“No Japanese in the Cockpit”

The Airplane and the Role of Race, Culture, and Bodies in Postwar U.S.-Japan Relations

ABSTRACT This article examines the techno-cultural process of accommodating, training, and qualifying the Japanese as pilots responsible for Pacific flights in the decade after the end of the allied occupation of Japan in 1952. There were two related modes of qualifying Japanese pilots, both of which created traffic of people, knowledge, and machines across the Pacific: One was the slow, politicized process of permitting Japanese pilots to fly again and training them with reference to American models of flying. Another mode of qualification consisted of measuring and recording the bodily differences between Japanese and American pilots, so that Japanese bodies could fit into American-designed cockpits and flying garments. Under the postwar technopolitical regime and given lingering racial perceptions, the terms and norms of the flying body and practice were mostly set by the American system, to which the Japanese worked hard to adapt. In this process, the cockpit and the Pacific served as crucial frames of reference for the Japanese. With its focus on pilot training and qualification, this article aims to bring together the histories of aviation, science, and U.S.-Japan relations and to situate them in the Pacific as a physical, imaginary, and technopolitical space. KEYWORDS aviation, technology, pilot, body, Japan, the Pacific

“It’s really difficult to become an English-speaking kamikaze pilot,” said Takashi Ishinabe. It was not 1945 but 1993, and Ishinabe was not a pilot but an actor who played the role of a kamikaze squadron commander. Ishinabe and his fellow Japanese actors came to New York City to perform the play The Winds of God at the Actors Studio. The play was originally Japanese written and directed, but the New York performance would be in English. According to the New Yorker, the Japanese actors, who were not native English speakers, practiced so diligently as to be “gamely mouthing their lines in an emotive Brando style.” A New York Times reviewer even had “the impression that smart American street talk is their native tongue.” The play tells the story of two present-day comedians who, through a motorcycle
accident, are suddenly thrown back into their previous lives as kamikaze pilots being trained for suicidal attacks at the end of the Second World War. Much as the actor Ishinabe found it difficult to perform in English and in New York, the main characters in the play at first are frustrated at their doomed fate, especially because they have the historical knowledge of the war’s end and the awareness of their future lives in the 1990s. At a moment approaching the fiftieth anniversary of the war’s end (the movie adaptation was released in 1995), playing an English-speaking kamikaze pilot for the American audience was a doubly uneasy exercise for the actor personally and for his character.¹

This kind of uneasiness was not unique to these actors in the 1990s. In early postwar Japan, many Japanese pilots with wartime flying experiences had to learn to speak English and fly in the American way. As the allied forces moved into Japan to occupy the defeated country in September 1945, one of the first policy measures instituted by the occupation authority was to ground all aircraft and all pilots in Japan. Japanese pilots could not, literally, get off the ground until the end of the Allied Occupation in 1952. This “aviation blank” of more than six years had enormous impact on the course of both civilian and military aviation in Japan.² When they attempted to fly again in 1952, Japanese pilots had to be reconfigured in the post-occupation era cockpit with new qualification standards set by Americans. Just as the Japanese actors in The Winds of God sought acknowledgement and appraisal from American audience and critics, the Japanese pilots needed American instruction and evaluation to fly in the postwar sky dominated by Americans. Just as the play was recognized as worthy of a New York debut, the certification of the first postwar Japanese airliner captain in 1954 and the first trans-Pacific flight from Tokyo to San Francisco by a Japanese captain in 1956 were significant moments for Japanese pilots and civil aviation.

¹. The Winds of God was written by Masayuki Imai, who also performed in one of the play’s leading roles. In 1995 (the fiftieth anniversary of the war’s end), the play was adapted into a movie with the same title, in which actors also performed in English. “The Winds of God” is a translation of kamikaze (or “the divine wind”). “Kamikaze Method,” New Yorker, May 31, 1993, 29–30; D. J. R. Bruckner, “The Punch Line Is No Joke for Comics Turned Pilots,” New York Times, July 3, 1998.

². There are few studies in English language on the postwar ban and rehabilitation of Japan’s civil aviation. Useful information and basic narratives can be found in Hitoshi Yoshioka, “Lifting the Bans on Weapons Production and Rebuilding the Aircraft Industry,” in A Social History of Science and Technology in Contemporary Japan, Volume 2: Road to Self-Reliance, 1952–1959, ed. Shigeru Nakayama (Melbourne: Trans Pacific Press, 2005), 47–60; Hitoshi Yoshioka, “Re-establishing Civil Aviation,” in Ibid., 61–79.
authorities as well as American observers of the postwar resumption of Japanese aviation. For actors and pilots alike, crossing the Pacific meant that their hard work and skill earned recognition and acceptance by Americans.

This article examines the techno-cultural process of accommodating, training, and qualifying the Japanese as pilots responsible for Pacific flights in the decade after the end of the allied occupation of Japan in 1952. Behind the efforts of pilots, instructors, doctors, engineers, bureaucrats, and journalists was a simple and awkward question: Can the Japanese fly? They could, of course, but the process of letting the Japanese fly again involved more than just mastering the cockpit controls and instruments. The Japanese had to become a new kind of pilot, modeled after their American counterparts in terms of skill, language, character, and even body. In re-training and re-qualifying as a pilot for the post-occupation sky, the Japanese came to grips with postwar American power—whether political or aerial—that spanned across the Pacific.

