during the 1970s and 1980s air and space museums opened around the world.

There is, to my knowledge, no country untouched by aviation and few that do not have an aviation collection of some kind. Some of the finest of these are naturally in the great cities of the developed world – Washington D.C., Paris, London and many others. However, such is the interest and maturity of this relatively new type of museum that no one country, city or state has anything like a monopoly in this area. China, the Russian Federation, Pakistan, Hungary, Thailand and around fifty other countries can now boast air and space collections which are comprehensive and popular. Many air and space museums have become centres of excellence in their own spheres and are carrying out groundbreaking work in a number of new areas. They have become as rich a resource of their communities as any other, longer-established museums, and in some countries they are the most visited of all types of museum. They have broken new ground with interpretive exhibitions for the popular market and their contribution to education has been exceptional.

All that has happened to build the worldwide network of air and space museums

is, I believe, just the beginning. If we can achieve so much in such a short time there is every reason to be optimistic for the future. Our museums are already inventing new and exciting ways of opening their collections to the world through the Internet; due to their closeness to an industry and discipline which has for its lifeblood the leading edge of technology, I have little doubt that the next twenty-five years will find air and space museums leading the field in all manner of areas.

I am grateful to my colleagues who have contributed to this edition of *Museum International*, for they share my belief in the strength of today's world air and space museum community and the vision that we

are already on a path that will result in huge advances. We have followed our colleagues and learned from them for many years. I suspect we are now about to take the lead in a number of areas, including those of curatorship and conservation. We are ready for the responsibility that such leadership must bring.

Call for contributions

Museum International welcomes suggestions and articles on all subjects of interest to the worldwide museum community. Proposals for articles or themes for special dossiers should be addressed to the Editor, *Museum International*, UNESCO, 1 rue Miollis, 75732 Paris Cedex 15 (France), Fax (+33.1) 45.68.55.91. We promise a prompt reply! ■

Risky business: some thoughts on controversial exhibitions

Tom D. Crouch

Tom D. Crouch, chairman of the Department of Aeronautics of the Smithsonian Institution's National Air and Space Museum, is no stranger to controversy, as this article reveals. It was written in response to the arguments of those who question the value of virtually all thoughtful exhibitions that seek to interpret objects within a useful social and cultural context. He has written or edited several books and articles on the early history of flight technology and is the recipient of a number of major writing awards, including the history book prizes offered by both the American Institute of Aeronautics and Astronautics and the Aviation/Space Writers Association. He received a 1989 Christopher Award, a literary prize recognizing 'significant artistic achievement in support of the highest values of the human spirit' for The Bishop's Boys.

'A shocking show is turning heads and stomachs at the National Air and Space Museum.' Those were the words which veteran *Washington Post* critic Hank Burchard began his review of *Legend, Memory and the Great War in the Air*, an exhibition that opened to the public on 13 November 1991. Pretty strong stuff! . . . And that was only the beginning.

What at first seems to be yet another hymn to the glories of early aviation suddenly becomes a straightforward account of the stupidities and horrors of war. It's a dose of reality such as has never before been seen in the Smithsonian's gee-whiz high-tech museum, which has made itself the town's top tourist draw by showing off big shiny aircraft and rockets while virtually ignoring the death and destruction with which they plague the planet.

Burchard's review was the first serious indication that the newest exhibition at the National Air and Space Museum was going to touch some nerves. Some commentators regarded that as a good thing. Burchard, for example, described the exhibition as a 'quantum leap forward', and an indication that 'the Smithsonian's standard bearer (NASM) may finally be rising to Smithsonian standards'.

Others took a quite different view. In a letter to the editor of the *Washington Post*, Jack Whitelaw, who had served as Executive Officer of the NASM at the time of its spectacular unveiling as 'a Bicentennial gift to the nation' in July 1976, remarked that the new exhibition belonged in a war museum not a technology museum. Clearly, Whitelaw sensed that the winds of change were blowing at the NASM, and longed for the 'good old days'.

The exhibit it replaced [an older NASM treatment of the First World War removed in 1984] did not describe the role the airplane played in World War I, but the role World War I played in the progress of the airplane. The theme of using points in history to reflect the technological advance of aviation prevails throughout the museum, i.e. barnstorming, World War II, naval aviation, etc. In these exhibits there are no winners or losers, good guys or bad guys.

Several days later, it was Whitelaw's turn to face the music. Bill Montague, another contributor to the *Post's* letters-to-the-editor column, remarked that 'Jack Whitelaw's screed against the new World War I exhibit . . . demonstrates the morally obtuse thinking that once characterized the museum. . . .' Montague applauded the museum for its 'good faith effort to balance technological fantasy with historical reality', and offered special congratulations to NASM's director Martin Harwit, who 'possesses the one navigation instrument that the old Air and Space regime lacked – a moral compass'.

The discussion of the new exhibition continued to bubble over the next several months. There was a series of very positive reviews, and a fair number of complementary letters and comments from visitors. But there were also letters of concern, most of them based on an Associated Press wire story, several versions of which appeared in an estimated 160 newspapers across the nation. The opening paragraph of the *Los Angeles Times* version gives some of its flavour:

SHOT DOWN

Forget what you heard about the Red Baron or watched in movie dogfights pitting Fokkers and Pfalzes against Spads

and Sopwith Snipes. The Smithsonian Institution doesn't think aviation contributed much in World War One. The Institution is about to open a sure-to-be controversial exhibit. 'The basic idea is to set the record straight on what aviation in World War One was all about,' says lead curator Dominic Pisano.

The editor of *Air Classics* (who had not seen the exhibition, but who had, apparently, read the *Los Angeles Times*) quoted the news story and 'explained' the 'problem' of the NASM to his readers: 'One has to remember that the majority of people that work for such static-display-only institutions [as the NASM] are mainly bureaucratic wimps who would never, never, venture aloft in the machines they display.'

So what goes on here? Did the National Air and Space Museum set out to attack the memory and reputation of the brave men who fought and died in the first air war? I can assure you that such was not the case. At the same time, *Legend, Memory and the Great War in the Air*, did represent a significant departure from the original NASM World War I Gallery.

Most visitors seem to have loved the World War I Gallery prepared for the opening of the museum in 1976. It was imaginatively designed and communicated the spirit of romance that surrounds our memories of aviation in the First World War. A re-creation of a 1918 US Air Service flying field 'somewhere in France' dominated the presentation. Sandbags, duckboards, and simulated mud provided a sense of time and place. A Fokker D.VII was parked near a small shed. Visitors could overhear the conversation inside as US intelligence officers interrogated a defecting German



Photo by courtesy of the author

pilot. Across the way, two mannequin mechanics were carrying on a lively conversation while labouring over a Nieuport fuselage. A Spad VII hung inverted overhead, frozen halfway through a victory roll. General 'Billy' Mitchell's Spad XVI was suspended near by in a more sedate attitude. Having traversed the recreated flying field, visitors moved past a series of cases containing the uniforms and memorabilia of the great aces, whose names and faces were continually flashed on a screen at the exit.

A Voisin Bomber suspended from the ceiling of the Legend, Memory and the Great War in the Air exhibition, with the NASM SPAD XIII 'Smith IV' in the lower left.

The old exhibition was a visual triumph. It was, in fact, a jewel box, a stage setting in which the principal artefacts – the aeroplanes – could be displayed to best advantage. Those who loved the old exhibit have insects to thank for its demise. An infestation was discovered in 1984. Given the nature of the materials with which the gallery was constructed, and the potential danger to the wood and fabric artefacts on display, there was no choice but to dismantle the hall and begin again.

Now, for the obvious question. Why did the museum not simply rebuild the old gallery? The answer is to be found in the fact that, while a well-designed jewel box



Photo by courtesy of the author

A Sopwith Snipe, used in the air defence of Great Britain, suspended over the re-created entrance to the Elephant and Castle Underground station, which was used as a bomb shelter during the First World War.

may help visitors appreciate the beauty of the Hope Diamond, it is not a very satisfactory way to communicate the meaning and importance of a complex social and technological artefact like a First World War aeroplane.

Accuracy in a museum exhibition requires a good deal more than error-free labels. Studies show that the exhibition is not a particularly good medium for the presentation of detailed information. Rather, visitors tend to acquire an overview from museum displays. An exhibition is like a puzzle in which individual pieces of information combine to express a larger, hopefully coherent, image or message. That being the case, it is not enough for an exhibition planner to provide an accurate description of individual objects and images. The curator must always be aware of the big picture – the basic message that is being communicated by the gallery as a whole.

What sort of image of First World War aviation did the original gallery present? It seems fair to suggest that the emphasis on fighter aircraft and the trappings of the great aces probably led visitors to believe that the air war was largely disconnected from events on the ground.

The inverted SPAD, the colourful uniforms, the two joking mannequin mechanics (their voices were those of the well-known Washington radio personalities Harden and Weaver), conjured up images of a 'lovely war', in which the Red Baron and Captain Eddie jostled each day high in the clear blue skies over France.

A complex vision

Legend, Memory and the Great War in the Air offers a different and much more complex vision of the first air war. The first case in the exhibition, a shop window labelled 'The Vintage Aviator – WWI Collectibles', certainly surprises visitors. It is filled with an artfully arranged selection of pizza boxes, wine bottles, tee-shirts, record albums, food items, restaurant menus, beer steins, toys and games – all displaying motifs related to First World War aviation. A label asks the visitor to consider the fact that, seventy years after the guns fell silent, the images of the First World War in the air remain so powerful that they are still employed to market a wide array of products. In the process, of course, those images have been trivialized out of all recognition.

Two cases on the opposite wall underscore the same notion. Both relate to Manfred von Richthofen, the famous German aviator known as the Red Baron. One contains labels, images and artefacts that tell the story of the Red Baron, the other is filled with modern items of kitsch and additional products bearing his name, or making use of his image. One doesn't find restaurants named after Douglas Bader, Richard Bong or Eric Hartmann. The legend of the Red Baron has assumed mythical proportions. No other fighter pilot, perhaps no other pilot short of Charles Lindbergh or Amelia Earhart, can match his name recognition.

Having brought the visitors face to face with these puzzling modern images of First World War aviation, the exhibition leads them back in time, past a boy's bedroom around 1935. The young fellow whose room this is – or was – has a squadron of stick and paper models of First World War aircraft hanging from the ceiling, and a model under construction on his desk. Pictures of wartime aerial heroes festoon the walls, pulp novels with war themes are scattered on his bed, and the bookshelves are lined with dog-eared copies of *Falcons of France*, *The Red Knight of Germany*, and *Fighting the Flying Circus*. A final section of the introduction presents Hollywood's vision of the First World War in the air through the medium of a special film *Hollywood Knights of the Sky*, narrated by Douglas Fairbanks Jr.

Visitors exit the introductory theatre, their thoughts filled with the popular culture images of the romance and glamour of single combat in the sky, and find themselves confronted with what reviewer Hank Burchard described as a 'death-size photograph of a spectral corpse, lying in a trench on the Western Front'.

The empty eye sockets stare at us from the unknowable beyond. The unblinking camera reveals that the flesh has not been quite completely consumed by maggots and rats. The soldier's uniform is so neat and complete that one guesses he must have died from poison gas rather than a bullet or shrapnel. I didn't notice which uniform he wore. Neither will you.

Having caught the visitors' attention, the curators of the gallery now retrace the history of the aerial weapon and its employment in the First World War. The emphasis is on the linkage between what occurred in the sky and what was happening in the trenches. Special units are devoted to aerial reconnaissance, to the evolution of the fighter aircraft, and to aircraft machine guns and synchronizers and the evolution of tactical thinking on the utilization of air power between 1914 and 1918.

Still another unit, built around an F.E.8 fuselage with a pilot in the cockpit, fully equipped for cold-weather flying, discusses all aspects of the 'Hostile Environment' faced by military aviators of the period. Glancing up and looking around, visitors can see an extraordinary collection of authentic aircraft of the period. On exhibit are: a Voisin VIII LA.P, a Pfalz D.XII, a SPAD, a Fokker D.VII, an Albatross D.Va, and a Sopwith Snipe. Other aircraft are represented by some stunning examples of the modeller's art. The one-sixteenth scale model of the Zeppelin Staaken R.IV prepared by the craftsmen of the Smithsonian's Office of Exhibits Central has to be seen to be believed.

There are far more aircraft in the new exhibition than in the old, and they are displayed in an interesting context. Very little is known about the wartime career or markings of the NASM Pfalz, but we know

a great deal about its postwar years as an aerial star in such cinema epics as *Dawn Patrol*. Therefore, the aeroplane hangs over the introductory theatre in the gallery, decorated in its Hollywood markings. The Voisin is shown as a night bomber, while the Fokker appears as it did at the time of delivery from the factory. The Snipe is suspended near the gallery exit, where such topics as home defence and the birth of the Royal Air Force are discussed.

Audiovisual devices are employed to humanize the exhibit and bring the aircraft back to life. A film of the F.E.8 being started, taking off, and flying over the countryside of upstate New York is narrated by Cole Palen, who describes what it is like to fly an aircraft of this vintage. On another monitor, the late Raymond Brooks explains what it was like to go into combat aboard 'Smith IV', the SPAD on display nearby.

Other units include a treatment of American entry into the war and the US aircraft production programme; a discussion of the role of naval aviation in the First World War; displays on the impact of home-front problems in Germany as they affected aircraft production; and descriptions of the evolution of aircraft structures and propulsion technology during the war.

Walking through a re-creation of the entrance to the Elephant and Castle station of the London Underground, visitors enter the closing portion of the gallery, where the German bombing campaigns against England, 1915-18, are discussed. The rise of British air defence and the foundation of the Royal Air Force, the world's first independent air force, are also treated. The concluding unit explores the impact of the First World War in the air on the subsequent history of the twentieth cen-

ture. A film, *The Long Shadow*, links the strategic bombing campaigns of the First World War to the evolution of air doctrine since that time.

A multi-level experience

The new gallery is complex, and can be appreciated at a variety of levels. For those who simply want to admire and study a marvellous collection of period aircraft, it offers a far richer experience than its predecessor. There are more aeroplanes of more types, most of which can be viewed from a variety of angles. The Voisin and the Snipe, hanging very close to the ceiling, are perhaps a little more difficult to see than the other aircraft. However, those two important aeroplanes are on display in the museum for the very first time, and, with a little effort, visitors can view the essential details.

For the visitor willing to take a little more time and read the labels, the gallery offers a useful and interesting introduction to the birth of military aircraft technology and the history of the first air war. Jack Whitelaw is clearly wrong on this point. The new exhibition offers a much clearer, fuller and more detailed presentation of the evolution of flight technology during the First World War than did its predecessor, and it places that information in an appropriate social, political and economic context.

Finally, at the highest level, the gallery offers a message that transcends the details of the subject in question: myths and legends can cloud the reality of historical experience in a remarkably short period of time. In view of the fact that we base our decisions about the future on our perceptions of the past, an accurate understanding of historical events is a matter of some importance.

Why should an exhibition of the sort described upset some people? Consciously or unconsciously, most visitors assume that a museum will be a comforting and generally reassuring place. The National Air and Space Museum certainly qualifies in that regard, as it should. The story of flight is an inspiring tale of human achievement. All Americans should take enormous pride in the contributions that the men and women of their country have made to the art and science of flight from the days of the Wright brothers to the era of the Space Shuttle. The NASM displays the icons of the aerospace age – from the world's first aeroplane to the Apollo XI command module that carried the first human beings to the moon, and the Pioneer and Voyager spacecraft that have travelled beyond the limits of the solar system. A visit to the museum is enough to engender a warm and fuzzy feeling of pride in the soul of the most jaded citizen.

Traditionally, the NASM has had no difficulty praising successes, underscoring strengths and achievements, or celebrating heroes and heroines. But if the museum has an obligation to inspire pride, it must also, at least occasionally, move beyond its purely celebratory function in an effort to help visitors understand the complex background of aerospace developments, and the impact that those developments have had on the world.

The First World War was *the* pivotal experience of the twentieth century. It gave rise to the revolutions, ideological movements and shifts in national status and direction that would mark an entire era. It also introduced the world to the military potential of the aeroplane, an invention that would revolutionize warfare. The need for an honest and accurate presentation of so important a subject is paramount.

