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Dieter Scholz

Pan Am's Historic Contributions to Aircraft Cabin Design

Based on a Lecture Given by
Matthias C. Hühne

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Hamburg University of Applied Sciences

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Abstract

The report summarizes groundbreaking aircraft cabin developments at Pan American World Airways (Pan Am). The founder and chief executive Juan Terry Trippe (1899-1981) established Pan Am as the world's first truly global airline. With Trippe's determination, foresight, and strategic brilliance the company accomplished many pioneering firsts – many also in aircraft cabin design. In 1933 Pan Am approached the industrial designer Norman Bel Geddes (1893-1958). The idea was to create the interior design of the Martin M-130 flying boat by a specialized design firm. Noise absorption was optimized. Fresh air was brought to an agreeable temperature before it was pumped into the aircraft. Adjustable curtains at the windows made it possible to regulate the amount of light in the compartments. A compact galley was designed. The cabin layout optimized seating comfort and facilitated conversion to the night setting. The pre-war interior design of the Boeing 314 flying boat featured modern contours and colors. Meals were still prepared before flight and kept warm in the plane's galley. The innovative post-war land based Boeing 377 Stratocruiser had a pressurized cabin. The cabin was not divided anymore into compartments. Seats were reclining. The galley was well equipped. The jet age started at Pan Am with the DC-8 and the B707. The B707 featured individual overhead "service clusters" with reading light, air outlet, and stewardess call button. The aircraft had no night time settings anymore. Inflight entertainment (video and music) was introduced. Early jets had hatracks. Overhead bins were introduced on the B747.

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1 Introduction

The lecture by Matthias C. Hühne is based on his book "Pan Am: History, Design & Identity" **Hühne 2016**. His lecture focused on a subset of the book: Pan Am's contribution to cabin design. Since Pan Am dominated the airline market by its innovative approach, it also set the pace in cabin design. This lecture shows some of Pan Am's cabin innovations. Often pictures have to speak for themselves.

This summary of Hühne's lecture makes use of figures and text from his book. Text from his book is printed here in italics and is indented. Text from my own notes taken during the lecture is written in normal type face. Other sources are added as necessary and quoted in a usual way. Note that all material taken from **Hühne 2016** is his copyrighted material. It is referenced here as usual in scientific writing.

> *Pan Am's pioneering role in commercial flight is well known around the world. For decades, the aviation industry and its customers profited from the airline's visionary ideas and technological innovations. Remarkably, Pan Am's symbolic power survives to the present day, long after its demise in 1991. An analysis of this unique phenomenon is the substance of this book. It all began in 1927, when Pan Am started as a tiny enterprise. With determination, foresight and a good deal of the ruthlessness required to win over politicians and investors, as well as to outdo the competition, the company's founder and chief executive Juan Terry Trippe (1899-1981) established the world's first truly global airline. His strategic brilliance becomes apparent in the company's many pioneering accomplishments and is evident throughout this volume: Pan Am connected South America by air to the United States, initiated commercial flights across the Pacific and the Atlantic, set up one of the earliest international hotel chains, pushed the world into the jet age, introduced computerized reservation Systems, and pioneered the use of the wide-bodied jumbo Jets that laid the foundation for mass air transportation as we know it today.*

Figure 1.1 Juan Trippe (1899 – 1981) was chairman of the Board of directors respectively president of Pan Am from 1927 to 1968 (for all but about two years). Trippe is pictured in front of a Boeing 377 Stratocruiser

2 Pan Am's History

The history of Pan Am is summarized with a focus on its aircraft. Pan Am's cabin design can only be understood, if the aircraft and their routes are known. The history is a summary from **Wikipedia 2017** (quoted).

"Pan American Airways, Incorporated (PAA) was founded on March 14, 1927 by Henry H. 'Hap' Arnold, Carl A. Spaatz, and John H. Jouett. Juan Trippe formed the Aviation Corporation of the Americas (ACA) on June 2, 1927. The Atlantic, Gulf, and Caribbean Airways company was established on October 11, 1927 by Richard Hoyt. This company merged with PAA and ACA on June 23, 1928. Trippe became operational head of Pan American Airways, the new company's principal operating subsidiary." In the beginning of the 1930s, the **Consolidated Commodore**, a flying boat built by Consolidated Aircraft was used for passenger travel, mostly in the Caribbean. It carried 22 passengers.

"Trippe and his associates planned to extend Pan Am's network through all of Central and South America. In September 1929 Trippe toured Latin America with Charles Lindbergh to negotiate landing rights in a number of countries. By the end of the year, Pan Am offered flights along the west coast of South America. The Aviation Corporation of the Americas changed its name to Pan American Airways Corporation in 1931. Trippe decided to start a service from San Francisco to Honolulu and on to Hong Kong and Auckland after negotiating traffic rights in 1934 to land at Pearl Harbor, Midway Island, Wake Island, Guam, and Subic Bay (Manila)." Trippe asked 6 manufacturers for an aircraft with a range of 2500 NM at 30 kt headwind. This resulted in the flying boats **Sikorsky S-42** and **Martin M-130**.

Figure 2.1 A Pan American Airways Sikorsky S-42 flying boat. First flight was 1934. Ten aircraft were built all for Pan Am. (Source: U.S. Navy National Museum of Naval Aviation)

Figure 2.2 Martin-130. Three aircraft were built for Pan Am in 1935. (Source: San Diego Air and Space Museum)

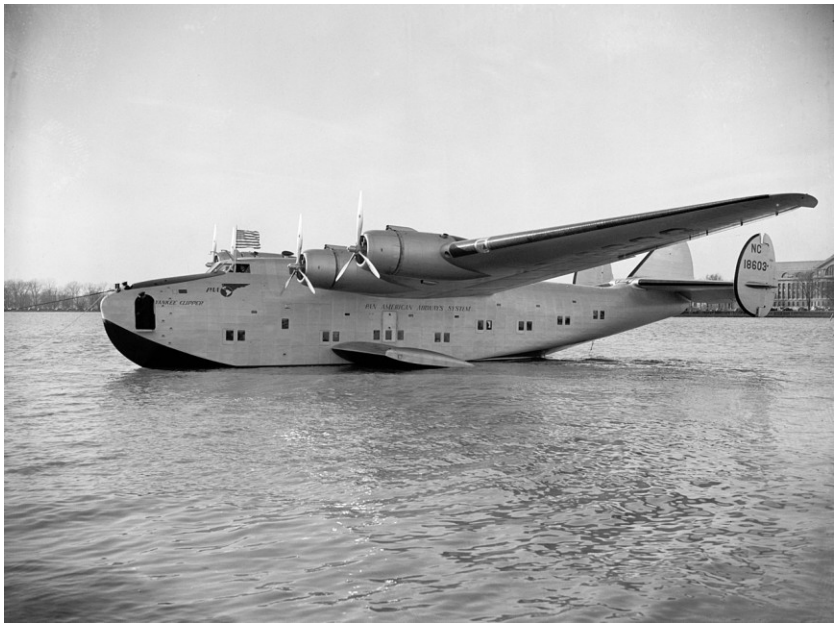


Figure 2.3 Boeing 314 produced between 1938 and 1941. 12 aircraft were built, 9 for Pan Am. (Source: Library of Congress)

"Six large, long-range **Boeing 314** flying boats were delivered to Pan Am in early 1939. On March 30, 1939 Pan Am made the first ever trans-Atlantic passenger flight. The first leg of the flight, Baltimore to Horta (Azores) took 17 hours and 30 minutes. The second leg from Horta to Lisbon took 7 hours. During the war Pan Am flew in support of military operations. Pan Am also used Boeing 314 flying boats for the Pacific route. In China, passengers could connect to domestic flights on the Pan Am-operated China National Aviation Corporation (CNAC) network. American Overseas Airlines AOA was the first airline to begin regular landplane flights across the Atlantic, on October 24, 1945."

"1945 Pan American World Airways (Pan Am) became the launch customer with the largest commercial aircraft order in history, a $24500000 order for 20 **Boeing 377 Stratocruiser**s. Entry into service with Pan Am was in 1949."

Figure 2.4 Boeing 377 Stratocruiser (Source: San Diego Air and Space Museum Archive)

Figure 2.5 Douglas DC- 4. 1245 were built from 1942 to 1947. (Source: San Diego Air and Space Museum Archive)

"In January 1946 Pan Am scheduled **Douglas DC-4**s from LaGuardia Airport to London and to Lisbon. Pan Am introduced the **Douglas DC-7C Seven Seas** on transatlantic routes in summer 1956."

Figure 2.6 Douglas DC-7C Seven Seas. 121 were built 27 for Pan Am. (Source: A.A.S. Collection from http://www.logbookmag.com/databases)

"Jet age: Pan Am was the launch customer of the **Boeing 707**. It also ordered Douglas's DC-8. Pan Am was the launch customer of the **Boeing 747**."

Figure 2.7 Douglas DC-8-32
(Source: Don Linn Collection from http://www.logbookmag.com/databases)

Figure 2.8 Boeing 707-321B (Source: InterAir from http://www.logbookmag.com/databases)

Figure 2.9 The 747-100 first entered service with Pan Am in 1970. (Source: Boeing Images from https://www.cnet.com)

"Internal German Services (IGS): From 1950 until 1990 Pan Am operated a comprehensive network of high-frequency, short-haul scheduled services between West Germany and West Berlin, first with Douglas DC-4s, then with DC-6Bs (from 1954) and Boeing 727s (from 1966)."

"Pan Am was forced to declare bankruptcy on January 8, 1991. Delta Air Lines purchased the remaining profitable assets. Pan Am ceased operations on December 4, 1991."

Pan Am operated many more aircraft. The once shown here were instrumental for Pan Am's cabin design.

3 Pan Am's Cabin Design

Passenger comfort in air travel is taken for granted today, indeed, in modern times it has often been the subject of criticism. The search to provide an optimum of comfort taking into account economic and technical as well as safety considerations has been a part of the airline business from its inception. Many of the key advances in cabin design were initiated by Pan Am, the world's first truly global airline. Looking back at these pioneering achievements provides insights into a discipline that shapes the air travel experience.

We may want to follow Pan Am's history (Chapter 2) in the sequence in which new aircraft were introduced. The **Sikorsky S-42** was noisy and had no insulation. Service was on paper plates.

Figure 3.1 Sikorsky S-42 interior (**Hühne 2016**)

3.1 Interiors for Long Distance Flights

Until the mid-1930s commercial aviation offered incomparable speed, adventure and glamour, but passenger comfort could not be described as luxurious by any objective Standard. Airlines and manufacturers focused on improving the safety and range of their planes, and the placement of bulkheads, doors and Windows was derived more from an engineer's perspective than a passenger's. Aircraft cabins offered insufficient head room, cramped seating and often poor Ventilation. There was only one toilet to be used by men and women, which was a considerable inconvenience for conservative female travelers of that era. These were important customers-especially in the tourist business Pan Am was aiming to expand. Although much effort was made to provide good food, there were no proper galleys, thus meals were not invariably fresh and tasty. To reduce weight, they were sometimes served on paper dishes instead of china. Insufficient soundproofing made the engine noise unbearable on longer flights. As a pioneer of long distance passenger flights, Pan Am had ordered new long-range aircraft, the S-42 from Sikorsky and the M-130 from the Glenn L. Martin Company, specifically developed for journeys across the Pacific and the Atlantic.

Aware of the need to improve the well-being of its fastidious passengers who would soon spend unprecedented amounts of time onboard, Pan Am in November 1933 approached ***Norman Bel Geddes*** *(1893-1958), a well-known and influential industrial designer. The idea of having aircraft interiors created by a specialized design firm was groundbreaking. Until then, interiors were designed by the aircraft manufacturers in consultation with the airline. As a result, the technical demands of engineers and their focus on performance always had precedence over aesthetics and comfort.*

In their January 1934 proposal for Pan Am, Norman Bel Geddes & Co. pleaded that the airline consider the total flying experience from the point of view of the passenger, to consider "the effect of every detail with which the passenger comes in contact and by which he may judge either (Pan Am), or air travel in general." Therefore, the industrial designer suggested a complete redesign according to a single unifying standard not only of the aircraft interiors but of everything else a Pan Am passenger might encounter, from terminal facilities, new hotels or special Pan Am sections within existing hotels to dinnerware, uniforms and menus. This approach was remarkably similar to the comprehensive corporate design and branding concepts that would become fashionable beginning in the 1950s and 1960s. It is an interesting detail that Bel Geddes' career began as a theatrical designer. He believed that good design and architecture could have a positive effect on a society. His work combined an aptitude for technically refined solutions, paying attention to even the smallest details, with aspects of utopian visions which made him one of the leading futurists of his time.

Pan Am already had made plans for new hotels or guest houses along its routes in Latin America and on the islands in the Pacific. New terminal facilities in Miami and elsewhere were also under construction. But the industrial design firm's pitch convinced Pan Am's management, and the airline asked Bel Geddes to design the new aircraft interiors. Because the airline had ordered its S-42s and M-130s to include fully equipped and functional passenger cabins, the contracts were signed between the aircraft manufacturers and the industrial design firm by way of introduction of Pan Am. Eager to produce the best new airliners, Igor Sikorsky and Glenn Martin were open to these innovations. By contrast, it took some persuasion to convince staff engineers to pay heed to the instructions of a design firm asking them to adjust the position of Windows or relocate a gangway for no technical reason.

Bel Geddes had studied the requirements of passengers on long flights in detail and devised what can be considered the first modern commercial aircraft interiors. He was one of the inventors of industrial design, a discipline that started around 1927, when a small group of designers including Walter Dorwin Teague, Raymond Loewy and Henry Dreyfuss first began to apply the techniques of functional, consumer-oriented design to industrial products such as refrigerators, packaging materials, soft drink dispensing machines, furniture, railways, automobiles, etc. Their aes-

thetic improvements resulted in better sales, and the top industrial designers became highly sought after and trusted consultants whose influence quickly expanded into the fields of graphic design, corporate design and architecture. The early industrial designers also defined the concept of streamlining that became one of the hallmarks of American design and architecture in the 1930s and 1940s. This style was originally influenced by art deco, however, unlike this movement which mainly shows geometric and angular shapes with an emphasis on the vertical, streamlining was more simplified, more curved and organic, as the aircraft interiors Bel Geddes designed for Pan Am illustrate.

For the first time, passenger comfort was given high priority in the design of new aircraft. Many of Bel Geddes' conceptual Solutions provided a model until the beginning of the Jet age. Jet technology rendered some of his innovations redundant, but several have become Standard principles of aircraft interiors until this day; among the most notable examples are efficiently designed galleys and adjustable lean-back chairs.

The introduction of an industrial designer was an early manifestation of a trend towards specialization in the aircraft manufacturing industry, and perhaps due to the great success of Bel Geddes' work it became common practice for aircraft manufacturers and airlines to hire specialized design firms. All of the other industrial design pioneers mentioned above soon played an important role in the airline industry.

3.2 Interior Design of the Martin M-130

3.2.1 General

The forty-by-eleven foot passenger quarters of the Martin M-130 were divided into three compartments and a large central lounge, providing accommodation for up to 36 passengers on shorter daylight flights and for 18 on long flights requiring nighttime settings.

The passenger cabin had the appearance of a distinguished club with soft grey fabric walls and generously proportioned sofas and adjustable lean-back chairs. There were three different color schemes, one for each of the Martin M-130s then on order by Pan Am. The Green Scheme called for seats in green with gold piping, and corresponding colors for the striped night curtains. The brown Scheme called for brown seats with eggshell white piping, the Yellow Scheme combined yellow and green with an emphasis on yellow. All colors were sufficiently subdued to provide a pleasant ambience for long distance flights.

Sofas and chairs were fitted with slip covers that could be cleaned after each trip. Leather hassocks provided passengers with a foot rest and contained an instantly accessible life jacket. Each compartment had two portable tables with a sponge rubber and felt surface, which prevented games, dishes, or writing equipment from slipping or spilling.