The original WW I Gallery presented the veteran aircraft of that conflict in a setting that reinforced popular notions of the first air war as a time of chivalry and romance. It provided a comfortable experience, one that reinforced the fantasy vision that many visitors brought with them of the First World War in the air as a series of single combats fought *mano-a-mano*, high above the squalor of the trenches. The new gallery, on the other hand, seeks to provide context and a framework for understanding the essential nature of the air war. The level of information provided is far more dense, and there is an honest attempt to contrast the myths and misconceptions that have grown up around the subject with the reality of life and death in the air in the years 1914-18. Finally, it suggests some ways in which that experience shaped subsequent history. In short, this is not a traditional NASM gallery, and that fact makes some visitors uncomfortable. They would prefer the old-style 'jewel box' presentation of the aeroplane as aesthetic object, to a gallery that undermines comforting illusions and underscores harsh realities.

The history of the twentieth century has been shaped in large measure by the fact that human beings can fly. If the NASM is to offer its visitors a useful and rounded portrait of the American aerospace enterprise, the staff must be prepared, on occasion, to tackle the difficult questions. We have an obligation to help our visitors place pressing issues of our national life in historical perspective. Sometimes, that requires us to take a risk – to be a bit more daring than usual, to probe, to ask some difficult questions, perhaps even to make our visitors slightly uncomfortable. Failing that, we face the prospect of becoming little more than Disneyland with wings. ■

A wing and a prayer

Tim Thorne

In an aviation museum, not only good order and accountability but also sound practice and personal safety depend upon the documentation systems in use. Tim Thorne, an independent management consultant specializing in information systems, sets out his view of the value of proper records and procedures, with illustration from the Royal Air Force Museum, Hendon, United Kingdom, where he is leading the overhaul of collections management. He concludes with some suggestions for those considering a similar venture.

I am sure many readers would admit that some aspects of this scenario are familiar. Envisage a large, national museum where two thirds of the collections are unaccountable and inaccessible because they are not documented at all; a mass of manual records includes over 100 different registers and card indexes; exactly the same garment might be variously described as 'hat, smasher type or hat, slouch or slouch hat or hat, Australian Army, broad-brimmed, Pattern 1936'; object stores fill huge aircraft hangars with thousands of aircraft parts and accessories, many undocumented and unrecognized; aircraft were reconstructed and maintained without formal procedures or documentation; a whole aircraft was 'lost' while on long-term loan.

I can understand if, to many seasoned museum professionals, similar circumstances are all too well known! But when I accepted a commission in 1993 to overhaul collections management at the Royal Air Force Museum, Hendon, I was unaware of any of these things – and they were not all known to anyone else. When my initial research work at the three museum sites revealed them, the museum's management (quite new, too) was as surprised as I was. To an information systems man such as me, used to the well-ordered environment of aviation manufacturing and massive supermarket distribution, here was a fascinating challenge indeed.

The museum depicts the operational and social history of the Royal Air Force, from its days as the Royal Flying Corps/Royal Naval Air Service in the First World War to the present day. There are over 100 aircraft on display, but these are just the tip of an iceberg: including books, documentary archives, photographs, film and sound, paintings and sculpture, the collection is estimated to contain almost 1 million artefacts. Besides two display sites, the museum

operates a Reserve Collection and Restoration Centre at Cardington, fifty miles from London, the home of the rigid airships R100 and R101 of British Empire days.

Of course, there are understandable reasons for the documentation problems. The museum was concentrating on getting up and running for the public in its earliest years in the 1960s and 1970s and in the 1980s the battle was one of survival in the face of declining government funding, as in other British museums. In the sure knowledge that we could not be alone in having all these problems, we set out to discover what other museums were doing about theirs. Many visits and research in the United Kingdom and the United States soon showed how much attention and effort documentation and procedures are now receiving throughout the museum world. We have learned much from bodies dedicated to developments in these areas such as CIDOC (the ICOM committee concerned with documentation) and the Museums Documentation Association (MDA) in the United Kingdom. We found that many museums had made valiant attempts to computerize their collections management, despite shortage of funds and staffing. And we discovered many good ideas to emulate, and many pitfalls for the unwary, which we must avoid if at all possible. In particular, we became aware that documentation projects have an infinite capacity to expand and to go on for ever. We learned, too (with some relief) that our situation was not unique: it is clear that many museums have massive documentation backlogs. Most notable was the enthusiasm of all those we met, and we returned to Hendon with many offers of assistance and invigorated for the task ahead. Against this background began the Royal Air Force Museum's Collections Management project, which will occupy a good deal of its professional resources for many years to come.

Why document collections?

There are many reasons and driving forces for sound documentation and professional methods which are well known and common to museums of all types and sizes. Firstly, we must build a comprehensive inventory so that we know what we have and where it is located. Only then can we truly take management responsibility for the objects in our collections and be properly accountable for the custodianship of public property now and in the future. Like our museum, many museums have a large number of objects to account for, and with limited curatorial staff paper-based records are impossibly labour-intensive and inaccessible. This makes a computerized database inventory essential.

Once we have an inventory we can build on this to catalogue our objects more fully. By this we mean adding detailed information about the operational history of an aircraft, or recording the type, nature and content of each paper in a documentary archive. With the various kinds of manufactured objects we are concerned with, much of the interest attached to an item relates to who designed and built it, what it was used for, who flew it, and when.

These object-based records will greatly enrich the collection both for the present (providing the contextual information which brings the objects to life) and, at least as importantly, for future generations (adding a degree of permanence to the frail institutional memory that now relies upon the continuity of the curators). The records will provide a sound starting-point both for improving access to the collections and for interrelating the contents of the different sub-collections which now exist as islands in a sea of ignorance. The value of the collections will be hugely enhanced if



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we can subject reference our database to answer questions such as ‘What aircraft have you in your collection which operated from Drigh Road, Delhi’ (a Royal Air Force Station in India)?

While museum collections are frequently thought of as largely static displays and stores, there is, in a live museum environment, constant movement of objects inward, within, and outward; not necessarily movements of large numbers of objects, but regular and ongoing shifts from one place or state to another. Examples are entry of objects for examination as possible acquisitions; transfer from storage to display; transfer to a contractor for conservation, and exit on loan to a borrower.

To maintain control over the inventory, it is clear the objects database must be kept fully updated with all types of movements. So each movement must be treated as a transaction, be documented fully and precisely, and be applied to the database to

This Hampden bomber, recently retrieved from Russia after crashing on an operation during the Second World War, is now under restoration at the Cardington centre. Here, a museum technician examines and catalogues components with painstaking attention to detail before the reconstruction process begins.

keep it up to date. Likewise, any important changes in the circumstances, condition or any other information about an object must be recorded and the database updated.

Only by treating all movements and changes as transactions in this way can the database form the vital institutional record that it is intended to be. The database will thus be no more reliable than the procedures are complete and fully observed. It is axiomatic that a database is much easier to corrupt through error or slackness than it is to set up in the first place!

This Supermarine Southampton Mark 1 flying boat, a 1920s aircraft, was recovered in 1967 from a river estuary where it had been used as a home for more than thirty-five years. Carefully restored, it has now won the 1996 United Kingdom National Conservation Award and is delighting visitors to the museum's main aircraft hall.

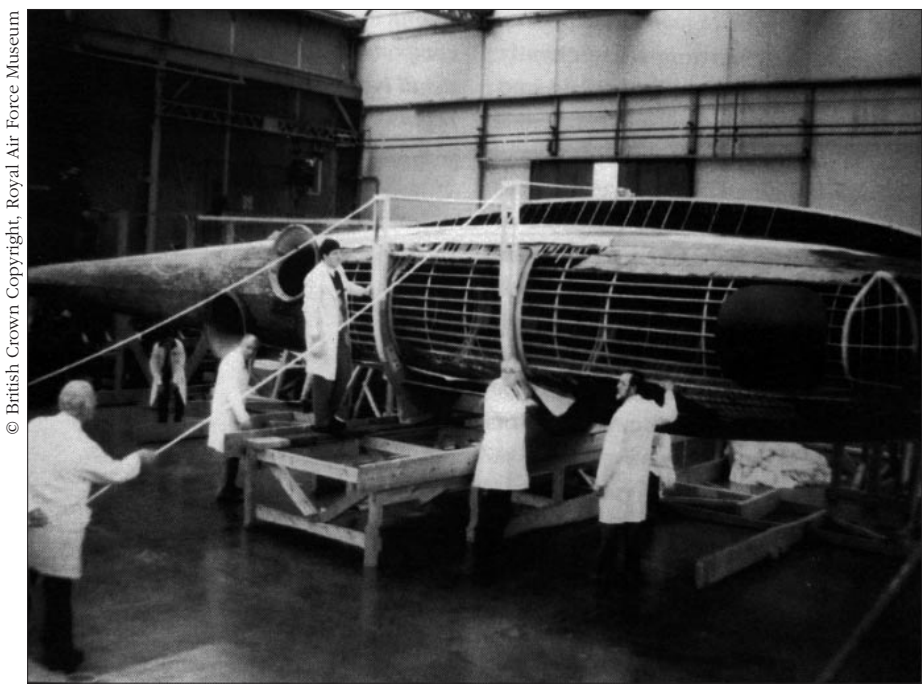
Some documentation and associate management needs are more acute within (and in part peculiar to) aviation and other technical museums. These relate to the close associations between the different sub-collections; the complex make-up of the objects; the wide range of high technology employed; and the fragility of many of the objects.

While subject access is a common requirement, identifying relationships between physically quite different but closely content-related material is of particular importance in aviation collections. In the example of subject access quoted earlier, it is not difficult to imagine the value of extending the question on Drigh Road to 'What contemporary photographs of this station do you have?', 'What archive film is there?' and 'Have you any books describing operations at Drigh Road?' Such powerful information retrieval can help to build better exhibitions, enhance facilities for researchers, and assist conservation and restoration projects.

Many historic aircraft instruments are radioactive, and so represent a potential danger to museum staff and visitors. Such items must be identified, logged, stored separately in a secure area and handled taking special precautions. Full and accurate documentation is critical for this.

Because many aircraft sections are complex assemblies comprising multiple items, what appears to be a single object may in fact be many, an example of this being the Phantom cockpit. This situation places special demands on record structures, which must be capable of reflecting 'fitted to' and 'fitted with' relationships, and on the curators and technicians who must ensure that documentation is completed accurately.

In some cases, aircraft arrive complete and fit for museum display, immediately they have finished their operational service life. Others are displayed as they were found after crashing, to illustrate particular historical events or circumstances. But many of the aircraft in aviation museums have been extensively restored to show them in their original condition. Such restorations can be lengthy and exceedingly complex, requiring great skill and painstaking attention to detail. When an aircraft is being



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reconstructed from crashed remains, for example, the museum's restoration centre often depends upon original manufacturer's drawings, technical manuals and photographs of equipment in its original state. Such projects draw heavily upon the museum's capacity to retrieve relevant material from its document and visual-arts collections. Besides original documentation to provide the blueprints for restoration, the complexity of such schemes makes tight control of the reconstruction process itself essential. Systems for planning and scheduling of work and for monitoring progress and task status are critical. Information is one of the keys to success, and in many ways the rigours of the original production environment must be observed, without the expensive, high-tech equipment available to facilitate the process.

Aircraft are highly complex structures, built from lightweight materials of many different kinds. This means that they have a natural tendency to deteriorate over time, and even aircraft and associated equipment in galleries on static display must be inspected and serviced regularly if they are to remain safe and have the longest possible life as museum objects to be enjoyed by future generations. In our museum, the large number of aircraft on display, including some outdoors, makes maintenance and repair a continuous process. When the present conservation management team arrived at the museum they found that maintenance had been largely undocumented, and the corporate memory relied upon. This approach was not only unreliable but dangerous when applied to tasks such as removing a wing structure to gain access, and examining rocket-propelled ejection seats. It was clear that a system of documentation was essential to produce logical work practices, discipline of purpose, and a coherent maintenance programme covering the whole collection.

Solutions and plans

Having understood the present situation and identified its needs, the museum is making good progress towards a better managed environment. The collections division is working to improve the approach to conserving and maintaining our aircraft, the most important objects in the collection. And the collections management project is now well underway.

The senior manager in overall charge of the restoration centre (a retired senior Air Force officer) observed recently:

Those elsewhere restoring aircraft to flying condition are required to document their work to CAA or FAA rules if they are to achieve a certificate of airworthiness. But with no such body to dictate rules for aircraft on ground display it is up to individual organizations to produce their own rules and, most importantly, the necessary documentation.

Such documentation is now in place and its use enforced by the management team. This automatically imposes the very necessary discipline on those engaged in restoration work, not only on aircraft but also on other large objects such as vehicles. Well-designed forms and routines structure the work and direct the technician to note carefully the necessary information in a regular and timely manner.

No suitable standards or practice for aircraft maintenance were found to exist in other museums, so the management team working with the Ministry of Defence developed a comprehensive maintenance schedule and log covering all the aircraft on display. This has been implemented progressively, and has brought the conservation of the collection firmly under control for the first time.

Royal Air Force Tornado fighter and Bulldog trainer aircraft stand at the entrance to the museum during one of the regular flight activities weeks.

The restoration and maintenance systems are at present designed for manual operation as they were implemented in advance of the museum's computerization for wider collections management purposes. In due course, the documentation and procedures will enable a simple transfer to a computer application and so provide even greater control and efficiency.

At the outset, our Collections Management project was conceived as an overhaul of the entire management framework for documenting objects and controlling their movements and location. It encompasses everything from developing museum-wide collections policies, through designing the database to meet the quite disparate needs of the various sub-collections, to procuring and installing a computerized collections management system

(CMS). These, and many other facets of the project, are all essential pieces in a large jigsaw puzzle. While a comprehensive scheme such as this is bound to be large, in terms of time-scale, staff requirements and costs, we have placed emphasis upon sound, practical solutions – aiming to derive 80 per cent of the possible benefit by concentrating on the tasks which add most value.

The museum community has been very active in recent years in developing standards guidance for collection-management policies, procedures and documentation. Much high quality work has been published and we have been fortunate in having SPECTRUM – the United Kingdom Museum Documentation Standard – published by the MDA just as our project was getting underway. This is now in use very

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widely in the United Kingdom and many other countries. We are adopting those parts of SPECTRUM (and other standards) appropriate to our needs and leaving aside those not needed or beyond our capacity to achieve, given constraints of resources and time. In this way, standards have provided valuable triggers and guidelines, facilitating progress. If we had adopted SPECTRUM slavishly as a mandatory standard we would be attempting now to impose a working environment quite unsuited to this museum and we would fail. Besides facilitating our project during its development, observing standards will lead to a professional curatorial environment which has much in common with that of other major museums. That, and the adoption of common data recording and technical standards will assist communication and information interchange in the future.

As described, the Royal Air Force Museum has tended to evolve in 'compartments' based upon the subcollections. An important goal of the documentation project has

been to introduce an organization-wide perspective, implemented in common policies and procedures. Moreover, a single computerized CMS is planned to support recording and collections management for the whole museum. A 'packaged' software system will be selected, then tailored to meet the individual needs of the six collections, providing a single, centralized database networked to forty users at the three museum locations. The package approach will provide a powerful solution at an economical cost, made possible by the recent development of systems for networked PC platforms (rather than mini-computers or mainframes). Common indexing of the database will permit information search and retrieval across the collections, so enabling their common subject matter to be exploited by both curators and researchers. Besides textual data for objects, the system will allow digital colour images and digital sound recordings to be captured and produced at the users' workstations. This will not only assist curatorial processes but also greatly enhance

The museum's reserve collection and restoration centre at RAF Cardington, Bedfordshire, houses tens of thousands of objects and spare parts for use in restoration projects which include everything from aircraft components and weaponry to the massive air force historic clothing collection.

the information available to research visitors to the museum. The same technology can also help to enrich displays in galleries, by enabling detailed views of inaccessible parts of objects such as aircraft cockpits. The 'Silver Dart' project at the National Aviation Museum of Canada is already doing this successfully.

The value of any information retrieval system depends absolutely on our ability to search it successfully and retrieve what we are looking for. Consistent use of language is vital to this, and the museum world and wider heritage community is actively working at every level (from the individual institution project to international initiatives such as the Getty Art and Architecture Thesaurus) to develop terminology for universal application. Our project established a terminology working group (TWG) in 1994, which has been developing our strategy and practical solutions ever since. The TWG has found that very little in-depth work has been done anywhere on terminology for aviation museums, which has left us with the task of researching and developing thesauri and authority lists for our own use. This is a major undertaking. We have received sound advice from information scientists and have been able to build upon a 50,000 term aviation/air force subjects referencing thesaurus constructed in our own library over the past twenty-five years, but until now not widely applied. Once our thesauri have been proven in use, the museum plans to offer them to other institutions and so help to exploit the investment made.