Sound-proofing was achieved by covering the walls and ceiling of the cabin with doped fabric held in place with zippers so that it could be removed easily for cleaning and for routine inspections of the structure. Cork flooring and wainscoting up to the window sills provided additional sound absorption. The flooring could be rolled up like a rug for cleaning or removal.

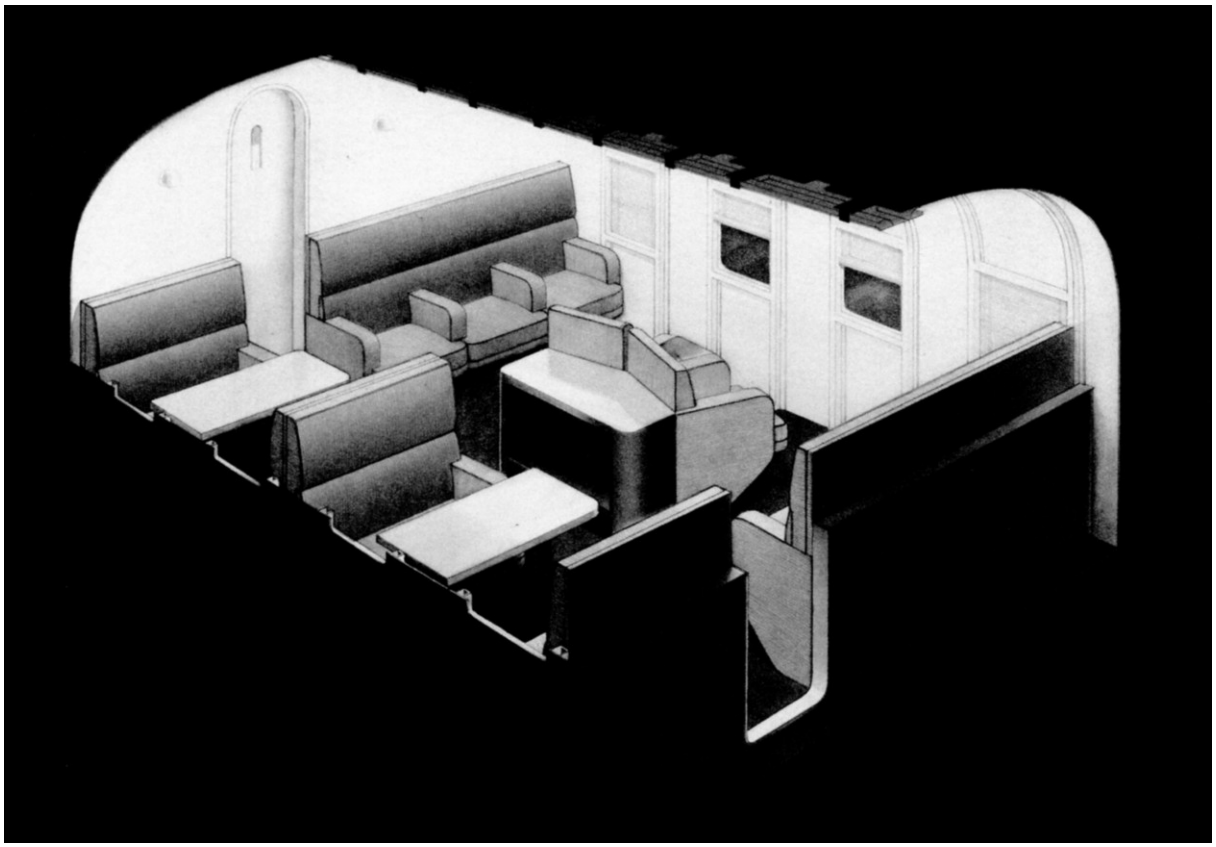


Figure 3.2 Martin M-130: Lounge compartment (**Hühne 2016**)

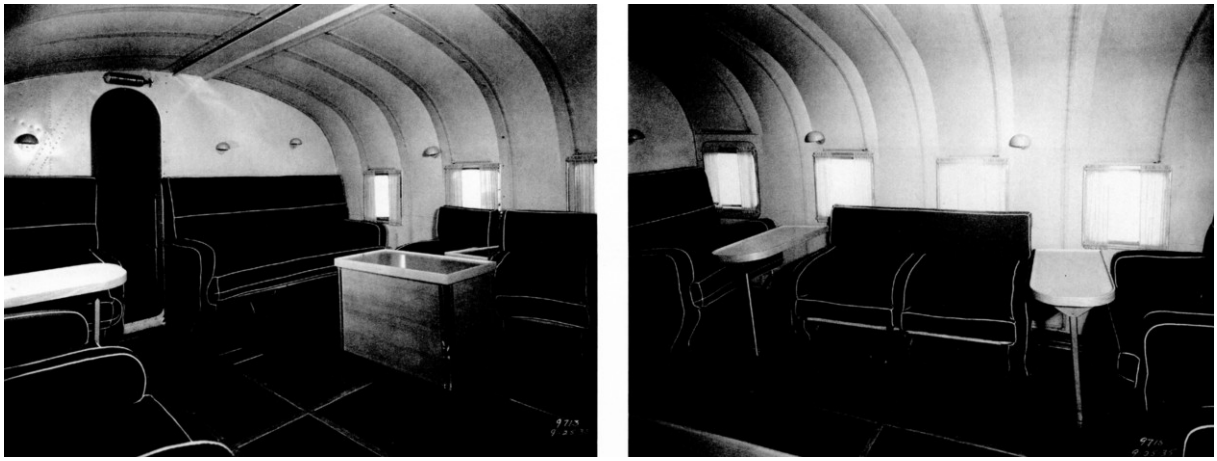


Figure 3.3 Martin M-130: Lounge compartment, details (**Hühne 2016**)

Weight was reduced by the use of anodized aluminum in window-sills, hardware, lighting fixtures, floor trim and ventilation ducts. The ventilation ducts were combined with cove lighting. Fresh air was brought to an agreeable temperature and humidity, before it was pumped into the plane, and was distributed laterally throughout the cabin from a concealed duct in the ceiling. All materials were tested for lightness and durability. Fabrics were also tested for sound-proofing qualities, and together with the upholstery were fire-proofed to permit smoking in any part of the aircraft. Adjustable curtains at the windows made it possible to kill the glare from the water and tropical sun and to regulate the amount of light in the compartments and the lounge.