The collections management project was begun in 1993 with a team of one consultant (the author) and one curator on secondment as research assistant, directed by a project board comprised of senior museum managers.

This was a strong team as it combined museum and curatorial knowledge with information technology (IT) and business projects experience. Now that the formative stages are completed, a new department of collections management (DCM) has been established to carry forward the scheme. The consultant operates as its head and reporting to him are a database manager, responsible for compilation of the collections database; a museum registrar, who operates as an adviser to the museum keepers and is designing new collections policies and procedures, and who will supervise the system implementation; an IT manager, to plan, procure and support all IT systems and equipment, including the computerized CMS.

Other staffing of DCM consists largely of curatorial staff on secondment from their normal posts. Engaged in a variety of tasks including terminology development, inventory planning and thesaurus construction, the seconded team includes senior staff who provide DCM with exceptional knowledge of the aircraft and associated collections. This is invaluable for present developments, and is also helping to build overall museum 'ownership' of and commitment to the project as a whole. This staffing is supplemented by a small team of data editors and recorders working on database construction.

The secondments are being made, inevitably, at the expense of mainstream curatorial work including research, design and exhibitions. This is putting great pressure on the capacity of the museum to keep the exhibitions and displays lively and interesting to ever more demanding visitors, so it is planned in the longer term to reduce secondments and expand the DCM team.

An undertaking of this scale and impact can only succeed if it has the support of senior management to encourage the necessary focus, priority of action and commitment of resources. At the Royal Air Force Museum the director instigated the project and the museum trustees have given it their backing. It has received unswerving management support to date, despite the internal pressures caused by the staff secondment programme. Continuity of support is vital, and on present plans this is assured for at least the next ten years. Providing support and funding for it continue, the collections management project should ensure proper accountability and more professional working practices in the museum well into the next century.

Management knows that to be successful it has to persuade staff of the benefits of documenting and managing the collections in a more disciplined way. When the new system becomes available, the curators will only be encouraged to use it effectively if they can see it is essential to fully professional working methods. So close attention is being paid to the consultation, education and training essential to ensure the new regime meets the real business and professional curatorial needs of the museum, and is fully workable for managers, curators and public researchers.

Keys to success

This article has described substantial documentation problems but it has, hopefully, demonstrated that solutions are perfectly possible given the commitment necessary. In conclusion (and particularly for those who may be contemplating a documentation project) perhaps the most important, universal pointers for success are the following:

- Research thoroughly to ensure the current situation and its problems are well understood at the outset.
- Use all appropriate means to gain full management commitment, and do not proceed without it.
- Tap into good practice by colleagues in other organizations.
- Pay close attention to planning and specifications, ensuring project management expertise is available.
- Identify the size of the labour force required, not only at the development stage but also to run the system once it is online.
- Make every effort to consult and foster 'ownership'.
- Do not ignore the terminology problem, but do recognize the magnitude of the solution to it.
- Use procedural standards as a guide, not as a straitjacket.
- If in doubt, always do what suits the situation in hand, not some idealized world over the rainbow. ■

Note

The author gratefully acknowledges the contribution of ideas for this article from Adam Smith, head curator, National Museums of Scotland, Museum of Flight, and Alan Mineault, software architect, Systems for Aviation Research.

A 'pioneering spirit': Uruguay's Aeronautical Museum

Colonel Angel H. Hernandez

The story of aviation has enthralled publics throughout the world and nowhere more than in Uruguay whose early exploits are celebrated in its Aeronautical Museum. The author is director of the museum.

The history of aeronautics in Uruguay goes back as far as the history of aeronautics itself. Its origins lie in 1852, when General Melchor Pacheco y Obes became the first Uruguayan to fly over the city of Paris in a balloon. At that time people were struggling to consolidate the youngest republics, but the desire to be able to fly was very strong and it was realized.

The advent of aeroplanes in the 1900s aroused great excitement all over the world, not just among a few, but among the public generally. Uruguay was no exception. So much so that, in 1910, a Uruguayan, Mario Garcia Camez, flew to Barcelona in his own plane, flying the Uruguayan flag. These events had a snowball effect throughout Uruguay and more and more people wanted to follow the example of these pioneers. Also in 1910, the Escoffet brothers built two entirely Uruguayan aeroplanes, the second of which succeeded in

taking off, marking a milestone in the history of Uruguayan aviation.

This pioneering spirit was confirmed by later events, abundantly demonstrating the intelligence, bravery and intrepidity of those who contributed to the history of Uruguayan aviation. All these events were valued and recorded and continue to be celebrated and respected by succeeding generations.

We, in our turn, wanted these events to be remembered and passed on to future generations, not only by word of mouth, but in places set up and maintained for the purpose – in museums. Thus began the basic stage of obtaining the necessary sites and buildings, arranging and systematizing the collections, defining the scope of the exhibition, etc. At the same time, all those directly involved in aeronautical activities joined forces and combined their private

Photo by courtesy of the author



In the upper part of the photograph, a replica of the Santos-Dumont 14 bis; on the ground, the Curtiss SNC-1 'Falcon'.



Photo by courtesy of the author

collections to form the nucleus of an aeronautical collection which was to be continually enriched with the acquisition of the new elements developed as aviation evolved.

It is important to note that the history of aeronautics extends barely over ninety years, if we refer only to aeroplanes. Yet some museums have been in existence for more than forty years. This again demonstrates that there is a historical awareness of aeronautics based on a sound background and magnificent collections that make us proud of our past and which help to mark the history of world aviation.

Uruguay's Aeronautical Museum was founded in Montevideo on 18 August 1954 by Colonel (Av.) Jaime Meregalli, who first had the idea in 1941 when preparing the First Exhibition of Civil and Military Pilots' Insignia and Licences at the Capitán Boiso

Lanza military aerodrome. In the course of time the collection increased and was extended to include other elements in the history of aeronautics, thus forming what was to be the nucleus of the present museum collection.

With the increase in the volume of exhibits, more spacious premises were required, so the collection was transferred to Air Base No. 1, at Carrasco. A little later, when the collection comprised a good many aeroplanes with a long history, it was decided to transfer it to its present site, on the corner of Avenida Larrañaga and Avenida Serrato.

Outstanding in the collection are a 1912 Castaibert; a replica of the Santos-Dumont 14 bis; a De Havilland DH90 'Dragonfly', the first plane of the national airline, PLUNA; the only surviving Neybar, designed and built entirely in Uruguay in 1947; a Potez 25 A-2 of French origin; and a Focke-Wulf FW

The main exhibition hall of the museum.

Photo by courtesy of the author



The 1941 'Neybar', entirely Uruguayan in design and construction and piloted by Uruguayans.

44 J 'Stieglitz'. Another important collection consists of engines from 1912 to 1939; wood and metal propellers; personal possessions of great historic value because they belonged to the precursors of Uruguayan aeronautics; etc.

The aims and purposes of the museum are: (a) to maintain, preserve and increase an invaluable collection of aeroplanes and objects connected with aeronautics and space, illustrating the historical and technological development of aviation; (b) to display these exhibits in such a way as to broaden the knowledge of the public and, through entertainment, to motivate and educate young people and inspire vocations; and (c) to make people understand that it is through historical development that human ingenuity and science have succeeded in this sphere.

Historic exhibits

In the aircraft collection, special mention should be made of the 1912 Castaibert with a Gnome-Lambda rotary engine, or

turbine, with which Lieutenant Cesareo L. Berisso, one of the founders of military aviation, was to accomplish in 1916 the first long-distance flight in the Americas, between the cities of Buenos Aires and Mendoza in Argentina.

Another very important aeroplane is the Potez 25 of French origin, which was to make its maiden flight in 1925. A civil version of this plane belonging to the Compagnie Aéropostale, piloted by Jean Mermoz and Henry Guillaumet, two great figures in world aviation, crossed the Andes, inaugurating an airmail service between Buenos Aires and Santiago de Chile. The Potez 25 in the museum made two historic flights, in 1934 and 1935, linking Montevideo with Lima (Peru) after crossing the Andes.

Also worthy of mention is the fact that we still have the first aeroplane acquired by our national airline, PLUNA. It is a De Havilland DH-90 'Dragonfly', which inaugurated a transport service connecting Montevideo, Salto and Paysandú on 20 November 1936.

Next in importance is the Neybar, which was entirely Uruguayan in design and construction and was piloted by Uruguayans. Designed in 1941, it included a retractable undercarriage, or landing gear, which was a remarkable advance for the time. The Neybar had a capacity of four and its performance was outstanding.

Another aeroplane seldom on view is the Curtiss SNC-1 'Falcon', of United States origin, which made its maiden flight in 1940. Very few planes of this type are still in existence today. A similar one is to be found in the Aeronaval Museum at Pensacola, Florida, in the United States.

Thanks to the kindness of the Government of Brazil, the museum received in 1975 an exact replica of Santos-Dumont's famous 14 bis, which is now one of the most important exhibits in the collection.

The museum also contains the following aeroplanes: Farman biplane, 1913; De Havilland DH 60 'Gipsy Moth'; Focke-Wulf FW 44 'Stieglitz'; Douglas DC-3; Fairchild PT-19 'Cornell'; United States AT-6 'Texan'; Beechcraft AT-11 'Kansan'; Lockheed 18 'Lodestar'; United States B-25 'Mitchell'; Lockheed F-80 'Shooting Star'; De Havilland DHC 1 'Chipmunk'; balloon.

Looking ahead to the future development of the museum, in view of the fact that we shall be adding five planes to our collection over the next five years, we are planning to build a new hangar of an area of 2,000 m², which will enable us to display our collection better and allow visitors to see it to better advantage.

Mindful of the wide distribution of *Museum International* all over the world, we wish to seize this opportunity to say that the doors of this museum are always open to visitors and that we shall receive them with great pleasure and with traditional Uruguayan hospitality. ■

Canada's technology museums go on-line

Christopher J. Terry

The increasing importance of on-line databases has led Canada's major technology museums to undertake a thorough revamping of the ways in which their vast store of knowledge is organized and made available. The author is Director General of the National Aviation Museum in Ottawa.

The National Museum of Science and Technology Corporation comprises three museums: the National Museum of Science and Technology, the National Aviation Museum, and the Agricultural Museum. As Canada's premier technology museums, we feel it important to provide the public with leading-edge access to our resources through the use of new media and on-line services. At the same time we recognize the importance of providing our own staff with internal and external communications that allow them desktop access to museum collections records, library catalogues, the Internet and each other.

The corporation has been working with computerized databases for many years, and maintains digital library and collections catalogues, as well as administrative systems. What is changing for the museums, however, is the degree to which such databases are placed on-line. The explosive growth of the World Wide Web has been the catalyst that has inspired corporation staff to rethink the way in which we manage our richest resource – the knowledge encoded in our databases and held by our researchers. In 1995/96, a Working Group on Information Technology scanned the environment, interviewed staff, and analysed our past experience to develop a policy for future direction in two areas which the museums deem significant – the provision of access to experience and of access to knowledge.

Fortunately the corporation has been able to acquire considerable experience in the areas of multimedia and networked applications. In 1993, one of the component museums, the National Aviation Museum, worked in partnership with a major Canadian telecommunications research organization, Stentor, as well as

other agencies such as the National Film Board (NFB) and the Canadian Heritage Information Network (CHIN) to launch the Silver Dart project. For this innovative project, the museum developed a multimedia database which was placed on a media server to deliver high-quality video (MPEG-1), images, and text to kiosks on a local area network (LAN) within the museum and over a wide area network (WAN) to other remote kiosks in Ottawa and Toronto. The trial of the content, the server and the networks was a resounding success, and Silver Dart remains one of the few multimedia applications developed for broadband distribution. The project itself won three awards, including an award of excellence from the Canadian Museums Association, a silver medal in the New Media/INVISION awards, and another silver medal from the Canadian Government for private/public sector partnership.

In 1995, the National Aviation Museum brought together some of the original partners, and with a young Canadian multimedia company, Digital Renaissance (who had also developed the Silver Dart application), produced *Flypast/Survol*, an award-winning (New Media/INVISION finalist) CD-ROM of the museum's collection. The CD-ROM featured over forty minutes of original video production on the history of Canadian aviation, as well as over 1,200 pages of text and 600-odd photos. The CD-ROM is now in international distribution with the National Film Board.

This experience enabled staff at the three museums to undertake the development of three websites, launched on International Museums Day in May 1996. The websites are based on the corporation's understanding (developed through the work of the Working Group on Information Technology) that the museum mandate is to provide access



© National Aviation Museum, Ottawa, Canada

not only to the physical experience of collections and buildings, but also to the knowledge embodied in the collections. To this end, the websites are more than what is pejoratively called 'brochure-ware'. They contain collections descriptions, curatorial essays, recommended readings, and soon, direct access to the library catalogues.¹

We would have liked to provide even greater on-line access to our collections and research information, but we realized that the structure of our databases did not permit the natural and fluid searching we required. As a result we are now engaged in a study with a group of partners including the National Research Council of Canada and the University of Toronto to develop a flexible browsing tool which allows dynamic linking through multimedia databases. This new approach to using

legacy databases as the foundation for the creation of new knowledge is exciting and promises to renew the mandate of the museum to provide access to users at every level.

Museums have always been repositories, and are often seen as storehouses for accumulated knowledge. Seventy years ago, Lewis Mumford suggested they could become not just storehouses but powerhouses. New technologies of information creation and dissemination now offer us the opportunity to realize that promise. ■

Note

1. Please visit our websites at www.aviation.nmstc.ca/www.science-tech.nmstc.ca/www.agriculture.nmstc.ca.

The National Aviation Museum in Ottawa collects, displays and interprets aeronautical technology.

'Building for Air Travel': Chicago's Art Institute celebrates aviation architecture

A Museum International report

The first-ever exhibition devoted to aviation architecture and design mounted by a major art museum was on view in Chicago from 19 October 1996 to 5 January 1997. Designed by the renowned architect Helmut Jahn, the exhibit presented an in-depth look at the enormous impact that architecture and design for commercial aviation has had on society for more than seventy years.

The *Building for Air Travel* exhibition focused on the architecture and design of the airline industry, its history and current state. Provocatively designed for the Art Institute's architecture gallery, it was housed within a set of enormous curved aluminium ribs that conveyed the sense of an aircraft under construction and acted as a 'time tunnel' through more than seventy years of commercial aviation. Installed

inside were photographs with vintage and contemporary views from a variety of corporate and archival sources, along with more than fifty original drawings, architectural models and rare cut-away models of aircraft interiors.

The period covered in the exhibition has witnessed the remarkably rapid development of commercial air transport –

© Steinkamp/Ballogg, Chicago



Installation view, Building for Air Travel, the Art Institute of Chicago.

from twelve-seater propeller-driven planes of the 1920s, travelling at barely 160 km per hour, to today's massive 747s carrying 450 passengers at speeds of more than 800 kph. This evolution is mirrored in the spectacular growth-rate of airports. In 1925, for example, 11,720 passengers passed through Berlin's Tempelhof Airport, then Europe's leading aerial hub. Today, O'Hare International Airport in Chicago, the world's busiest, sees more than 66 million passengers each year!

The exhibition's story begins with the development of a design identity for early commercial aviation that was grounded in the security of past associations with the railroads. It continues through the pre- and post-Second World War period, when designers consciously sought a new identity for this advanced and ever-growing form of travel – one shaped by the vocabulary of modernist architecture. Not only viewed as the most modern way to travel, aeroplanes and their related infrastructure – airports, aircraft factories – have been since their very beginning symbols of regional and national prowess. Moreover, these varied interrelated design forms have had, and continue to have, an enormous economic impact, both nationally and for local communities. The exhibition was an attempt to offer visitors a behind-the-scenes look at the fascinating range of choices made in the conception and creation of these crucially important twentieth-century structures.

Building for Air Travel comprised three categories – airports, aircraft factories and airline interiors – and was divided into seven major topics: commercial airports, 1924–44; commercial airports, 1945–95; constructing and repairing aircraft from biplanes to jumbo jets; airliner



interiors and corporate imagery, past and present; contemporary airports and airport buildings; building for the future: aircraft factories today; and airlines

Above: *Original terminal of the Prague-Ruzyně Airport, 1933–37 (slightly altered) with a Pan American DC-3 in the foreground.*



©Pan American World Airways, Inc., Records, Archives and Special Collections Department, University of Miami Library, Coral Gables, Florida

Left: *Interior of the Martin M-130 'China Clipper', 1934/35, designed by Norman Bel Geddes.*



© The NBBJ Group

Modernization of the Sea-Tac International Airport in Washington state by NBBJ, architects, with Leo A. Daly, associates.