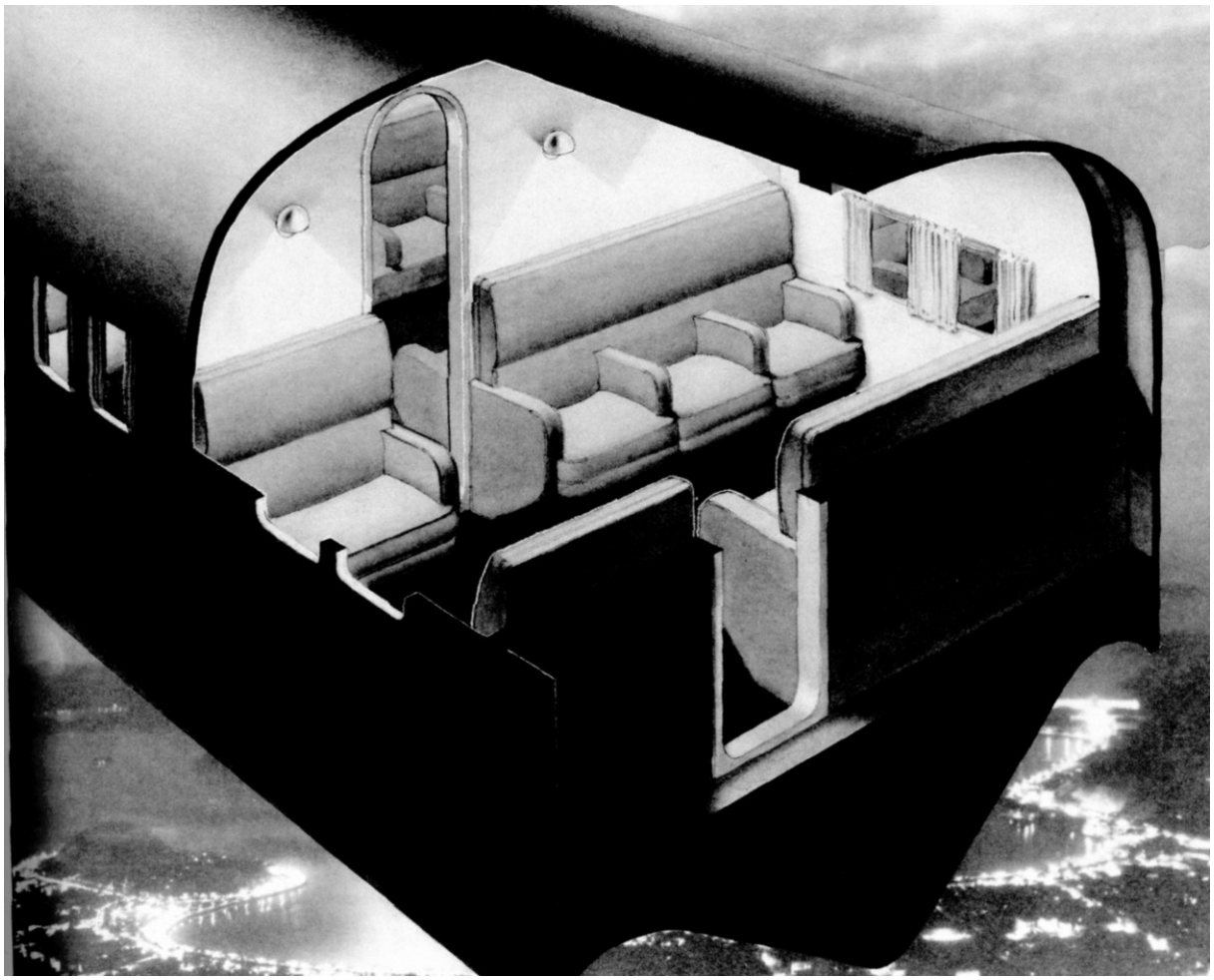


Figure 3.4 Martin M-130: Lounge compartment (**Hühne 2016**)

Figure 3.5 Martin M-130: Lounge compartment, details (**Hühne 2016**)

Figure 3.6 Martin M-130: Lounge compartment (left), lavatory (middle), and Galley (right). (**Hühne 2016**)

3.2.2 Lounge

The lounge, seating twelve, had all the comforts of a living room. Intended to serve as a pleasant gathering place for passengers who did not wish to spend the entire trip in their compartment, it was furnished with divans, easy chairs, card tables and a magazine table. The indirect lighting was ample for reading, card playing or socializing.

Figure 3.7 Martin M-130: Dining in the lounge (**Hühne 2016**)

3.2.3 Galley

A compact galley was designed, utilizing every square inch available, with exact-size storage space for linens, silver, cigars, food, etc. A suspended glass and china closet, insulated against Vibration by a spring steel construction, was installed so that the glassware, cups and dishes would not rattle or break. All work surfaces were designed five degrees from normal to allow for the handling of liquids in flight position. Beetleware, a thin high quality plastic invented in England in the mid-1920s, was chosen for the table service instead of china because it took up very little space, was light in weight and had the appearance of high quality china. The fixed cabinet was fitted with an electric stove, a refrigerator, a sink with hot and cold water, a garbage receptacle and a soiled-laundry container. The wooden top of the refrigerator was surfaced to double as a drain board. There were four one-gallon food containers. Food was to be partly precooked ashore, stored in the thermos containers, and given the final touch on board. To round off the in-flight experience, twelve one-quart beverage containers and a wine closet were provided, the latter containing a wide variety of liquors ranging from champagne to whiskey, with the correct glasses for each type.

3.2.4 Night Setting

A key improvement to previous aircraft design was the modification of the layout to optimize seating comfort and facilitate conversion to night setting. Bulkhead doors had previously been at the center of an aircraft, Norman Bel Geddes & Co. moved them to the side, creating large compartments on the left side of the aircraft, and smaller ones on the right. At night, this allowed for beds to be arranged at a right angle to the aisle in the larger compartments, and parallel to the aisle in the smaller compartments.

At bedtime and in the morning the wider portion of the lounge was divided by curtains into dressing rooms for men and women, and two portable wash basins were placed onto the magazine table and connected with hot and cold running water. In addition, there were wash basins in the newly introduced separate men's and women's toilets.

The backs of the sofas in the larger compartments doubled as mattresses for the upper berth beds, the seats formed the mattresses for the lower berths. Similarly, the upper and lower berth beds were formed in the smaller compartments. In night setting, opaque curtains were so arranged that they not only gave privacy to each berth but created ventilation ducts for the lower berths. Effective individual lighting for reading was provided for each seat or bed.

Figure 3.8 Martin M-130: Dressing rooms for men and women with portable wash basins for each room (**Hühne 2016**)

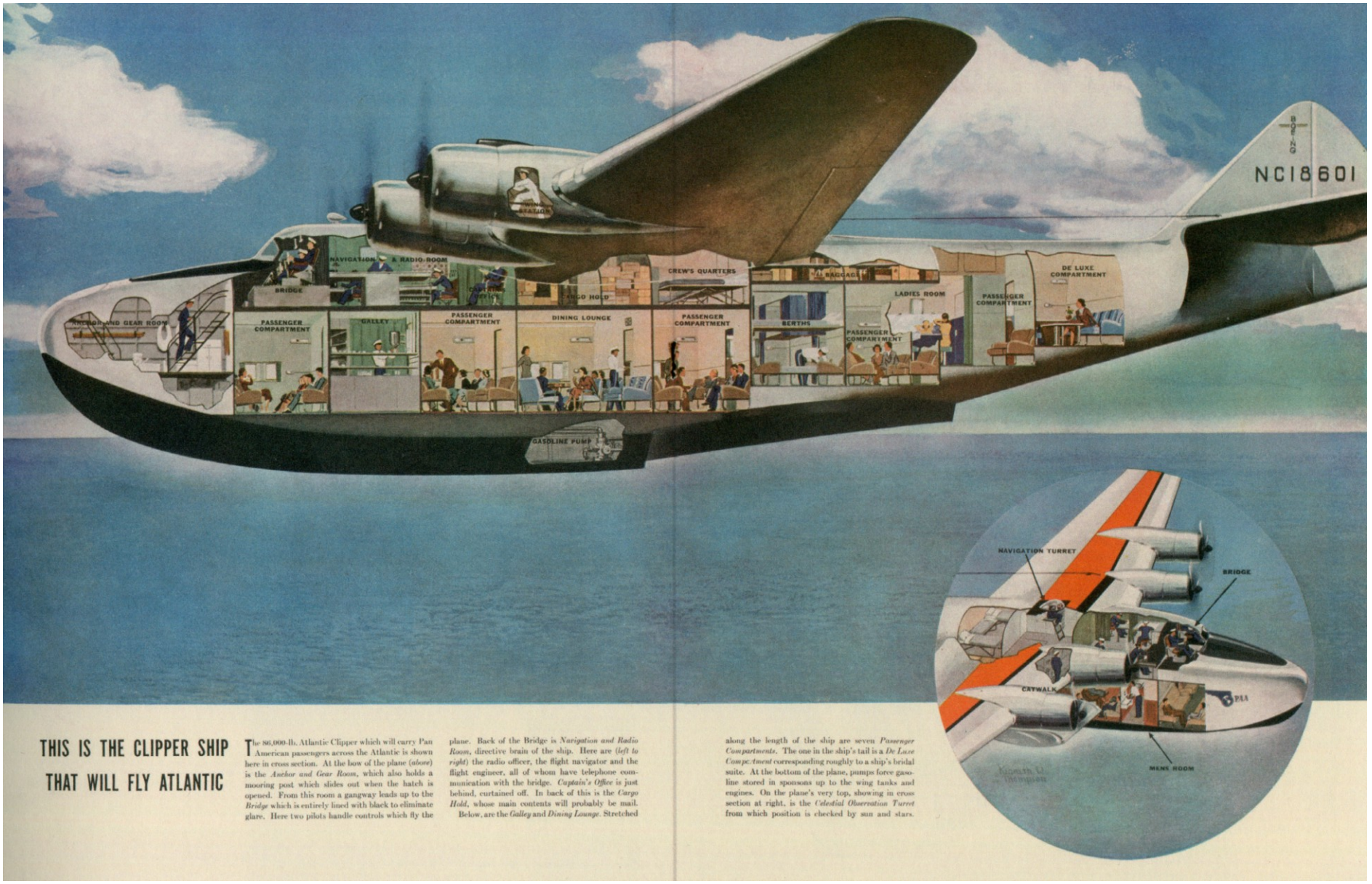
Figure 3.9 Martin M-130: Night setting with upper and lower berth beds (**Hühne 2016**)