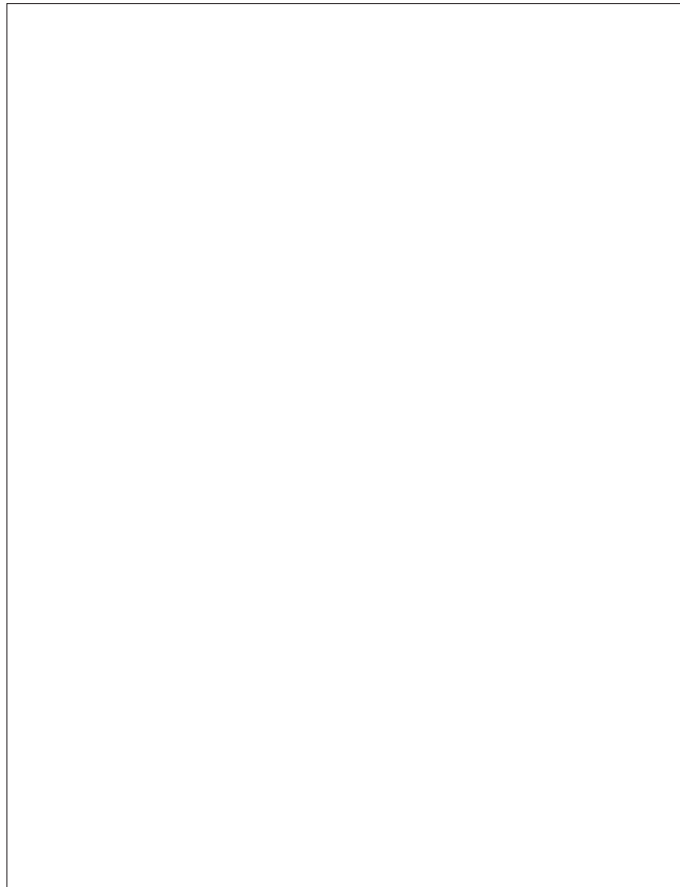
for today and tomorrow. Exhibition highlights include two large cutaway models of 1939 Boeing 307 and 314 airliners flown by Pan American Airways and now at the Cradle of Aviation Museum in Garden City, New York; drawings and models for new airports under design and construction, including those for Kuala Lumpur, Bangkok, Cochin, India,

and Fukuoka, Japan, and the new International Terminal of San Francisco airport; sketches lent by Daimler-Benz Aerospace Airbus for the interiors of the proposed double-decker Airbus A3XX scheduled to fly in 1998–2001, and for the high-tech cockpit of a proposed Airbus regional jetliner for 100 passengers. A series of video presentations

showed the motorized 'people movers' first used at Washington's Dulles Airport in the 1960s, the teamwork involved in making Airbus airliners, and a computer-generated tour of the interiors of the new Boeing 777.

Starting at the Art Institute, the exhibition then travelled to the Museum of Flight in Seattle, Washington, and the galleries within San Francisco International Airport. A more portable version of the exhibition, employing photo enlargements, is scheduled to circulate over a two-year period to airports around the world (as of this writing, Frankfurt International Airport and Amsterdam's Schiphol International Airport have expressed interest for 1997/98).

The exhibition was accompanied by a 256-page book published simultaneously by the Art Institute of Chicago and Prestel Verlag, Munich. It included 80 colour pages and essays by eight scholars and industry professionals, thus presenting the first comprehensive overview of this important but little-explored topic. ■



© Lufthansa Bildarchiv

Corporate image design for the Lufthansa 'Crane logo', 1918, design by Otto Firle. Poster for Deutsche Luft Reederei.

The Paris–Le Bourget Air and Space Museum: an embarrassment of riches

General Jean-Paul Siffre

France is often considered the cradle of air conquest, beginning with the hot-air balloons of the Montgolfier brothers in the eighteenth century. It is only natural that the doyen of all air and space museums be located there, on the site of a historic airport on the outskirts of Paris. General Jean-Paul Siffre, director of the Paris–Le Bourget Air and Space Museum, describes the size, scope and the sheer variety of its collections, which have made it one of the best museums of its kind in the world.

The Musée de l’Air et de l’Espace de Paris–Le Bourget (the Paris–Le Bourget Air and Space Museum) will soon be celebrating its eightieth anniversary, and is in fine health. At a time when many museums are experiencing difficulties, it would be interesting to take a brief look at what is not only a scientific and technical establishment, but also a human and artistic one. Its history, collections, architecture and exhibitions, together with activities that are specifically directed toward young people, no doubt provide the best guaranties for its future development.

The Musée de l’Air et de l’Espace de Paris–Le Bourget is indisputably the oldest aeronautical museum in the world, one of the best endowed in terms of the size and quality of its collections relating to ballooning, aeronautics and space, and one of the largest in terms of the size of its galleries, restoration workshops and reserves. This is so because the first balloon flights took place in Paris at the end of the eighteenth century, and France played a major role in the development of airships and, later, heavier-than-air craft, and is still one of the few world players in the aeronautical and space fields.

Since the inauguration of the museum in its temporary buildings at Chalais-Meudon in 1921, it has housed a rich collection of ballooning, aeroplane and engine equipment which survived the First World War. But for several decades, the Musée de l’Air et de l’Espace was to suffer from lack of space for the fitting display of its collections, and from the dispersal of its reserves over several sites in the Paris area.

The opening of the Paris–Charles de Gaulle airport and the departure of the airline companies from the Le Bourget airport made it possible to install the museum in the air terminal and a section of the

technical zones, both civilian and military, of the Paris–Le Bourget airport. The museum gradually opened its galleries at Le Bourget to the public between 1975 and 1987, with an inauguration about every two years (one for each of the international air and space shows). Today, the museum’s mission is twofold: first, the objective which it shares with other museums of conserving, enhancing and exhibiting its collections and, second, the moral responsibility of preserving the memory of the Le Bourget site. It was on this airfield, created in 1915 during the First World War, that the airline companies established the first air links to Brussels and London in 1919. In addition to being the first civilian airport of Paris, Le Bourget served as the base for numerous long-distance flights during the interwar years. In this latter context, it was often the locus of hope and tragedy as well as triumph and glory. The site is also a memorial to the loss of Nungesser and Coli and the success of Lindbergh. The museum is duty-bound further to develop the air terminal which the architect Labro planned and built in 1936, and is now a protected historical monument.

Apart from being located in a spot of great historical significance, the Musée de l’Air et de l’Espace occupies a site that is very much alive. Business aviation and industrial activities have continued to grow, and every two years since 1953 the largest international air and space show is organized at Le Bourget in front of the museum’s buildings. Visitors to the show, numbering in the hundreds of thousands, are thus given a space of ten days in which to discover the museum.

The collection existing in 1922 comprised some 50 aeroplanes, 77 engines, 160 scale models, a large amount of photographic

equipment and materials, a dozen or more nacelles of balloons and airships, and some parachutes and kites. As time went by, it was enriched by different donations of holdings from technical and historical archives. They included the correspondence of the Montgolfier brothers, the notebooks of Clément Ader, and the studies and sketches of Renard, Mouillard and Pénaud. At the same time, the donations made by the first director's family and the predilection of the second director for ascents in balloons and the collection of ballooning objects of the eighteenth and nineteenth centuries led to the creation of a large section of works of art, objects, engravings, toys, posters and curios all concerning aeronautics. Over and above its documentary value, this collection, which grew up alongside the technical sections, bears unique testimony to the influence of ballooning and aviation on society. The collection of ballooning objects now comprises hundreds of items. They are tokens of the enthusiasm with which Paris, the provinces and foreign countries reacted to the first human flights at the end of the eighteenth century. In this way, far from being confined to a technical vision of flying, from its very beginning the Musée de l'Air was established to cater for society as a whole.

A generalist collection

Although the creation of an aeronautical collection was the work of the Ministry of War, the project was not limited to a conservatory of military hardware. It was conceived within the framework of the major establishments concerned with scientific and educational heritage. From the start, the museum was set up as a generalist museum whose domain encompasses the entire range of civilian and military aeronautical fields. The

collection of aircraft with its 300 machines is its most visible component, but only one of its aspects. The section concerned with propulsion now has almost 1,000 engines which include some 800 internal-combustion engines and 200 turbo-jet engines. Today, the different technical sections together contain almost 400 screw propellers, thousands of on-board instruments, 200 armament pieces, and hundreds of objects relating to ballooning, nacelles, loading rings and valves. One of the museum's treasures is an outstanding collection of 553 scale models, with most of them being one-tenth in scale. Since 1922, it has continued to expand on the basis of the principle of a unique scale. One can thus follow the changing forms of the most outstanding machines.

When the museum was created in 1918, a decade had passed since Henry Farman's exploit in flying the first kilometre in Europe and thereby signalling the birth of practical aviation. This was an exceptional case of the constitution of the historical memory of a human activity taking place

Exterior view of the Musée de l'Air et de l'Espace with models of the Ariane I and Ariane V rockets.



© Musée de l'Air et de l'Espace, Le Bourget

© Musée de l'Air et de l'Espace, Le Bourget



A china plate representing the ascension of Charles and Robert on 1 December 1783 in the first hydrogen balloon.

only very shortly after the activity began. This rare case explains both the rich variety of the collection of old aircraft and the constant desire of curators to take into account the most recent developments in aeronautical activity. As a result, the museum possesses models dating from the beginnings of aviation: a 'Demoiselle' by Santos-Dumont exhibited in a hundred or so copies; an 'Antoinette' by Léon Levavasseur; and the seaplane by Henri Fabre which was the first in the world to take off from water using its own power.

Some machines were transferred straight from their hangers to the museum, as happened with the Astra-Wright Type BB, rediscovered at Villacoublay in 1921 and donated by the Astra company. Identical versions were made of models that had not survived what amounted to a period of 'wood smashing'. One example is the Farman No.1bis, produced by the Voisin workshops in 1908, and a replica of it which was made by Gabriel Voisin in 1919

for the Musée de l'Air. Another is a Nieuport II N which was specially produced by the Nieuport factory in 1919, with the original machines dating back to 1910. After the Second World War, the French aeronautical industry was reborn and the collection was enriched by modern machines and numerous prototypes, including the rocket-engine Trident, the thermopropulsive-engine (ramjet) Leduc and the Djinn helicopter. The end of the 1960s witnessed the entry into the space age with the Astérix A1 satellite and the Diamant rocket. In 1973, the arrival in flight of the Concorde 001 prototype testified to the desire to take advantage of the most recent advances in technology.

One of the characteristics of the Musée de l'Air et de l'Espace is that it is open to the aviation industries of other countries. This international character, adopted from the beginning, was natural in a country which had become a point of convergence, from the turn of the century onwards, for all those who, like the Brazilian Santos-Dumont, the Americans Wilbur and Orville Wright and the Romanian Train Vuia, wanted to play a role in the nascent adventure. Vuia was the pioneer of Romanian aviation, and his No.1 prototype, built between 1903 and 1905, has been recovered. It is the museum's oldest motorized aeroplane. The military aircraft which made up the first items of the collection include foreign machines from the deliveries made by the Germans under the armistice terms in 1919. They include the Fokker DVII, the best fighter plane to be produced by the German industry of the time, and the Junkers J9, a plane made entirely of metal which was used by the technical air services before being donated to the museum. Thus, from the initial years of the latter's being opened to the public, thirty-eight of its fifty machines were French, six were English and Italian, and six German.

The interwar period witnessed the birth of both transport and popular aviation, as well as long-distance flights. The museum conserves prestigious machines from this period, such as the Breguet *Grand Raid* 'Nungesser-Coli' which carried out the first non-stop crossing of the South Atlantic in 1929 and the Breguet *Point d'Interrogation* which accomplished the first direct Paris-New York crossing in 1930. With the end of the Second World War, the museum was able to resume its international role thanks to acquisitions of British, German, American and Soviet aircraft, namely the Supermarine 'Spitfire', Heinkel 162, Republic P-47 and Polikarpov I-153.

The museum is continuing an active policy of enhancement in all areas. Its most outstanding recent acquisitions include six life-size satellite models bought in 1993 from the Russian Science Academy, and, in the field of civilian transport, a Dassault 'Mercure' aeroplane donated by the Air-Inter Company in 1995. In a less spectacular way, all the technical, engine, instrumentation, armaments and balloon sections are regularly enriched by donations, procurements, and exchanges with associations and collectors. This is also true for the iconographic and art object component which comprises nearly 4,000 objects, making it the collection with the largest number of items after the library and the

Colour is often used symbolically, for example, in the immense tricolour roundel on the floor of the gallery devoted to the history of the Air Force.



© Musée de l'Air et de l'Espace, Le Bourget

collection of photographs which numbers in the tens of thousands. In the pursuit of this acquisition policy, none of the sectors that embody the wealth and originality of the Musée de l'Air et de l'Espace are left out. This requires the use of very strict criteria based on historical, technological and symbolic considerations, and taking long-term conservation problems into account.

From the beginning, the museum has had workers and workshops to carry out maintenance and restoration work on the collections. Since 1994, a spacious hangar-workshop has been used to launch ambitious programmes concerning medium-sized aeroplanes. The current major restoration work concerns a B-26 'Marauder'.

The museum also strives to maintain and expand a network of partners which serves as a channel for concerted action in regard to the restoration and exhibition of the national air and space heritage. In concrete terms, this involves the assistance given to voluntary associations and loans to thematic museums, as well as help setting up decentralized museums: association museums such as the Musée Historique de l'Hydravion (Museum of Seaplane History) at Biscarosse and the Musée Régional de l'Air (Regional Air Museum) at Angers; local community museums such as the Musée de l'Aéronautique (Air Museum) of Nancy; museums belonging to defence establishments such as the ALAT (helicopters) Museum at Dax, and museums belonging to enterprises, such as the SNECMA Museum.

A play of space and colour

The museum occupies a surface area of over 120,000 m² at Le Bourget. The site includes the Le Bourget air terminal which

was built by the architect Labro in 1936, five buildings and two vehicle parks. The architectural changes made in the buildings enabled them to be used as a living museum which was able to keep abreast of advances in the aeronautical industry and space exploration.

The technical and architectural policies adopted had to take account of the conservation requirements for prestigious and often fragile collections predominantly made of wood, canvas and metal. The layout adopted led to the creation of attractive spaces within which the acquisition of knowledge forms part of the pleasure of discovery, and ensures the conservation of the objects in an overall environment in which humidity and temperature are regulated. A decision was taken to use opaque watertight awnings, and its application extended to include the presentation of the galleries as a whole.

The architectural disposition of each exhibition space means that the aeroplanes are displayed on different levels. A series of walkways and platforms lead by successive stages to the higher sections of the naves, thus giving visitors closer access to the machines and readily available close-up views. The visitor can scrutinize and even photograph the structures, construction and components, or take a more general approach to the aeroplane on display. This form of presentation also compensates for lack of space. A close view of the materials on display also reveals the real size of the machines. This particularly holds true for the space gallery in which satellites, cabins, launchers, rockets and other devices, about whose real size the public usually has only a vague idea, are close to visitors. The latter can, in this way, establish their own scales in relation to their personal environments, perceiving a reality that is otherwise diffi-

cult to imagine in a domain for which one usually lacks points of comparison.

The aeroplanes of pioneers which are on display in the air terminal have complex structures and are built with different materials in the assembling of which empty spaces are as important, if not more important, than filled spaces. This results in a superabundance of intermingling elements, making the viewing of several machines in the same visual field difficult. The exhibition of aeroplanes that can be seen collectively produces a feeling of anarchy and makes adequate viewing of the collections impossible. They claim attention, but the eye is not captivated by any one object or group of objects. To avoid this danger, subdivisions exist in the form of inclined walls, creating unenclosed but self-contained spaces. This encourages discovery in the context of a degree of mystery. The inclined or slanted planes which block the view help to produce a feeling of curiosity. At the same time, the existence of such discontinuities further expands the overall exhibition space, and the visitor cannot see where it all ends. The resulting impression is one of an abundance of collections and a dynamic interrelationship between all the different spaces.

Visits inside the galleries are organized to enable visitors to discover the collections using twinned itineraries. The first goes through the ground floor while the other is halfway up the nave, with visitors using horizontal or sloping walkways stretching from one end of the building to the other. There is an interplay of different museographic spaces around the walkways. The intention is to create not a labyrinth, but playful itineraries at the junctions of which discoveries can be made.

Extensive use is made of colour to define architectural spaces. Visitors move in an

environment in which colour markers are used in the different exhibition areas to demarcate exhibition spaces as well as in the descriptive boards and panels. Sometimes, colour is used symbolically as in the case of the immense tricolour roundel on the floor of the gallery devoted to the history of the Air Force. Graphics are also used to create an appropriate context. The Concorde 001 prototype is thus displayed with a diagram of the beginning of the runway on which its initial trials took place. The colours harmonize with the general atmosphere in each gallery: darker walls in the space gallery to symbolize the sidereal night; yellow and ochre tones associated with the sun and leisure activities in the tourist aviation gallery. In the pioneers gallery, the colour scheme is based on the materials used to make the machines on display.

For the fuselages and wings of the period, the predominant materials employed were unbleached linen and painted or varnished wood which were all in the grey or dark beige range of colours. Browns, greens, violets and other colours from the mineral and plant kingdoms, as well as blue, characterize the fighter aeroplanes of the 1914–18 period. They were used for camouflage. ▶



© Musée de l'Air et de l'Espace, Le Bourget

From the museum's collection of some 1,000 motors, a 1920 Gnome rotary motor.

Highly saturated strong colours were chosen for the air terminal's galleries. They provide the required contrasts, where neutral colours would have absorbed images and diluted vision.

The pinkish beige atmosphere that exists in the aisles where the machines of the pioneers are displayed stems from the search for a harmonious contrast between container and content. The dimensions of the exhibition areas, the lengthening of spaces, are accentuated by the graphics used in the coloured areas, with colour serving as the link between the individual spaces. The overall objective of all this was to give infinitely greater prominence to the objects on display. In this coloured setting, which is full of contrasts and surprises, stairs and walkways pass around the machines, lead through the nacelle of a balloon, climbing and descending to avoid a linear and symmetrical itinerary that would be contrary to the dynamics of an exhibition.

Opaque watertight awnings are used in the overall presentation of the galleries. In this way, natural light falling on the buildings can be filtered, and light rays controlled to avoid any damage to the collections, and the exhibition as a whole is given homogeneous character with operating costs being kept to a minimum. At the same time, integrated light sources are used inside the galleries to isolate and emphasize different aspects of the aircraft on display for the benefit of visitors.

By contrast, the lighting is weak in the rooms depicting the eighteenth and nineteenth centuries, so as to avoid any damage to the very fragile collections on display. The visitor itinerary is deliberately poorly lit in order to enhance this minimum lighting and give greater prominence and grandeur to the exhibits.

Elsewhere, a combined metal and fabrics gallery has been built in the aeroplane park to protect and display the Concorde supersonic airliner. This space highlights the object on display by a chiaroscuro which emphasizes the power and vitality of the aeroplane as well as its purity of form. The visit of its interior is aimed at drawing attention to the different measuring instruments. Fibre optics have been used to ensure the highest degree of accuracy.

A museum for youth

Groups of young people comprise about half of all visitors to the Musée de l'Air et de l'Espace. They represent the future of the museum, and particular attention is paid to them. They visit as part of school and extracurricular activities, and group leaders can choose between visits with or without guides, or a specific activity such as the planetarium or workshops carrying out practical experiments. The organizers of unguided visits can acquire documents published by the museum to facilitate the preparation and exploitation of visits. Game itineraries which can be photocopied enable young visitors to discover the museum's collections all by themselves.

In the workshops, children can make and then fly hot-air balloons, kites, small gliders and micro-rockets. In a 'mechanics of flight' workshop young people can discover why and how a plane flies. For older children, the museum has a wind-tunnel where certain phenomena can be viewed and comparative measurements of pressures and depressions made.

The range of activities that can be staged in the context of air and space conquests is so vast that the museum organizes 'museum

classes' during visits lasting a week for schoolchildren coming from the provinces or one day per week over a one-month period for local schools. Days or periods of training are frequently organized for teachers. A number of schools of engineering in the Paris area visit with their teachers or send students as trainees to the museum.

The reputation of the Musée de l'Air et de l'Espace is certain to grow in the years to come. The recent requests for the loan of objects in the collection to foreign exhibitions and the travelling exhibition *Le Temps des Ballons* (*The Age of Balloons*) which is now in Canada, show that the quality of the museum's collection is recognized worldwide.

Today, it can be said that all the collections, restoration workshops and administrative offices are adequately housed together on the historic site of Le Bourget airport. Even if there are still gaps to be filled in the collections, it should be possible to use the available spaces to expand the surface area used for exhibition and conservation activities. The enrichment of the collections, including the acquisition of wide-bodied aircraft, will be possible at little cost given the existence of landing strips that can be used for last-flight deliveries of the planes to the museum.

The Musée de l'Air et de l'Espace, which since 1994 has been given the status of a public institution and placed under the responsibility of the Ministry of Defence,

which has set up a programme of subsidies lasting several years, is about to embark on a new phase of expansion. The best example of this is the restoration of the Concorde 001 prototype and its exhibition in a new gallery which was built and opened to the public in 1996. Plans have been established for using the air terminal building and its surroundings and the construction of a hangar to house the reserves which are unprotected at present.

Such plans are of little consequence over time, however. The museum's future life depends not on its physical setting, but on its collections. Reflection about the future should take in centuries and millennia. A project is now being drawn up in the Musée de l'Air et de l'Espace, and the appearance of this article in a publication that enjoys worldwide circulation clearly holds out good prospects for finding possible partners who might establish an identical project: conserve an aeroplane for a thousand years and more. Such is the challenge launched by the Musée de l'Air et de l'Espace as we approach the twenty-first century. ■

Note

Christian Tillati, chief of the Conservation Service, Christian Marchant, architect of the Musée de l'Air et de l'Espace, and Patrick Pisier, chief of the Cultural Action Service, also collaborated in the preparation of this article. – Ed.

IATM Aviation Museum Group takes flight

Christopher J. Terry

From modest beginnings as a sub-group of the International Association of Transport and Communications Museums (IATM), the Aviation Museum Group (AGM) has taken on a vigorous life of its own, which is recounted by its chairman.

Aviation has captured the popular imagination for decades but it is only recently that specialized museums have been developed to collect, display and interpret this epochal technology. Such is the relevance of aviation to modern life, however, that museums devoted to it are now found in almost all countries and they are among the most visited in the world.

Thirty years ago the nascent growth of aviation museums gave rise to a series of annual meetings which led over time to the formation of what is known today as the Aviation Museum Group (AMG) of the International Association of Transport and Communications Museums (IATM). From humble beginnings these meetings have evolved into eagerly awaited conferences held at different locations each year. The AMG now stands on the threshold of becoming a truly international organization reflecting the ubiquitous spread of aerospace technology and the concomitant interest in its preservation.

The genesis for the AMG lay with the 1960 appointment of Kenneth M. Molson to the position of curator of the National Aviation Museum of Canada. Having a lifelong interest in aviation history and a background in the Canadian aviation industry rather than museology, Molson took it upon himself to initiate contacts with Louis S. Casey, his opposite number at the then National Air Museum (now the National Air and Space Museum) of the Smithsonian Institution in Washington, D.C. Following several years of visits between Ottawa and Washington, Casey suggested that it would be beneficial to all those working as aviation museum curators to meet to discuss issues of mutual concern. They also hoped that the creation for a forum for discussion might have a positive impact on the process whereby artefacts were being acquired.

In April 1966 twelve museum directors and curators met in Washington and agreed to create an association. The Aviation Museum Group dates itself from this inaugural gathering. Although the North American basis for the initial meetings of the group influenced its character and focus from the outset, an international dimension was quickly added as aviation museum staff from various other countries began to participate in the meetings at an early date.

The Group's leadership has been provided by Louis Casey, then curator of the National Air and Space Museum, the late Royal Frey who occupied the same role at the United States Air Force Museum and most recently by Harvey Lippincott, one of the founders of the New England Air Museum, and, until his recent death, director of exhibit development. I took over the position from Harvey Lippincott in May 1995. The chairman has been selected from an elected executive made up of three members from the United States, one from Canada, one from Europe and, most recently, one from South America.

In addition to its annual conferences at North American aviation museums, the AMG soon instituted a series of 'study tours', which permitted its largely North American membership with an opportunity to visit colleagues abroad and see their often legendary collections. Thus, three study tours to European museums have taken place, most recently in 1991, and in 1994 the AMG held its first meeting in South America when it accepted the invitation of the Museo Nacional Aeronautico de Chile to visit Santiago. This proved to be a major breakthrough as the meeting provided many directors of aviation museums in most countries in South America with their first opportunity to meet their

counterparts from North America and Europe. The 1995 meeting at the National Museum of Naval Aviation at Pensacola, Florida, and the October 1996 meeting at the Museum of Flight in Seattle, Washington, have continued the trend toward the internationalization of the group with attendees from many parts of the world.

From a broader organizational perspective, the AMG has continued to function as a distinct entity under the umbrella of the overall International Association of Transport and Communication Museums (IATM), itself an affiliate of ICOM. This linkage has proved to be a useful means of exposing aviation museum specialists to the broader museum community. AMG members may and do attend the annual IATM meetings as well as the specific AMG gatherings.

The future bodes well for the AMG. The world of aviation museums has matured immeasurably since Molson and Casey first met in 1961. The well-established institutions reflect the best museum practice and their views and advice are widely sought by the many new and evolving institutions. The sharing of experience and operating practices has become commonplace: it is not unusual for AMG members to be consulted by their colleagues halfway round the world on how particular operating, collecting or ethical issues have been addressed. The AMG has proved to be an exceptional conduit through which such bilateral and multilateral consultations may take place. Its annual conferences have provided a ready-made forum for the discussion of ideas and for networking. This latter is perhaps the most valuable of its accomplishments in conjunction with the opportunity to see, on the ground, how other museums approach problems or, more frequently, what imaginative ways are employed to tell the aviation story.

I have, for example, participated in six conferences, plus the meeting in Santiago and one European study tour. In addition to having an opportunity to see some of the great collections at first hand and in considerable detail, I brought back ideas from each meeting which have been implemented at my institution. My professional life has also been enriched by the colleagues with whom I have established relationships.

The AMG will continue to evolve along three broad fronts: first, it will continue to provide a traditional venue for the discussion of collections, the identification of artefact availability and trading potential and the exchange of information on artefact restoration; secondly, it will expand on its role as a forum for the discussion of best museological practice as applied in aviation museums, including, at the 1996 conference, extensive coverage of the new electronic technologies available to us; thirdly, it will continue to provide an opportunity for professionals in the field to establish or nurture relationships. Kenneth Molson, one of the group's founders, considers this to be its most significant role.

Having established a relationship with colleagues in South America, the AMG has stepped up its attempts to make contact with other museums and museum organizations in other countries. Its next efforts will focus on Australasia, a veritable hotbed of interest in the history of aviation and its impact on national development. Much as the AMG expanded its contacts in South America in 1994, it hopes to take advantage of the forthcoming ICOM and IATM meetings in Australia in 1998 to hold its

first meeting in the Antipodes in conjunction with the Australian and New Zealand colleagues.

In addition, the AMG will be making concerted efforts to make the several hundred other aviation museums around the world aware of its activities and to broaden its membership base. The possibilities for synergy and co-operation are boundless and they know no international boundaries. Mankind's fascination with the experience of flight, its science, technology and the people who give it life, is universal. The AMG will continue to play an important role in

helping its members respond to the fascination in creative and professional ways. ■

Note

More information on the AMG is available from Christopher J. Terry, Director General, National Aviation Museum, P.O. Box 9724, Station 'T', Ottawa, Ontario, K1G 5A3, Canada, or Dennis Parks, Curator of Collections, Museum of Flight, 9404 East Marginal Way South, Seattle, Washington 98108-4097, USA.

Hidden treasure: museum libraries and documentation centres

Odile Tarrête

At a time when information for specialists and laypersons alike is now available from a constantly expanding number of sources, what is the role of museum libraries and documentation centres? And how, in the face of ever more stringent budget restrictions, can they perform the 'mission of cultural mediation' which, according to Odile Tarrête, is rightfully theirs? The author is chief curator of libraries and head of the documentation centre of the Direction des Musées de France since 1992.

In 1948, in the first issue of this review, Paul Rivet wrote:

Despite the importance of the museum's part in popular education, it has many other functions. Every museum should be a centre not only of popular instruction, but of scientific information. There should be attached to each an ample specialized library, which should be free, open to all, comfortable and open during leisure hours. Such libraries are the essential complement of the museum, and I mean that they should be open to *all* and not merely to scholars and research workers. . . . The librarian should serve as guide and adviser just as does the curator himself. The two posts are complementary.

Nearly half a century later, the principle laid down by Paul Rivet is far from attained. Most museums do have a library,¹ but while some institutions, generally the national museums and the oldest museums, have rich collections of specialized works carefully built up over the years and run by professionals, others very often have a meagre collection of disparate works piled up in an office corner, and the situation described by Cécil Guitart in 1994 in his *Rapport sur les bibliothèques des musées territoriaux de France* (Report on the Libraries of Local Museums in France) unfortunately seems to apply: inadequate budgets; cramped premises, unsuitable for storage, for presenting documentation, or for receiving the public in a convenient setting; too few documents, and collections of haphazard scope; dissuasive public opening hours; extremely low attendance; a chronic shortage of qualified staff.

A survey conducted in the Scandinavian countries, Spain, Germany, the United Kingdom, the Eastern European countries, Japan, Canada and the United States cor-

roborated these sad findings. Owing to budget restrictions, large museum libraries in Canada and Belgium are forced to close their doors to the public. How can the general trend be reversed, and museum libraries equipped to perform the mission of cultural mediation which should rightly be theirs, faced with the expectations of visitors and with the information needs of new categories of users?

Let one thing be perfectly clear: a museum library cannot fully play its role unless it is recognized and supported by the museum's administration. The routine practice of separating reference material for curators from the documentation made available to the public does not help to clarify the situation; keeping it in the same place would ensure better management of both human and financial resources. If the museum has house regulations, the place of the library and its functions should be clearly stipulated therein. If not, the chief librarian should draft a text accurately identifying them and submit it to the administrative and scientific head for approval, in order to establish an unambiguous situation within the institution.

Most museum libraries come into being simultaneously with their museums, and their collections essentially consist of donations and exchanges of museum publications. Since many libraries do not have a specific budget, their holdings continue to be enriched in random fashion. A clear acquisition policy should be drawn up jointly by the librarian, the curatorial staff and the other museum professionals: restorers, cultural mediators and museographers.

Confidentiality is too often the rule for the documentary holdings kept in museums. Museum libraries must be opened up more to the general public: children, young

people and adults alike should be able, at their leisure, to deepen their familiarity with the works that attracted them in the museum. Discoveries made in the library will bring readers back to the museum, creating a shuttle movement between the two, and the museum's educational mission will thereby be fully accomplished. Today, museum libraries are virtually unknown to the public at large: in 1994, a survey conducted on nearly 4,000 German museums revealed that 90 per cent of those questioned were unaware that these museums had libraries, though every one of them had one, large or small. To contend with an unacceptable invasion of the premises by a student population short of somewhere to work (a fear shared by many curators in countries where the library infrastructure is inadequate), the audacious measures taken by the Museo Nacional Reina Sofia in Madrid could set an excellent example: access to the library is open to all, but books, notes and satchels must be left in the cloakroom, unless evidence is produced of specific research into the library's holdings.