Figure 3.10 Martin M-130: Night setting with upper and lower berth beds – with and without curtains (**Hühne 2016**)

3.3 Interior Design of the Boeing 314

Next page:

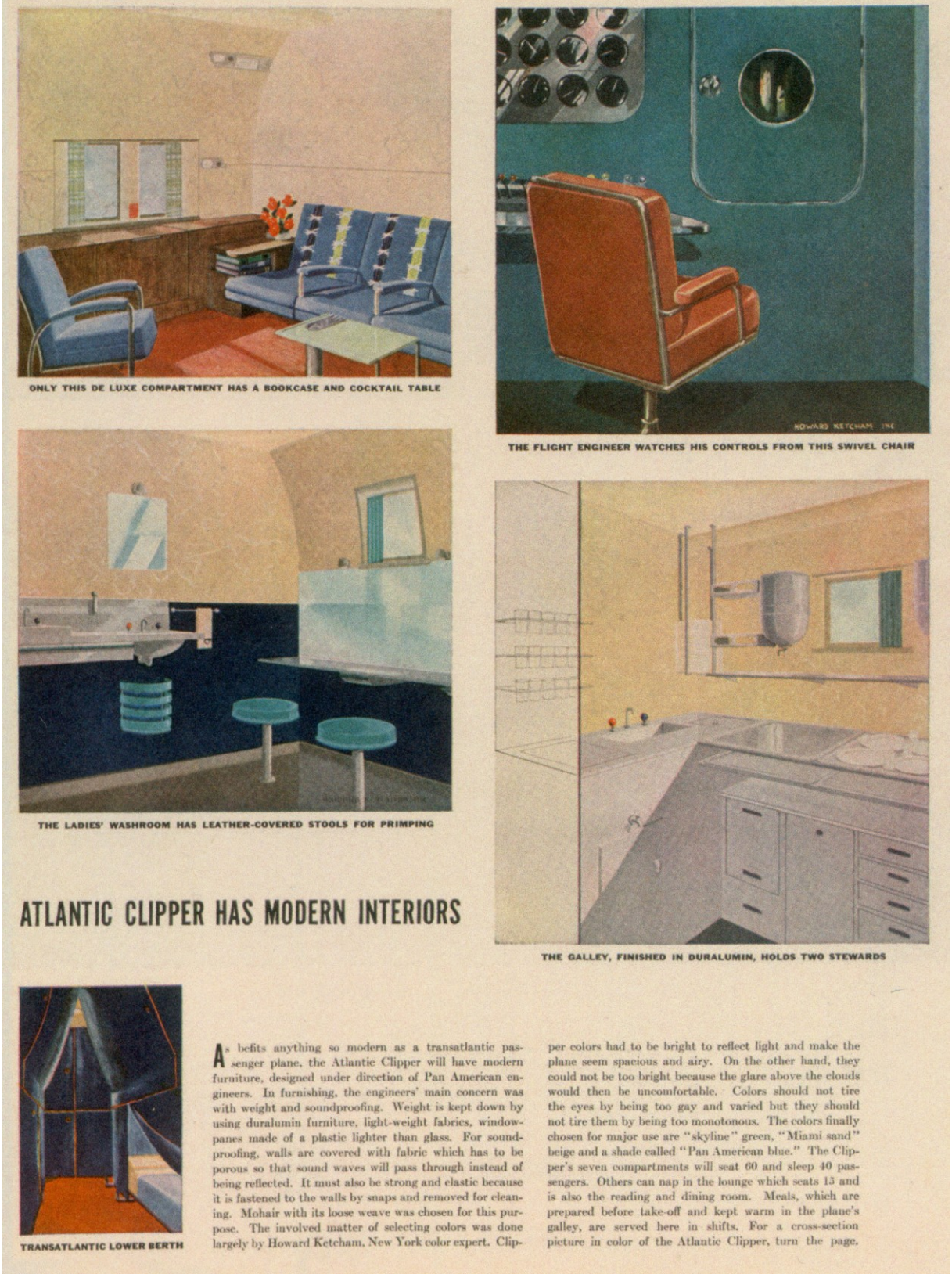
Figure 3.11 Interior arrangement of the Boeing 314 Clipper long-range flying boat produced by the Boeing Airplane Company between 1938 and 1941 (**Hühne 2016**)



THIS IS THE CLIPPER SHIP THAT WILL FLY ATLANTIC

The 86,000-lb. Atlantic Clipper which will carry Pan American passengers across the Atlantic is shown here in cross section. At the bow of the plane (*above*) is the *Anchor and Gear Room*, which also holds a mooring post which slides out when the hatch is opened. From this room a gangway leads up to the *Bridge* which is entirely lined with black to eliminate glare. Here two pilots handle controls which fly the plane. Back of the Bridge is *Navigation and Radio Room*, directive brain of the ship. Here are (*left to right*) the radio officer, the flight navigator and the flight engineer, all of whom have telephone communication with the bridge. *Captain's Office* is just behind, curtained off. In back of this is the *Cargo Hold*, whose main contents will probably be mail.

Below, are the *Galley* and *Dining Lounge*. Stretched along the length of the ship are seven *Passenger Compartments*. The one in the ship's tail is a *De Luxe Compartment* corresponding roughly to a ship's bridal suite. At the bottom of the plane, pumps force gasoline stored in sponsons up to the wing tanks and engines. On the plane's very top, showing in cross section at right, is the *Celestial Observation Turret* from which position is checked by sun and stars.



ONLY THIS DE LUXE COMPARTMENT HAS A BOOKCASE AND COCKTAIL TABLE

THE FLIGHT ENGINEER WATCHES HIS CONTROLS FROM THIS SWIVEL CHAIR

THE LADIES' WASHROOM HAS LEATHER-COVERED STOOLS FOR PRIMPING

THE GALLEY, FINISHED IN DURALUMIN, HOLDS TWO STEWARDS

ATLANTIC CLIPPER HAS MODERN INTERIORS

TRANSATLANTIC LOWER BERTH

As befits anything so modern as a transatlantic passenger plane, the Atlantic Clipper will have modern furniture, designed under direction of Pan American engineers. In furnishing, the engineers' main concern was with weight and soundproofing. Weight is kept down by using duralumin furniture, light-weight fabrics, window-panes made of a plastic lighter than glass. For soundproofing, walls are covered with fabric which has to be porous so that sound waves will pass through instead of being reflected. It must also be strong and elastic because it is fastened to the walls by snaps and removed for cleaning. Mohair with its loose weave was chosen for this purpose. The involved matter of selecting colors was done largely by Howard Ketcham, New York color expert. Clipper colors had to be bright to reflect light and make the plane seem spacious and airy. On the other hand, they could not be too bright because the glare above the clouds would then be uncomfortable. Colors should not tire the eyes by being too gay and varied but they should not tire them by being too monotonous. The colors finally chosen for major use are "skyline" green, "Miami sand" beige and a shade called "Pan American blue." The Clipper's seven compartments will seat 60 and sleep 40 passengers. Others can nap in the lounge which seats 15 and is also the reading and dining room. Meals, which are prepared before take-off and kept warm in the plane's galley, are served here in shifts. For a cross-section picture in color of the Atlantic Clipper, turn the page.

Figure 3.12 Interior details of the Boeing 314 Clipper (**Hühne 2016**)

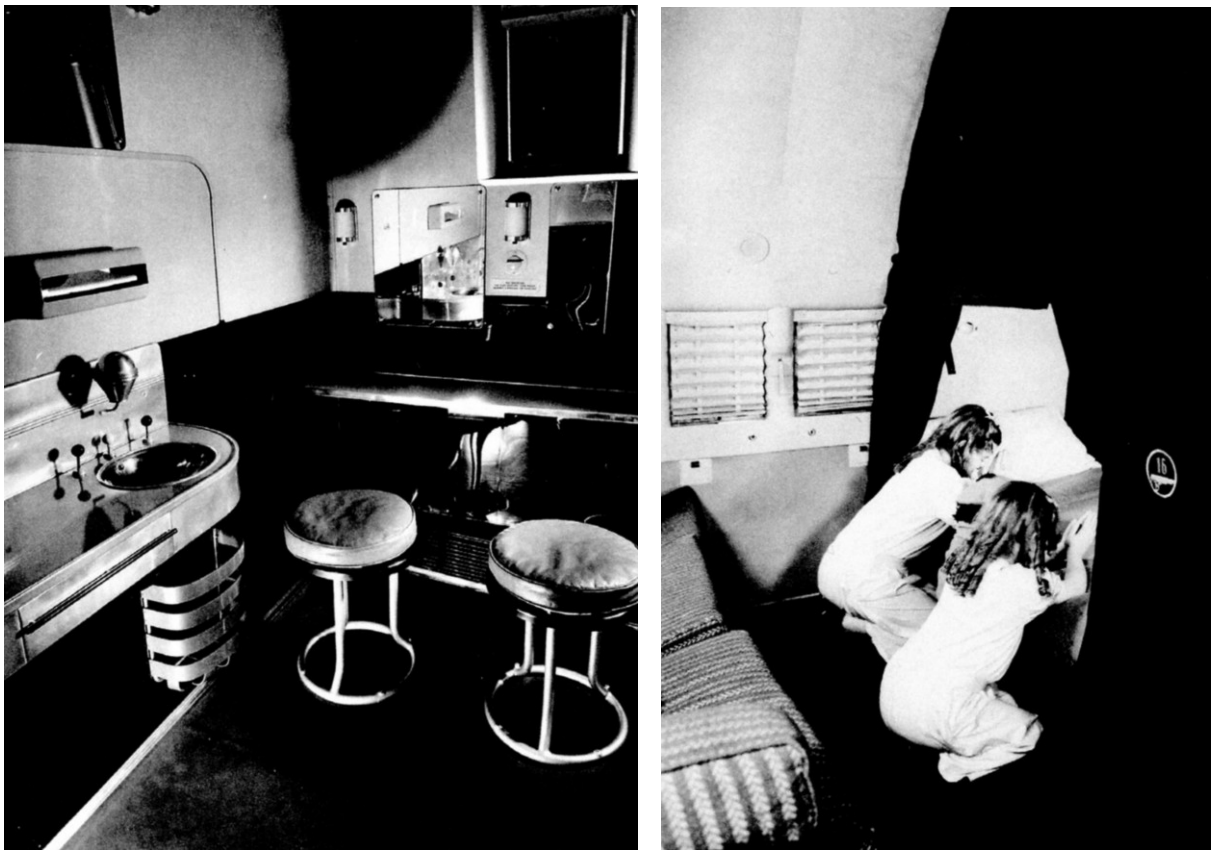


Figure 3.13 Boeing 314 washroom (left), children in front of bed (right), c. 1939 (**Hühne 2016**)

Figure 3.14 Boeing 314 dining room, c. 1940 (**Hühne 2016**)

3.4 Interior Design of the Boeing 377

The Boeing 377 Stratocruiser had a service ceiling of 32000 ft and hence needed a pressurized cabin. This was a relatively new feature on transport aircraft after the war. The aircraft had a modern cabin layout and no compartments anymore.

Figure 3.15 Interior of the Boeing 377 Stratocruiser. The Boeing 377 was a large land based long-range airliner (**Hühne 2016**)

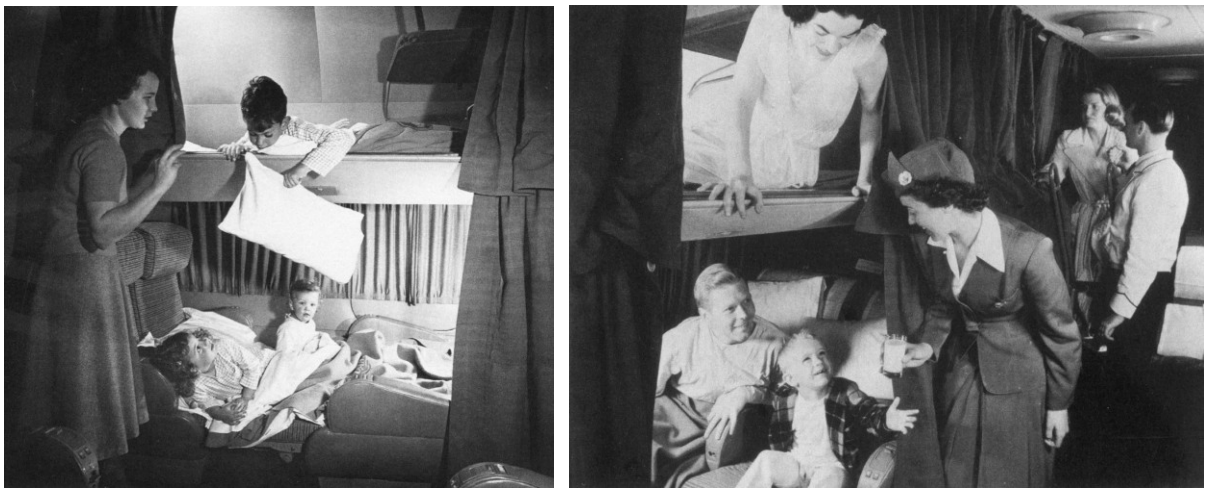


Figure 3.16 Sleeping on board the Boeing 377 Stratocruiser (**Hühne 2016**)

Figure 3.17 Seats on board the Boeing 377 Stratocruiser (**Hühne 2016**)

Figure 3.18 The galley on board the Boeing 377 Stratocruiser (**Hühne 2016**)

3.5 Interior Design of the Boeing 707

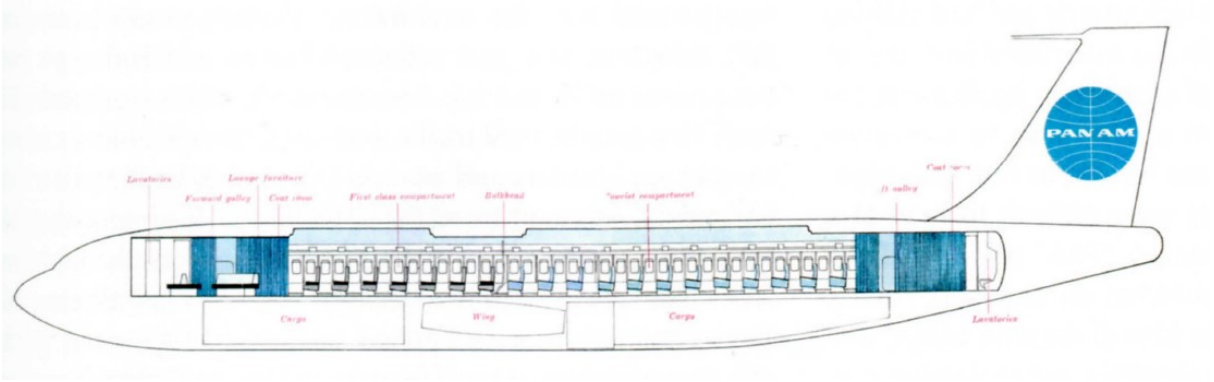


Figure 3.19 Section showing the color scheme design for the Boeing 707, c. 1956 (**Hühne 2016**)

With the start of the jet age, flights were so short that the aircraft had no night time settings anymore. The early jets had hat racks on which carry-on baggage could be stored. The iconic new Pan Am logo (Figure 3.19) was introduced with the jet age.