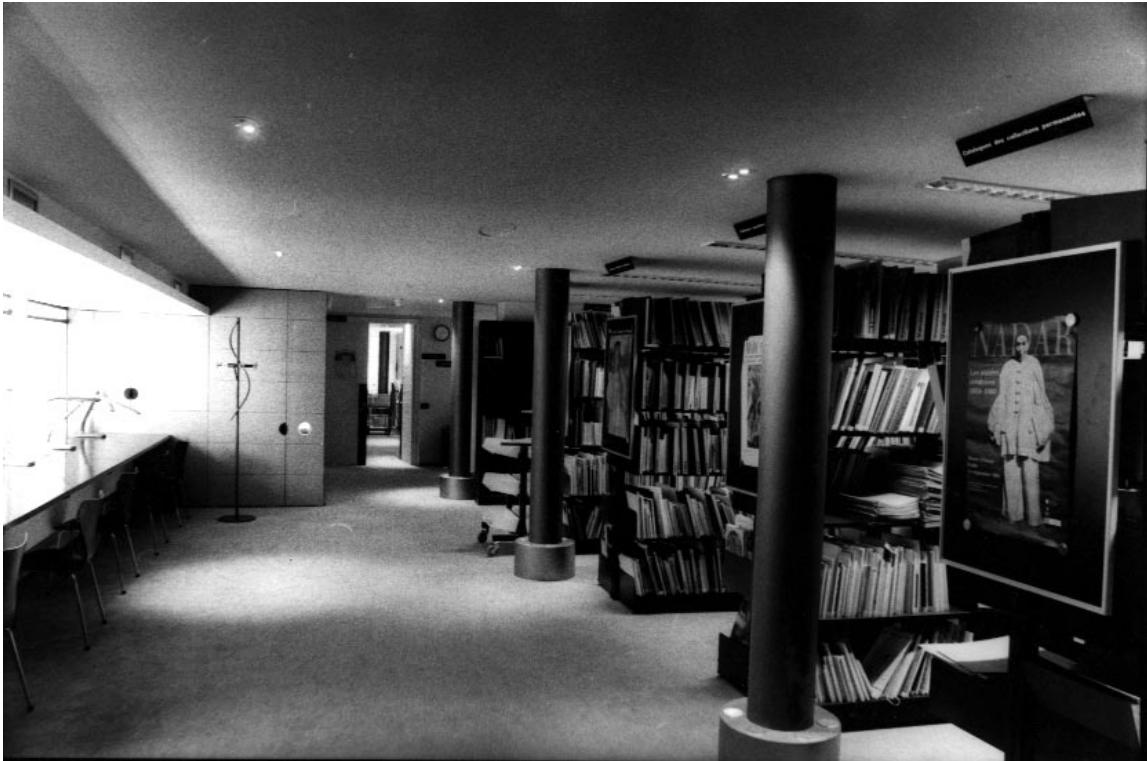
The public should also be informed about the library's holdings and services through a whole range of documentary materials: information leaflets, acquisition lists, thematic bibliographies detailing all the infinite variety of the archived documents, printed catalogues of specific holdings and articles published in specialist reviews.

Whenever possible, museum libraries should be part of a network, a good example being Scandinavia, and particularly Norway, where museum libraries collaborate in the national union catalogue distributed throughout the country, and actively participate in the inter-library loan system, thereby spreading information about their holdings. Tasks and skills must obviously be shared. For acquisi-

tions, cataloguing, presentation and public access, the policy of a museum library can be perpetuated only if it is part of a networking arrangement and matches the policy of the community on which it depends. This participation in a municipal, university or regional network can offer a rational economic response, conforming to the rules of the profession, and to the needs, especially computer-related, of museum libraries.

Yet it must be acknowledged that the most serious and widespread handicap is the non-professional status of the staff responsible for these holdings. The management of museum libraries is too often entrusted as a sideline to a museum curator or a secretary, who knows nothing of basic documentary techniques and is unaware of the need to conform to international standards. Innumerable documentary training programmes of outstanding quality exist, academic and private, and the staff hired to process museum documentation should be recruited from among persons who have received training of this sort. In Japan, the JADS (Japan Art Documentation Society) pressures the museum administrations to hire professional librarians and documentalists. It would be wise for the professional associations of librarians and documentalists of other countries to follow suit.

In any case, the managers of museum libraries should join the special interest groups of these professional associations which exist in many countries, including Canada, France, Germany, Japan, Norway, Slovenia, South Africa, Sweden, the United Kingdom and the United States. These specialized sections organize study meetings and workshops on topics common to museum libraries, such as the processing of archives and photographs, new technologies and copyright. They also carry



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out co-operative projects: union catalogues of art periodicals, exhibition catalogues, an inventory of archives on artists, and reproduction programmes for rare documents. Museum librarians should get involved in these working groups, or set them up if none exist in their countries, in order to emerge from an isolation that inevitably condemns them to hopeless mediocrity. And every individual concerned with the different aspects of documentation in museums should join ICOM: the International Council of Museums.

Creating common services

Some countries have joint documentary bodies for their entire museum community. While exerting regional, national or international influence in the case of the larger ones, these resource centres, whether attached to a university or to a central administration, gather together and offer their users large museological collections which no independent museum library could possess. Some examples are the library of the Institut für Museumskunde der Staatliche Museen zu Preussischer Kulturbesitz in Berlin; the Museumsverband

Library at Pram (Austria); the library of the Republikanski Naouchno Metodicheski Centr po Mouzeeznanie in Sofia (Bulgaria); the Museologisk Bibliothek at Lyngby attached to the Danish Museum Training Institute; the Museum Reference Center of the Smithsonian Institution in Washington D.C. created in 1974, which has made available the Museum Studies Database on the Internet since 1995; the library of the Reinwardt Academie in Leiden (the Netherlands); the Ústřední Muzeologický Kabinet (ÚMK) in Prague; the museological library open to the general public in the Department of Travelling Exhibitions in Sweden.

The Museological Documentation Centre of the Library of the Canadian Institute of Conservation is attached to the Canadian Heritage Ministry in Ottawa and was opened in 1972 at the same time as the Institute. This library manages two collections of national importance in conservation and in museology, and is a founding member of two bibliographic databases made available on the Internet by CHIN (the Canadian Heritage Information Network): BCIN, a database on conservation, and BMUSE, a museological data base. ▶

The Documentation Centre of the Direction des Musées de France.

The Muzejski Dokumentacioni Centar (MDC) in Zagreb (Croatia), was established in 1955 by Antun Bauer, a leading museologist and collector. The MDC has published *Informativa Museologica*, an internationally renowned museological review, since 1970, and, since 1990, the *Bulletin on Museum Information and Automation*. It regularly organizes seminars, conferences and other events.

The United Kingdom appears to be in a very fortunate position. In addition to an excellent museological collection built up very early for the use of students and teachers of the Department of Museum Studies of the University of Leicester, and another at the City University of London, the Museum Documentation Association in Cambridge has a very good members-only library, and many area museum councils have developed their own museological collections for the use of professionals in their regions, including: the Northwest Museums Service of Lancashire in Blackburn; the Yorkshire and Humberside Museums Council in Leeds; the North of England Museums Service in Newcastle upon Tyne; the Scottish Museums Council whose Information Service, set up in 1982, exerts an influence ranging well beyond its regional boundaries, thanks in particular to its publications, *Scottish Museum News* and *Museum Abstracts*, an annotated museological bibliography published since 1985.²

Norway plans to establish a museological library and an information centre on the museums of Norway and other countries within the Norwegian Museum Development (NMD), a body of the Museums Associations, intended for museum staff, the government and the media.

France is well endowed. Since 1947 it has benefited from the presence of the UNESCO-ICOM Museum Information Centre. In addition, OCIM, the Office for Museographic Co-operation and Information attached to the University of Burgundy in Dijon, maintains a very rich documentation centre on the museography of science and technology in France and abroad, open to all establishments by appointment. It liberally lends books and periodicals throughout France through the mail, and also sends photocopies. The Direction des Musées de France has also created a documentation centre, which is described in detail below.

The Documentation Centre of the Direction des Musées de France

In 1992, the Direction des Musées de France of the French Ministry of Culture inaugurated a documentation centre in its new Paris premises to cater first to the needs of central administration staff and also to publicize the activities of the Direction des Musées de France by offering information and documentation on the nature, history and presentation of French museum collections. Open daily from 1.30 to 5.30 p.m., with the possibility of morning appointments for readers from the provinces or abroad, the public area has fifty seats and four PCs, CD-ROM readers, video disks, films, microfiches, Internet links, and connections with databases specializing in museology, curatorship, the art market, law, administration and museum collections.

The entire holding of documentary files, annual reports, reviews, catalogues, guides, inventories, museographic projects and periodicals of the museums of France, specialized books on museology, museography, museum administration and

management, films, video disks and CD-ROMs pertaining to the same fields, is available for consultation, under two classification systems – geographic and thematic.

This stock, which already contains 15,000 books, 251 titles of current periodicals and 1,800 documentary files, has recently expanded considerably. The Executive Council of ICOM decided in 1995 to deposit its documentary holdings at the documentation centre of the Direction des Musées de France. With the addition of this multilingual documentation, initiated in 1947 and devoted to international museology (368 titles of periodicals, 3,500 books, 10,000 museum catalogues), the centre has become a worldwide centre of excellence. The ICOM holding stored at the Direction des Musées de France remains identified as such, and continues to grow with the publications received in its own name. At ICOM headquarters, the museological information centre is now busy assembling and processing all the documentation relating to this organization and its various national and international committees.

MUSÉES, the bibliographic database of the documentation centre of the Direction des Musées de France, containing nearly 60,000 entries (12,000 DMF and 45,000 ICOM), will be available shortly on Minitel and the Internet, thus disseminating internationally this holding which is invaluable for professionals and museum-lovers the world over. The entries in MUSÉES are also being incorporated in BMUSE, the bibliographic database set up by the Canadian Institute of Conservation.

The documentation centre publishes a quarterly *Museological Bibliography* which prints all the entries of the MUSÉES base organized around twenty chapter

headings, and an annual *List of Periodicals*. These publications currently have a circulation of 350 copies and are sent to anyone upon written request.

Like other countries, such as Croatia or the United Kingdom with DOMUS (Digest of Museum Statistics), the documentation centre of the Direction des Musées de France has started compiling a reference base on French museums, MUSÉOFILE, which will be accessible via Minitel and the Internet. A twenty-two-page questionnaire was sent out in 1995 to the museums whose collections are state-owned, and also to museums that are officially recognized and inspected. The answers are flowing in, and the database is building up. As a resource centre for museum professionals in the field of museum libraries and documentation centres, it can be consulted for advice on material organization (equipment, furniture, signs and information panels, planning of premises), filing of shelved documentation, collections maintenance, and computerization (choice of software and technical advice for database compilation). It is also a demonstration and training centre for accessing and consulting all types of multimedia products relating to museums and their collections, not only a select showcase of achievements, but a place for comparing and collating products of every kind and quality.

A collective asset

It is high time to realize that the documentary holdings stored in museums represent a collective asset that is abundant, varied, often unique, and totally underexploited. Every country should compile an accurate inventory of these holdings to benefit from their complementarity, promote their strong points, fill in gaps at the national level, and

also identify and satisfy the most pressing curatorship needs. Moreover, museum documentation encompasses a reality that is far wider than a mere library collection. It includes museum archives, documentation on works, photographs, manuscripts, unpublished papers and ephemera which flow daily to the museum, eluding commercial circuits, all of it adding up to raw material that can be put to good use.

A museum linked to computer networks enjoys access to many sources of information and 'virtual collections' which are not simply accessed for consultation but can be fed with input at different levels. For instance, what use can a museum make of the Internet? Museums today see the Internet more as a medium for publicity and advertising their programmes than as a genuine educational tool. Yet while the Web may prove to be an effective commercial showcase, it also opens up new museographic prospects and can play an important part in the democratization of knowledge. For example, during the summer of 1996, the San Francisco Fine Art Museum made its entire collection available on the Internet in the form of photographs (which can be enlarged) and entries on all the works, including those kept in cellars or in crates, thereby disseminating its holdings far and wide, enabling publishers to select little-known documents, and offering the general public access to works never exhibited

because of their fragility. The job of dissemination rightfully belongs to the library, which, to accomplish it fully, must be transformed into a genuine centre of documentary resources, compiling all the information available in the museum and redistributing it on request and in various forms within the institution and to the outside world.³ ■

Notes

1. The variety of names of documentary centres attached to museums clearly reflects the confusion of the missions entrusted to them. Yet it would appear that most of the oldest museums have libraries and the most recent have documentation centres, while some make a distinction and have both. Some libraries also carry out broad documentary activities, and a few documentation centres also manage a large library. For simplicity's sake, I employ here the term 'library' in the general sense of a documentary centre.

2. See 'The Scottish Museums Council: A Model of Museum Support', *Museum International*, No. 191 (Vol. 48, No. 3, 1996) – Ed.

3. Space does not permit publication of the detailed bibliography provided by the author, which may be obtained from *Museum International* upon request. – Ed.

Exhibiting the slave trade

David C. Devenish

The Wisbech and Fenland Museum is one of the rare museums in the United Kingdom with a permanent collection devoted to slavery and the slave trade. To commemorate the 150th anniversary of the death of one of the country's leading abolitionists, a special exhibition was organized by curator David C. Devenish, who describes how, with modest means but great ingenuity and dedication, this complex issue was presented to the public. The author was formerly director of the Barbados Museum.

'A Friend to Slaves: Thomas Clarkson' is the wording that appears on the memorial plaque which was unveiled on 26 September 1996 in Westminster Abbey. It is also the title of the exhibition organized from 29 June to 25 October 1996 at the Wisbech and Fenland Museum. Both events commemorate the 150th anniversary of the death of Thomas Clarkson, born in Wisbech, who was, one may argue, the most important of all the British abolitionists.

Slavery and the slave trade are potentially very controversial issues (when I gave a lecture to ICME (the International Committee for Ethnography Museums) at ICOM '95 in Stavanger, one delegate left in anger when I mentioned that slaves were bought from African merchants and not always kidnapped as popularly supposed). At the Wisbech and Fenland Museum we have tried to present the question with a small permanent exhibition which opened in 1993. Entitled *Thomas Clarkson, Slavery and the Slave Trade*, this display is heavily labelled (arguably, over-labelled) and is built up of numerous modern photographic illustrations and small exhibits packed together. It covers the lifelines of Thomas Clarkson with illustrations, an oil portrait of his grandson as an infant, memorabilia (mostly local) of abolitionists, busts of Thomas Clarkson, an illustrated bibliography and an illustrated lifeline of his younger brother John.

The display on the trade itself includes a 1783 letter to the Liverpool merchants from Egboyoung Offeong, an Ibo slave dealer of Old Calabar, illustrations of New World slavery and a small showcase of 'Relics of Empire'.

The major exhibit is Clarkson's chest which contains items collected for the meeting with the Privy Council in 1788. These include handicrafts such as textiles, metal-

work and leather as well as seeds and spices, all of which were intended to argue for a 'legitimate' trade with West Africa. There is also an ivory 'reference' to an 'honest' African slave trader and a cat-o'-nine-tails which was used by a captain to murder one of his crew.

In Spring 1995 the Thomas Clarkson 150th Anniversary Committee was set up. It campaigned for the plaque in Westminster Abbey, encouraged other organizations to commemorate Wisbech's greatest son, and notably our museum to prepare a major exhibition.

I began planning the display, working out a storyline and tracking down suitable exhibits. Collateral descendants of Thomas Clarkson and some non-museum organizations agreed to loan objects but, regrettably, with the worthy exceptions of Norwich and Bexhill, most other museums were, to use a euphemism, 'unhelpful'.

The Hudson Gallery, a 5.5 x 13.5 m rectangular room, was selected to house the exhibition and in September 1995 the basic plan was submitted to the Wisbech Museum Committee. Detailed costings were worked out, a budget prepared and possible sponsors approached. More than 90 per cent of the total expenditure of £1,120 (\$1,820) excluding the return of objects, was donated by external sponsors.

A simple and logical approach

The design is based on a logical clockwise progression around the room, with an anti-clockwise circulation around island units. Items which might suffer from ultraviolet light are protected with ultraviolet filters and, insofar as possible, placed in dimly lighted areas. Objects on open display ▶

Photo by courtesy of the author



Life-size diorama of a slave auction.

which are lightweight enough to be moved are fixed to the wall and exhibited high up. Small items are cased and valuable objects (such as the contents of Case 4, Clarkson's chair and the two oil portraits of Clarkson) are placed directly under the gaze of a security camera attached to a video screen and recorder.

To some extent the display may be seen as an art exhibition. Original items and secondary illustrations are not mixed together in the same unit, and original artefacts are displayed as paintings or applied art rather than only as sources of information. Small illustrations are kept to a minimum; instead, life-size cut-out 'habitat groups' have been made from photostatically enlarged prints and painted by a volunteer artist. Careful consideration was given to the display labels which were computer printed with bold lettering on variously coloured cards. Minor headings and captions were colour-coded by category: personal memorabilia of Clarkson, original items relating to slavery, comparative or replica items, and modern illustrations.

Text labelling was kept to a minimum because the historical background is explained in the permanent exhibition in the foyer. The storyline was kept simple. It may be criticized on the grounds that, apart from a very small section on Olaudah Equiano (who at one time lived locally), the only abolitionists mentioned are the Clarkson brothers. This was intentional as I did not wish to become involved in the controversy and allegations that rocked the abolitionist movement in the period 1834–44, and which may well have distorted received history ever since.