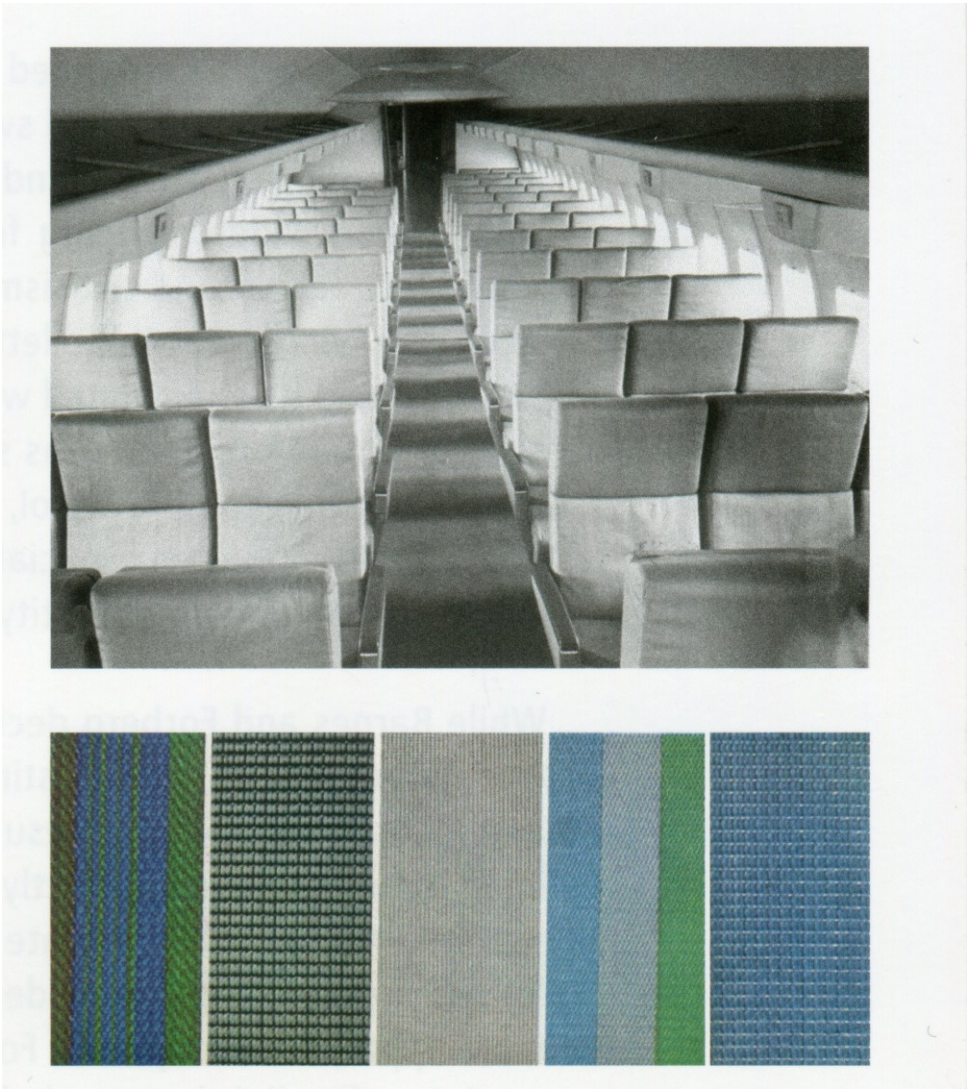


Figure 3.20 Interior of the Boeing 707 looking to the rear, c. 1958 (upper picture). Interior color scheme designed for the Boeing 707, c. 1956 (**Hühne 2016**)

HUSHED QUIET FOR TALK AT "LIVING ROOM LEVEL"

"O beautiful for spacious skies" . . . that's the song you'll sing about the new Jet Clipper. Spacious for truly comfortable living too — with dozens of design features that could only come from years and years of planning.

But the quietness of the Jet Clipper is the thing you'll marvel at most. You didn't believe in radio, until you heard it — or in television, until you saw it. You won't believe the serene quiet of flight in a Jet Clipper — until you experience it.

On the ground, you may not even notice the starting of the engines. In the air, you hear a low hum — or perhaps you'd describe it as a pleasant whoosh. This plane is vastly quieter than any you've flown in before — you can talk in a low voice, with no straining to hear.

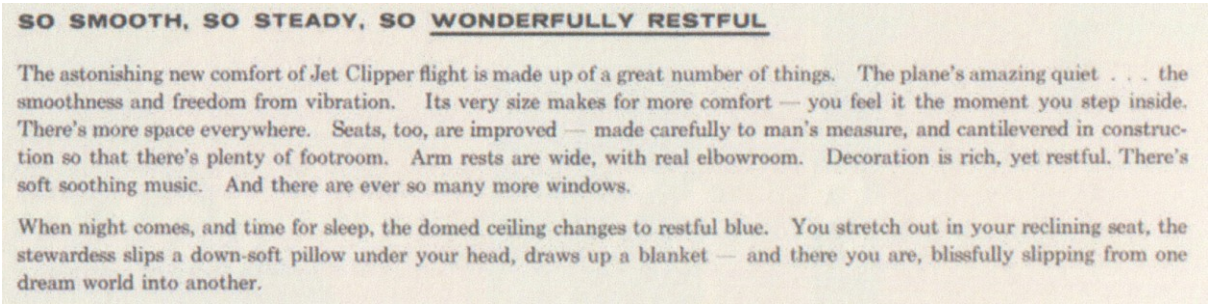
Also contributing to this delightful feeling of hush, is the amazing lack of vibration. Jet Clipper smoothness comes primarily from the source of power — the pure jet engine. There are no propellers and no pistons to cause internal noise or vibration. In addition, Jet Clippers fly in a world of peaceful air, up where the forecast is almost invariably Fair.

Despite the fact that you fly almost twice as fast as piston-engine planes, your Jet Clipper does this magic with complete ease. Result — the most restful and relaxing air trip you've ever known.

Figure 3.21 Advertising for the new Boeing 707. The lower picture conveys the message "The jet flies so smoothly you can even play chess". Brochure, 1958. (**Hühne 2016**)

The Boeing 707 was advertised with cabin comfort from an individual overhead "service cluster" with reading light, air outlet, and stewardess call button. In addition to general illumination through soft cove lighting, five lavatories were offered. The cabin altitude inside the 707 was kept equalized to a comfortable level through improved pressurization.

Figure 3.22 Dining on board the Boeing 707 as shown in a brochure from 1958 (**Hühne 2016**)



SO SMOOTH, SO STEADY, SO WONDERFULLY RESTFUL

The astonishing new comfort of Jet Clipper flight is made up of a great number of things. The plane's amazing quiet . . . the smoothness and freedom from vibration. Its very size makes for more comfort — you feel it the moment you step inside. There's more space everywhere. Seats, too, are improved — made carefully to man's measure, and cantilevered in construction so that there's plenty of footroom. Arm rests are wide, with real elbowroom. Decoration is rich, yet restful. There's soft soothing music. And there are ever so many more windows.

When night comes, and time for sleep, the domed ceiling changes to restful blue. You stretch out in your reclining seat, the stewardess slips a down-soft pillow under your head, draws up a blanket — and there you are, blissfully slipping from one dream world into another.

Figure 3.23 Advertising the "Jet Clipper" Boeing 707 in a brochure from 1958 (**Hühne 2016**)

Inflight entertainment was perhaps the only major trend Pan Am was initially hesitant to accept. There were occasional experiments with inflight movies, but it was not until the 1960s that technology was sufficiently advanced. By the mid-1960s, screen movies and headphones for the movies as well as for music had become standard on long distance flights.