Visitors are greeted by illustrations at the entrance as well as palm trees to lend a tropical atmosphere. As they move clockwise around the room they encounter the following exhibits:

The triangular trade – a map of the Atlantic, drawn in cord, illustrating the slave trade; weapons, an elephant throne and acknowledgements of sponsors, lenders and volunteers.

Into slavery – a life-sized coloured cut-out diorama or ‘habitat group’ made by building up a picture from A0 size photostats mounted on 1.27cm, 5-ply wood, cut out and painted.

Slave castle – a coloured cut-out enlarged from an eighteenth-century print of Christiansborg Castle, Accra.

The Africa trade/currency and commerce (Case 1) – small objects illustrating the West African economy and slave trade, such as manillas, footlocks and a model of a *pirogue* (bumboat).

West Africa – prints and maps loaned by Kauai Fine Arts of Hawaii.

Slave ship – enlarged elevation and plan (each 1.1 x 2 m) of *The Brookes* by Thomas Clarkson, along with weapons and a cat-o’-nine-tails.

Thomas Clarkson in his study – a life-sized cut-out of Thomas Clarkson, from a print by C. Turner, 1828, coloured after the photograph of the original painting by A. E. Chalon and also made from 1.27 cm, 5-ply wood.

Flag of a slave ship – a replica of a flag in the National Maritime Museum, captured by the Royal Navy during the suppression of the slave trade, 1862–66; alongside is a life-sized coloured cut-out of a slave being branded on the shoulder with her new owner’s initials.

Latin America – the main destination for slaves: three prints, illustrating employment of slaves as mariners, miners and manufacturers.

North America – documents, prints and two cases of exhibits loaned by the John Judkyn Memorial in Bath. ▶

Photo by courtesy of the author



Map of the Atlantic, drawn in cord, illustrating the triangular trade.

West Indies – slave auction – life-sized coloured cut-outs from a print on an abolitionist mug showing a small Black boy on top of a rum or sugar barrel being auctioned to a White family.

Tharpe Estates – facsimiles of an estate plan and specifications for a slave hospital in Jamaica, drawn up for a Cambridge-shire family.

Folklife (Case 2) – folk pottery made by male potters in Barbados and female potters in Saint Lucia, as well as other examples of handicrafts including the hide of a blackbelly sheep (all items from my own private collection).

Sugar (Case 3) – objects illustrating the growing of sugar-cane and the manufacture of cane sugar, which was the main product of West Indian slavery.

Olaudah Equiano – a poster of Equiano's portrait.

John Clarkson – an ideographic display illustrating the voyage of John Clarkson, Admiral of the Black Fleet and first Governor of Sierra Leone (in 1772, some 1,600 Blacks who had supported Great Britain during the American Revolution sailed from Nova Scotia to Sierra Leone and founded the city of Freetown).

Selected objects (Case 4) – tasteful objects related to the overall topic of the exhibition displayed on glass shelves.

John Clarkson – portrait miniatures and his French silver compass.

Abolition – commemorative pottery including the mug used as the basis for the diorama of the slave auction.

Slavery – statuette, doll, coins, banknotes, manumissions and the 1773 book by the slave poetess Phillis Wheatley.

Thomas Clarkson's Chair – displayed on a dais, this wood and basketwork writing chair with a small moveable desk in front was given to the National Trust by Mary Dickinson, daughter of John Clarkson and widow of Thomas Clarkson's son, also named Thomas.

A 'tower' made from four vertically set display panels ends the exhibition. It features large original oil paintings of Thomas Clarkson as a young man (Anonymous) and as an old man, by Henry Room, 1838, prints and other personalia, including a record of his election as chairman of the Antislavery Society in 1840. The drawing of the elevation for the Thomas Clarkson Memorial, Wisbech, is the original design by Sir Gilbert Scott, which was later modified by his son. ■

Replica of a flag of a slave ship captured by the Royal Navy during the suppression of the slave trade, 1862–66; the original is in the National Maritime Museum.



Photo by courtesy of the author

History, context and identity at the Sukuma Museum

Mark H. C. Bessire

How can a museum avoid 'silencing' objects that have been removed from the practices and context which gave them meaning? This question is of particular importance to African museums where individual artefacts often have a living relationship with the community and form part of a total cultural experience. The thoughtful and innovative response of the Sukuma Museum in the United Republic of Tanzania is recounted by Mark H. C. Bessire, who has just completed a Fulbright Fellowship in Museum Studies at the Sukuma Museum. He recently coordinated the exhibition Art of Identity: African Sculpture from the Teel Collection for the Fogg Museum at Harvard University.

The Sukuma Museum in the northwestern region of the United Republic of Tanzania has recently undertaken the task of re-cataloguing its collection of objects from the Sukuma culture and is redesigning its exhibition spaces. Such a vigorous task has unearthed many issues regarding contemporary museum display and the contextualization of cultural artefacts in the museum setting. In reorganizing the twenty- to thirty-year-old display, the museum took the opportunity to reconsider the significance of the objects and the efficacy of their educational value. The issues that were raised during the project were of topical and philosophical interest to museums of art and cultural artefacts. The museum wanted to maintain the cultural heritage and ritual power of the objects and was concerned to avoid the silencing of such objects which were removed from practice and context when placed in the museum. There was also an awareness of the relationship of the museum collection to the history of the institution and the taxonomies that were utilized to organize the collection.¹ All of these considerations were related to the need to gain a better understanding of the permanent collection by reconciling its history, context, and identity within the museum setting.

In past years the issue of the contextualization of cultural artefacts has been a topic of discussion for museums, artists, academia and cultural groups. This discourse has often exposed the tendency of museums to defend a specific curatorial agenda through exhibition constructions or the decontextualization of an object or culture. The challenging of traditional cataloguing and taxonomic paradigms has revealed the consequences of the curatorial manipulation of objects and their meaning. These issues influenced the Sukuma Museum's initial project evaluation of its exhibi-

tion display. The alternative to the dilemma of decontextualization, the museum decided, is to display cultural objects in an educational setting providing all relevant cultural, aesthetic and historical information, while at the same time recognizing the inherent existence of the curatorial voice. This creates an agenda that strives to educate the public as to the objects' original contexts and meanings, and, on another level, recognizes the objects' changing identities created by the decontextualization or layering of contexts within the museum.

Today, one question that faces the museum in its current soul-searching revitalization, is how it should define its identity and context: ethnographically, historically, culturally, or as a living museum? Who is exhibiting whose culture? The Sukuma Museum is not only redesigning its exhibition of Sukuma culture, but re-examining the history of the institution itself. It is a process that will attempt to reveal the agenda of those in control of the display and the reasons why and how they chose to present certain aspects of Sukuma culture. This tactic is intended to demystify the authority of the museum and place the institution's history and mission on display as a historical document, an artefact in itself, alongside the art collected and chosen to represent the culture. This is not a simple proposition for the museum, which was originally founded by Fr David Clement, a Catholic missionary in Africa, with the help of two indigenous church groups, the Bana Cesilia and the Bujora Research Committee.

Up until now what has been presented at the Sukuma Museum does not reveal the full history of the museum's origins. Visitors view the excellent cultural art/artefacts of the permanent collection and are exposed to information ▶

Photo by courtesy of the author



The monstrance designed with Sukuma symbolism is carried in the annual procession on the feast of Corpus Christi.

concerning the Sukuma chiefs, dance societies, blacksmiths, and traditional doctors. But, on another level, the museum represents the history of the Catholic Church in Africa and specifically the Sukuma region in the United Republic of Tanzania. The church at Bujora is situated at the end of a tree-lined avenue where it towers over the surrounding museum's exhibition halls. The large circular church dominates the landscape and its painted patterns symbolically represent the triangular shape of a traditional Sukuma home. The triangular shape also resembles the *lupingu*, a Sukuma amulet worn in reverence for one's maternal ancestors which the Bujora Church translated into a signifier for the Trinity of the Father, the Son and the Holy Spirit. When the round church, the first of its type in the country, was built in the 1950s in the shape of a Sukuma traditional home, it created quite a controversy.

In 1954, under Fr David Clement, the Bujora Parish became the official experimental and spiritual centre for 'adaptation'. At that time, adaptation, which was related to the teaching of the Catholic liturgy through indigenous symbols and traditions, was questioned by many Western missionaries and African priests. Yet, with the support of the Bana Cesilia and the Bujora Research Committee, Clement was able to channel local knowledge and faith to translate the Catholic liturgy and symbols into Kisukuma and later Kiswahili. Never part of a vision or a plan, the notion of a museum evolved from his work with adaptation. It was an excellent opportunity, in a particular era, at a specific site. The museum later matured into a vehicle for adaptation and became an outlet for the work of the Bana Cesilia and Research Committee. It was also a time of transition for the Catholic Church in the United Republic of Tanzania, the post-independence government and a moment that Fr Clement realized he could tap into. In the mid 1960s, soon after the government had abolished the power of the Sukuma chiefs, Clement emerged as a collector. He gained the faith of some royal families who were interested in preserving their royal objects and willing to give or trade them to the new museum, or *makumbusho* in Kiswahili.

Slowly objects were collected and placed in the Royal Pavilion, a structure built in the shape of a royal throne. Yet, even before the Royal Pavilion was built in 1969, the first museum building, the Sukuma Homestead, was dedicated to the Bana Cesilia and opened on 22 November 1968, the Feast day of St Cesilia. The Homestead is a collection of Sukuma cultural artefacts donated by individual members of the Bana Cesilia. In 1971, the Dance Pavilion was built to illustrate the importance of dance for Sukuma culture and to pay homage to the region's most important

dance societies, the Bagalu and Bagika. From as early as the 1950s, Fr Clement had attempted to incorporate Sukuma songs and dance into the church. He also realized the importance of gaining the respect of Sukuma dance leaders. To this end he sponsored a dance festival that was inaugurated after the traditional religious Corpus Christi feastday procession. Clement was the first leader to bring these two groups together for meetings and encouraged them to participate in dance competitions at *Bulabo*, the Sukuma name for the feast of Corpus Christi.

Reclaiming history

This brief history and description reveals how history complements the objects on display. It also forces a much richer understanding of this unique museum's place within Tanzanian, Sukuma, and Catholic history. And if we return to the notion of constructing a curatorial agenda, one that chooses a single point of view, we can see how easy it would be to disguise its identity and alienate the Catholic influences in order to recode the collection as a strictly Sukuma undertaking. When we examine the Sukuma Museum's history as well as its exhibition agenda it is necessary to recognize the Western role in its founding. For the African museum, it is a challenge to define the philosophical heritage of categories and taxonomic systems.

The museum's current project is partially an attempt to define its categories and conceptual systems, which can be defined as taxonomies, and their relationship to history, context and identity. The museum wants to reclaim its history and to activate the collection to signify a reversal of perspectives. A large aspect of this break is a response to the Western notion of what the African philosopher V. Y. Mudimbe calls



Photo by courtesy of the author

'the idea of Africa,' one that is framed by Eurocentric taxonomies, modes of display, and a linear perspective on civilizations and art history. When these issues, which are equated to the museum agenda, are brought to the forefront, limitations are placed on the museum's institutional authority. Some museums in the United States have already been criticized for forcing certain readings of an artist or movement through particular exhibitions in an attempt to validate their institutional collecting. There may be post-colonial criticism of early collecting at the Sukuma Museum, but the museum feels responsible for unveiling its history, context, and identity, allowing others to decide for themselves.

The Royal Pavilion, Sukuma Museum.

As we have witnessed the post-modern shift in anthropology and the humanities from nature to culture and from history to discourse, so too are art and ethnographic museums transforming outdated

taxonomies and attempting to at least decode outmoded designations and labels. Today, exhibition planning depends as much on how to display art as on what art to display. The Sukuma Museum plans to go well beyond the basic museological criteria for labelling by decoding the permanent collection and providing full documentation in Kisukuma, Kiswahili and English. It will also eventually reveal its agenda through an exhibition of the museum's history. In many ways this recoding of the collection begins the process of levelling the labelling field and prepares the way for the Sukuma Museum staff to then fully deal with the relation of object and order. Once the objects have been defined within their own history, context and identity, a new 'ordering' may emerge.

Dr Paul Msemwa, director of the Village Museum in Dar-es-Salaam, feels that contextualization is necessary when displaying African objects in a museum setting. He explains in an interview that

objects should be accompanied by a cultural description, a photograph of the object (or of a similar type) *in situ*, and if possible a video. In addition, he views the totality of the performance as art and points out that it can be difficult to single out an object and say this is an art piece. The Village Museum, which Dr Msemwa defines as a 'living museum', has chosen to have cultural days supported by local communities who present dance, song, cooking and other activities of their specific cultural group to create a context around the art. The Village Museum's African audience, he claims, is more interested in the 'totality' than in looking at individual objects in a static setting.²

Collection and community

Similarly, in considering the issue of context, the Sukuma Museum has attempted to integrate the permanent collection with

© Sukuma Archives, Bujora Cultural Centre



The opening of the Traditional Doctors Pavilion at the Sukuma Museum; traditional doctors are dancing the mbina ya Balungu.

the local community. In this way the museum objects have maintained their potency as cultural icons and the Sukuma Museum can also be regarded as a living museum. Although the objects are separated by the boundaries of the museum walls, it is desirable that Sukuma culture and museum context meld to create a hybrid environment of institutional authority and cultural surroundings. There are many examples of the close connection between the community and the museum. In 1995, elders from the Bana Cesilia group accompanied the loan of two royal drums for use in a royal ceremony in a neighbouring chiefdom. As another example, Mzee Kishosha Budomaji, an *ntemi*, or local leader of the Bagalu dance Society and father of the manager of the Sukuma Museum, Jefta Kishosha, often visits the museum to cleanse and re-empower the Bagalu Society objects.

As these celebratory events with objects take place, the works are able to project a strong sense of identity and cultural purposes which remains with the object as it is placed back on display. Thus, rather than silencing objects through display, the Sukuma Museum attempts to keep them 'alive' and resists any tendency towards neglect or a lack of *beshima* (Kiswahili for 'respect'), for the objects in its care. The registration team learned from interviews with traditional doctors that most of the ritual *dawa* or medicine contained in the calabashes, dance bags or *pembe* (animal horns) has sustained its power while in the museum. Yet, like many Sukuma medicines, some must be used or cleansed to revitalize their strength, so it is not the display that extinguishes the power but the lack of respect or practical use by someone who is initiated in the knowledge of the medicine.

The ability to resist the mausoleum effect which can stifle cultural artefacts is made possible by fostering the trust of the community represented and especially of those elders whose objects are in the permanent collection. The cultural vitality of the museum is also achieved by creating a cultural centre for those practising the traditional ways, those who want to learn history, and those who are creating the new traditions. Theory is often reinforced with practice in such instances as when Joseph Mahyegu Lupande, the Bujora Cultural Centre's manager, attended a royal installation in the Sima Chiefdom in 1995. For over twenty-five years there had been no chiefly installation ceremonies in Usukuma and the recent re-emergence has been difficult as much of the royal regalia has been lost and most of the *banang'oma*, or royal attendants, have died. This has left the present generation in a vacuum without information concerning the royal Sukuma ceremonies. The museum and its staff filled this vacuum for the Sima Chiefdom and on other major occasions provided not only the necessary information concerning the traditional rites and rituals, but authentic examples of Sukuma royal regalia that are essential to the ceremonies. Mzee Lupande explained that during the installation in the Sima Chiefdom, he guided the new chief through the coronation steps like a teacher, as few of the participants had ever experienced the royal rites and rituals.

Just as integration with the Sukuma community is a major part of the museum's activities, the overall agenda must be reshaped and the future reconciled with its Sukuma and Catholic past. To be in control, to project identity, the Sukuma Museum plans to reveal its original agenda and the historical experience of the institution in order to offer the visitor the option to gaze at the collection on multiple levels. The museum is

counteracting the suffocation and decontextualization of ethnographic museums by offering the permanent collection the opportunity to tell its own history through museum display as much as through contemporary dance competitions and royal ceremonies.