Figure 3.24 Introduction of inflight entertainment in the mid 1960s. (**Hühne 2016**)

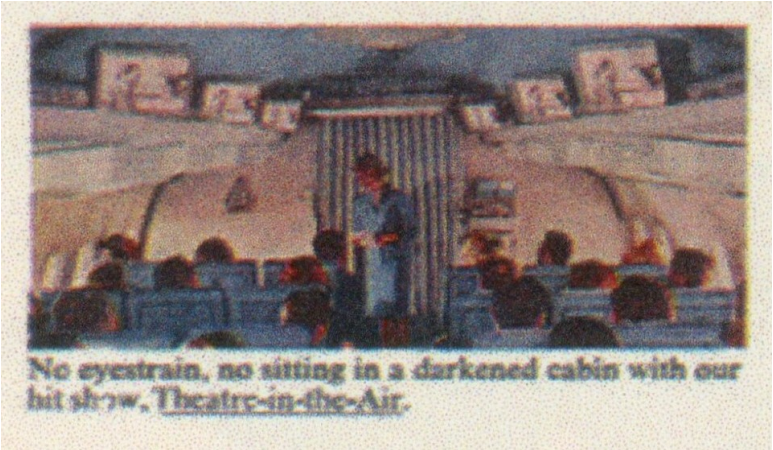


Figure 3.25 When inflight entertainment was introduced, screens were placed on the hat racks. This is an enlargement of a little inlay in an advertisement (**Hühne 2016**)

3.6 Interior Design of the Boeing 747

Figure 3.26 Boeing 747 upper deck lounge, c. 1970 (**Hühne 2016**)

With the B747, Pan Am replaced the open hat racks by closed overhead bins.

Figure 3.27 On board the Boeing 747 – advertisement 1970 (**Hühne 2016**)

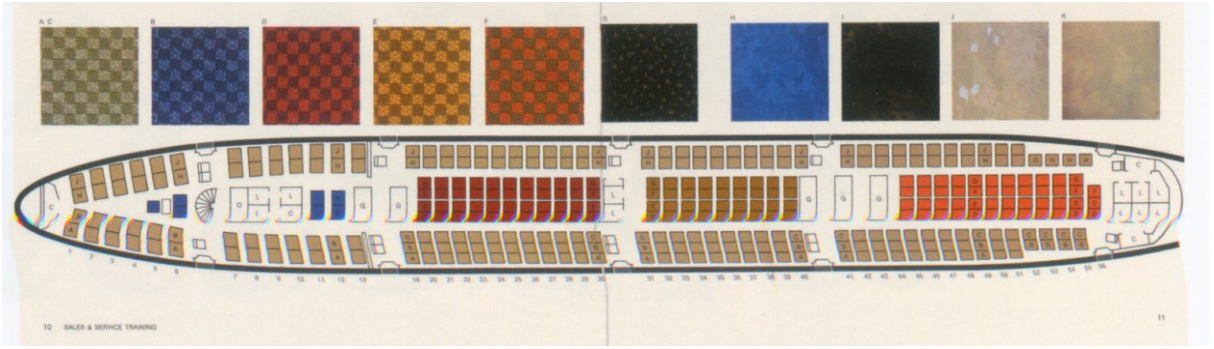


Figure 3.28 Color scheme of the new Boeing 747, 1969 (**Hühne 2016**)

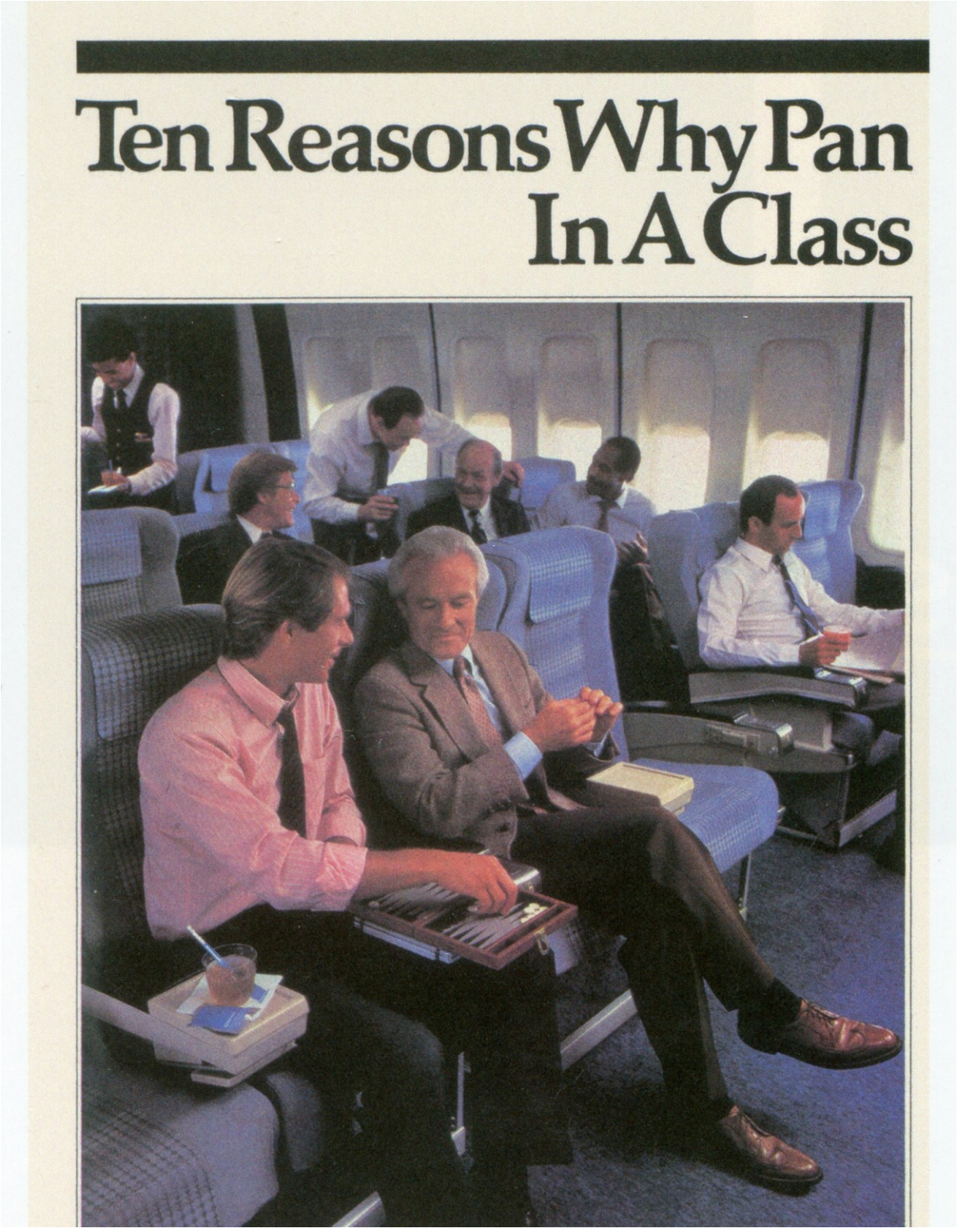


Figure 3.29 Boeing 747 advertisement, 1983 (**Hühne 2016**)

Figure 3.30 Boeing 747 advertisement, 1983 (**Hühne 2016**)

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Passenger comfort in air travel is taken for granted today, indeed, in modern times it has often been the subject of criticism. The search to provide an optimum of comfort taking into account economic and technical as well as safety considerations has been a part of the airline business from its inception. Many of the key advances in cabin design were initiated by Pan Am, the world's first truly global airline. Looking back at these pioneering achievements provides insights into a discipline that shapes the air travel experience.

Matthias C. Hühne graduated from Harvard University with a Bachelor of Arts. In addition to Hühne Development Services GmbH, he founded Callisto Publishers which is producing design books of the highest standards. Hühne authored and published the book "Pan Am: History, Design & Identity". In the book and in our lecture the author tries to answers the question: "Why have the brand name and blue globe symbol become cult and continue to be recognized around the world a quarter of a century after Pan Am's shattering bankruptcy?"

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