With limited financial support and professional training, the Sukuma Museum is fighting to sustain its commitment to Sukuma culture. Though the museum's mission may be very different from other museums, the positive and negative issues raised by the experiences of other museums helped set the parameters of the project to register the collection and redesign the exhibition spaces. During the work, the museum kept returning to the issues of history, context, and identity. It realized that the use of its objects for rites and rituals alongside those of the local community enhances the identity and symbolism of the objects in the museum's care. In many ways the object's identity is related to history and changing contexts; when these traditions are perpetuated, its identity is reinforced. Its use also expresses identity while at the same time projecting the history which places it in its original context. It is within this locus that tradi-

tional objects and ceremonies are renewed and revitalized by contemporary innovation and society. The museum wants to be positioned at this site where tradition and innovation are melded because it is the meeting place of the shifting identities of the museum and Sukuma culture.³ ■

Notes

1. Sukuma history and culture are still very much based on oral traditions. As the founders of the museum were the first to institutionalize Sukuma history and culture, the history they chose to present through the museum display should be seen in the light of their agenda and as a construction of Sukuma history.
2. See Fidelis T. Masao, 'Reviving the Village Museum in Dar-es-Salaam', *Museum International*, No. 177 (Vol. 45, No. 1, 1993).
3. The author would like to thank members of the Bujora Village, the Bana Cesilia dance troupe, the Tanzanian Commission for Science and Technology and the Fulbright Committee, for supporting the work of the Sukuma Museum.

Books

Museum Exhibition. Theory and Practice by David Dean, London/New York, Routledge, 1994, 177pp. + introduction

When the time comes for the act of communication between the museum and its public, professional museologists and, more particularly, those working in the domain of exhibition, are often inevitably torn between theory and practice. Although these two aspects can sometimes be complementary, they are more often paradoxical, when not simply antinomic. But they still form the binary basis of any approach on spatial arrangement. Consequently, museologists – whether ‘curators’, ‘project managers’ or ‘exhibition organizers’ – find themselves in the delicate position of reconciler, having to negotiate the sharp turns between theoretical reflection and the physical details of the actual exhibition.

With *Museum Exhibition. Theory and Practice*, David Dean proposes an integrated approach to exhibition, an effort at synthesis of theory and practice, in the very concrete sphere of exhibition and exhibition space.

The tour on which he takes the reader is extensive and almost exhaustive: from the planning of the exhibition to its *a posteriori* evaluation, the author deals with the various components in eight chapters, each of which has an average of five themes. He thus tackles subjects as widely diversified as the conceptual process underlying an exhibition, the public and its education, design, micro- and macro-environments, administration and management, evaluation, textual and visual aspects and, lastly, the computer in the world of museums.

To cover so much ground in just 200 pages requires the skill of a concise style. And, indeed, not only is the author’s pen precise and sure, but his educational motivation is supported by a

layout which is clearly didactic but whose graphics and presentation are, none the less, pleasing to the eye.

The text, which is well supplied with illustrations and photographs, is aided by many boxes, as well as by diagrams and schemas. The latter have a successful visual impact, are easy to understand, and are in harmony with the accompanying theoretical references. The less numerous photographs provide a note of realism by showing how the theories put forward are applied, thus insisting on the practical side of the work. However, one might perhaps express regret at the absence of references for both the illustrations and photographs. It would have been to the reader’s advantage to be able to identify the places given as visual references by names and dates.

Although all of the book’s eight chapters fit into a logical sequence, they are designed to be independent of each other. The reader can thus choose the chapters relevant to his or her needs, and not be obliged to read the entire work. Starting from the introduction, a connecting link is established, and, starting from the first chapter, the metaphor of the iceberg springs to mind: the reader who is ready to delve for them will discover all the information and procedures required for mounting an exhibition, stage by stage.

David Dean’s approach is largely a multidisciplinary one, and he draws on psychology as well as physiology and architecture to support his standpoints on museology. For instance, his analysis of the visiting public’s behaviour is based on Arnold’s thesis (‘values and lifestyles segments’), on Maslow’s principle of the pyramidal hierarchy of human needs, and on explanation of the bihemispherical functioning of the brain and its consequences on human perception. He then establishes parameters which are applicable to exhibitions on the basis of these

seemingly disparate types of information, and takes reflection further by suggesting a framework for assessing the learning process in which the given exhibition involves the visiting public.

In like manner, the author uses current theories of marketing and management to support his statements on the administration of museums and exhibitions, and scientific terms to explain the technology being employed for the preservation and conservation of collections.

One can understand that these two chapters, and the eighth chapter, which concern the integration of technology and electronics in museums, should take on a colouring of technical specialization. What can be seen as surprising, however, is the fact that the author adopts the same tone when dealing with the question of the texts used in exhibitions. Despite what the title seems to announce, presentation is focused more on the economy of the text than on its cognitive content. The structure of a museum text is examined: the number of words and the use of titles and subtitles. Much attention is given to the choice of page-setting – vertical, horizontal, justified, etc. – and to typographical, reproduction and editing choices. To be sure, such data is absolutely necessary for producing a good exhibition text. None the less, one wonders if attention should not also have been devoted to the thorny questions of editorial and stylistic choices and of levels of comprehension and interpretation where textual efficacy and storyline development are concerned. In a word, this chapter is long on textual form, very short on textual content – and, in the end, silent on the text as a medium of communication.

The author is interested in architecture because of his initial training. The work which he published in 1983, in co-operation with the Royal Institute of British Architects, on functionalism in

architecture, testifies to his concern for the development and design of public spaces. Dean, who has been a staff-member for over eighteen years at the Museum of Texas Tech University, is more particularly involved in exhibition design. This obviously comes through in his textbook. The chapter dealing with this subject is full of information and acquired experience, and is, by far, the longest, with its thirteen sections. Ergometrics, cybernetics and space management, which concern human and material factors respectively, play a pivotal role in it and enable reflection to be focused on the essential aspects of the relationship between visitor, space and exhibit.

Museum Exhibition is clearly a very good textbook, which one should wish to consult in order to initiate oneself to museography and to gain an overall picture of the nature of exhibition in its various aspects, or to find solutions to more particular problems encountered in practical activities.

The work's educational qualities become obvious as soon as one begins to read it. It combines the significant strong points of a good reference work: readability, abundance and relevance of illustrations, clarity of text, diversity of information and provision of complementary tools such as a glossary, index and bibliography. It also has some of its weak points.

In general, the author has chosen to avoid theoretical arguments, and the theories he draws upon are mostly put forward as expert statements, cultural assumptions which are not to be questioned. The absence of a general conclusion underscores this trait and confirms one's impression of a somewhat axiomatic approach. In fact, because of its evolutionary nature, museology is a discipline that is constantly being redefined. This changing property is part and parcel of museum theory. Should a textbook which is aimed at both theory and practice leave the major arguments aside?

The title announces a work that deals with both theory and practice. And, as we have seen above, the introduction and initial chapters are deeply rooted in the theories of a variety of disciplines. But the author is a practitioner both by training and actual profession and, starting from the third chapter, emphasis is surreptitiously and increasingly placed on practice in the subjects considered. This shift from the abstract to the concrete occurs in the final chapters which concern computers; it is even more pronounced at the end of the work where the reader is given, not the traditional conclusion, but a series of practical tools. The annex thus contains three forms designed to initiate the reader to some of the unavoidable paper work, from the 'infestation report' to the complicated 'exhibition request form'. Then follow a glossary, reference notes, a bibliography and an index. The

glossary, which contains some 200 terms widely employed in museology, is a remarkable instrument for students. The bibliography is varied and relevant, though it only contains books written in English.

By his work, David Dean fills a huge gap in the domain of museological instruction. *Museum Exhibition* is one of the first textbooks of practical museology, and is a pioneer in the effort made to establish a synthesis of theory and practice. By its global approach and concern for details, Dean's work stands out as a basic reference work, and should form part of any good bibliography concerning exhibition in the museum environment.

*Book review by Marie-Claude Rocher,
Associate research worker (third cycle),
Laval University, Quebec.*

Illicit traffic

France joins 1970 UNESCO Convention on Illicit Traffic

On 7 January 1997 the French Ambassador and Permanent Delegate to UNESCO deposited France's instrument of acceptance of the Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property 1970.

This is a landmark for the Convention. During its early years, diverse interpretations of its provisions led to doubts as to the extent of the obligations to be implemented, particularly among states which regarded themselves as countries of collectors and strong art markets. While many developing states did not hesitate to become party to the Convention, it was not until 1983 that the United States joined the list, the first major art market state to do so. The same year the French Senate authorized ratification, but this did not occur,

apparently because of concerns about amendments which would be necessary to French internal law.

Several new factors emerged in the 1990s which have given the Convention a new impetus. First, UNESCO set to work with UNIDROIT (The International Institute for the Unification of Private Law, Rome) to draft a complementary Convention which would deal with private law issues affecting illicit traffic. The long and complex negotiations for this treaty, the UNIDROIT Convention on Stolen or Illegally Exported Cultural Objects adopted on 24 June 1995, focused attention once again on the differing interests involved and on the continuing concern of UNESCO, the museum community and archaeologists about the increasing damage to cultural property all over the world. It also led to better appreciation in many quarters of the difficult choices which had to be made if international collaboration to

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stop illicit traffic was to be improved. In 1993 the European Directive on the return of cultural property illegally removed from the territory of a member state and found on the territory of another member state of the European Union came into force. The Directive was based on an early draft of the UNIDROIT Convention, and European states were obliged to bring their internal law into compliance with it. It provides for the return of cultural property 'illegally removed' ('export' no longer exists in a customs union) from one member of the Union to another. Fears that it would have far-reaching effects on the art market have not been fulfilled – in the three years of its existence not one claim has been made for return under its provisions.

Switzerland has announced that it intends to become party both to the UNESCO and UNIDROIT Conventions. It has already signed the UNIDROIT Convention, which is not yet in force, as has the Netherlands. These developments show a new determination to try to stop illicitly traded cultural property finding its way into the licit international market where, because no questions were asked, purchasers were unable to check title.

France, which has many important collections, suffers, like every other country, from thefts from its museums and private collections. It has established a special police unit, the Office Centrale pour la Répression du Vol d'Oeuvres d'Art (the Central Office for the Repression of Theft of Works of Art) and painstakingly documents losses. It also has a good record of

recovery, and its expertise has been used to assist other states with serious problems. For example, it has provided specialized training to units of the Cambodian police responsible for the protection of cultural property.

France played an active role in the negotiations for the UNIDROIT Convention, which it has signed, and changes to its law introduced after the adoption of the European Directive have probably considerably facilitated the acceptance at last of the UNESCO Convention.

During her meeting with the Director-General of UNESCO, Ambassador Françoise de Panafieu stressed that France was the first country of Northern Europe to accept the UNESCO Convention (Greece, Italy, Portugal and Spain are already party) and said that France would be seeking to persuade other countries in the European Union to do the same. The Director-General saw French accession as a great step forward and an indication of a heightened willingness generally to take serious action against the illicit trade.

There are now 86 states party to the 1970 Convention. It is interesting to compare this with the 1954 Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict (88 states party) and the 1972 Convention concerning the Protection of the World Cultural and Natural Heritage (147 states party). France joins a select group of states which are party to all three UNESCO Conventions for the protection of the cultural heritage.

Professional news

Meetings and trade fairs

'Safeguarding World Cultural Heritage – A Global Challenge' is the theme of the symposium to be held in Hildesheim

(Germany) from 23 February to 1 March 1997. A forerunner of EXPO 2000, the next major world exhibition which will also take place in Hildesheim, the symposium is expected to lay the

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groundwork for an international partnership to help preserve humanity's cultural heritage by providing specialized knowledge through a global network of experts. It will feature workshops on such subjects as restoration and conservation, documentation and presentation, training and new media, ecology and environmental pollution, destruction through armed conflicts, art theft, explosive urban growth and tourism, and is addressed in particular to experts in monument preservation and specialists from museums, restoration institutes and universities as well as to interested laypersons. The symposium, which has received UNESCO patronage, is sponsored by the Deutsche Bundesstiftung Umwelt and EXPO 2000 Hannover GmbH.

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Understand and re-live heritage, the first international meeting about heritage interpretation in France, the United Kingdom and Canada, was organized at the Château d'Auvers, Auvers-sur-Oise (France) on 3–4 December 1996. The overall aim was to present and evaluate experiments in interpretation of cultural heritage and museum collections. Themes discussed by specialists from the three participating countries included various ways of interpretation: technical means or human interpreters; interpretation and heritage identity: how to deal with the memory of sites; interpretation for the benefit of economic development policies: a balance between culture and tourism; financial and cultural implications of interpretation: public attendance and private resources. Meeting reports were published in early 1997.

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The Museums and Heritage Show will celebrate its fifth year on 25–26 March 1997 at the Royal Horticultural Halls in London. The show, according to organizer Joanna Brown, 'will be a shop window for a huge range of suppliers to museums and visitor attractions, providing an opportunity to update their professional knowledge and the ideal chance to liaise with old and new contacts'. Created in 1992, the annual Museums and Heritage Show has established itself as the United Kingdom's most important venue for organizations involved with the museums and heritage industry. It features a seminar programme which will include contributions from the Royal Institute of British Architects, the Society for the Interpretation of Britain's Heritage, the Association of Independent Museums, the Museums Association and the Museums Trading & Publishing Group.

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Courses

The University of Paris I (Panthéon-Sorbonne) offers a Diplôme d'Études Supérieures Spécialisées (DESS) (Diploma in Higher Specialized Education) devoted to preventive conservation of cultural works. Involving one year of study, the course benefits from the support of ICCROM (Rome) and also draws upon the resources of the French Institute for Restoration of Works of Art. It is open to candidates possessing a Master's degree or equivalent who have had experience or training in conservation-restoration.

For further information:
 Secrétariat de la Maîtrise de Sciences et
 Techniques
 'Conservation-Restauration des Biens
 Culturels'
 17, rue Tolbiac
 75013 Paris (France).

New publications

Handbook of Standards – Documenting African Collections/Manuel de Normes – Documentation des collections africaines. A bilingual publication of the International Council of Museums (ICOM), Paris, 65 pp. (ISBN 92-9012-029-0). Available from ICOM, UNESCO, 1, rue Miollis, 75732 Paris Cedex 15 (France).

The result of a four-year effort of the professionals of six African museums and the ICOM International Committee for Documentation (CIDOC), this handbook is the initial response to the concern to protect the African heritage by documenting and producing systematic inventories and by developing greater co-operation between museums. The standards have thus been developed in order to facilitate collections management, ensure the security of objects by an inventory which includes minimal information permitting the identification of each object or specimen, facilitate exchange between museums and the development of common projects such as research, exhibitions, training, etc., and prepare the computerization of inventories and the documentation of collections by a standardized and rigorous organization of information. The handbook covers all types of collections; humanities (history, archaeology, ethnography, art, etc.) as well as natural history (palaeontology, zoology, geology, etc.); however the accent is on the humanities, reflecting the composition of the participating institutions. Tested for more than three years on the collections of the six pilot museums (in Kenya, Madagascar, Mali, Namibia, Tunisia and Zaire) and

continually readapted, these standards have already proved their effectiveness, not only in each museum but within the broader framework of exchanges. However, they will attain their objective only when the majority of the African and Africanist museums have adopted them. First presented at the CIDOC meeting in Nairobi (Kenya) in September 1996, the publication was warmly welcomed as a major achievement for the entire museum community.

Conservation and Restoration of Ceramics, by Victoria Oakley and Susan Buys. Published by Butterworth/Heinemann, Linacre House, Jordan Hill, Oxford OX2 8DP (United Kingdom), 1996, 252 pp. (ISBN 0-7506-3219-4).

Now available in paperback, this book opens with a discussion of the fundamentals of the ceramic medium, information of importance when selecting treatments or considering conservation methods. It then discusses the restoration and conservation processes, the nature and properties of materials commonly in use and gives guidance on the facilities and equipment needed. Also covered are old restoration materials and methods, the ethics of ceramic conservation, examination and recording and display treatments.

Vagues – Une anthologie de la nouvelle muséologie [Waves – An Anthology of the New Museology], Vol. 1 (ISBN 2-7297-0454-X), Vol. 2 (ISBN 2-7297-0478-7). Collection Museologia, published by Éditions W-MNES and distributed by Presses Universitaires de Lyon (France).

A collection of the basic texts which were at the heart of the reflection and evolution, in both theory and practice, of the new museology. Contributors include Elie Faure, Georges Henri Rivière, Stanislas S. Adotevi, Hugues de Varine, Duncan Cameron, Alpha Oumar Konaré, Jorge Enrique Hardoy, Jean Clair, Stephen Weil, Jacques Hainard and Harald Szeemann.

museum international

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