With its focus on pilot training and qualification, this study aims to bring together the histories of aviation, science, and U.S.-Japan relations and to situate them in the Pacific as a physical, imaginary, and technopolitical space. What puts the pilot at the intersection of these histories is the concept of mobility as a historically situated, culturally encoded, and differentially embodied practice of movement. Recent scholarship in “mobility studies” suggests that flying is not practiced solely as a technical means to support allegedly more important political and economic relations between distant locations. Often the act of flying itself is fundamental to constituting this set of relations. Practices of aerial mobility can be made possible only by bringing together the political, technical, and cultural resources of the various historical actors involved.3 From this mobility perspective, the question of who could qualify as a pilot in post-occupation Japan is as significant as the pilot’s seemingly simple physical act of flying. Japanese pilots embodied radically different political and cultural meanings from those of American pilots, thus presenting distinctive challenges for the pilots and for those who worked with pilots. The first postwar trans-Pacific flight was thus a marker of how the historical actors linked together bodies (especially Japanese bodies), machines, Japan-U.S. power relations, and the Pacific as a techno-cultural space. The

airplane as an iconic technology of spatial mobility only heightened the meanings attached to these intertwined relations.

As historians such as Joseph Corn, Robert Wohl, and Peter Fritzsche have shown, being a pilot was both a technical achievement and a cultural performance. The collective identity of pilots was shaped not only by the mechanical functionality of the plane they flew but also by the political, social, and cultural circumstances under which they flew. In times of war or peace, prosperity or hardship, a pilot could be a daredevil, a war hero, a messenger of God, or an entertainer. In occupied Japan, however, it was no longer possible for a Japanese pilot to be a daredevil or a proud hero. The prospective pilots in Japan found themselves embedded in a new geopolitical reality, in which an American-dominated Pacific presented new challenges and meanings to pilots as well as flight. Even though, or rather because, some of them had flown before and during the war, American authorities doubted their competence and reliability, requiring that they be tested and certified according to American standards. Rather than celebrated in the sky, the Japanese pilots were subjected to an intense U.S.-defined regime of qualification on the ground. In proving themselves to Americans, the Japanese pilots had to cross the U.S.-defined physical, imaginary, and technopolitical space of the Pacific all at once.

The process of qualification was both humiliating and rewarding. The discourses and practices of qualifying Japanese pilots during and after the American occupation mirrored the political and cultural qualification of Japan as a trustworthy and manageable American ally. Studies of the postwar U.S.-Japan relationship have suggested that the rapid shift in American perception of Japan from a ruthless, racialized war enemy to one of America’s most important strategic allies and economic competitors was mediated by the metaphorical recasting of the Japanese as women or immature youth in need of care and education by an adult male, America. As historian Naoko Shibusawa has written, it was crucial for Americans to regard the Japanese “not as savages but as dependents that needed U.S. guidance and benevolence.” The Japanese were weak and small by every measure but had the potential to

“grow up.” The Japanese pilots in the post-occupation period were seen through a similar lens. The Japanese would certainly make good pilots, if only they were willing to learn from Americans and accept the American way.

In the case of pilots, this American guidance was intimately bound to the Pacific as geographical and techno-cultural space. One of the important qualifying tests for postwar Japanese pilots was the trans-Pacific flight, which was technically challenging and symbolically significant. Yes, in the American view, the Japanese could fly, but could they, or should they, be allowed to cross the Pacific? Here the Pacific represented the physical and geographical span of water to fly over as well as a symbol of political and cultural distance. During and after the war, the Pacific presented a clearer and more expansive division between races, cultures, and even bodies than did the Atlantic. As historian John Dower argues, the wartime American perception of the people across the Pacific, namely the Japanese, differed significantly from that of the people across the Atlantic, namely the Germans. For Americans, the world and the people at the opposite side of the Pacific belonged to different categories or levels from their own. To cross the Pacific, therefore, meant not simply a technical task but also a cultural and psychological leap for both sides. Especially in the early postwar period, with the memory of Pearl Harbor and kamikaze still fresh, it required simultaneous technical and cultural efforts for the Japanese to claim, and for the Americans to acknowledge, the capability of Japanese pilots to fly across the Pacific. Both materially and symbolically, the Pacific demanded more work for a crossing than did the Atlantic, as they involved different modes of interplay among geography, technology, and culture.

In what follows, I will discuss two related modes of qualifying Japanese pilots, literally and figuratively, in the context of the post-occupation U.S.-Japan relationship. Both modes of qualification created traffic of people, knowledge, and machines across the Pacific. One is the slow, politicized process of permitting Japanese pilots to fly again and training them with reference to the American models of flying between 1950 and 1957. During this period, the Japan Air Lines (JAL) began its service, and the Japan Air Self-Defense Force (JASDF) was established. The process involved bringing

former Japanese pilots to the United States for American-style training and incorporating American practices and conventions within the Japanese training system, including learning English as the language of flight. Even with such training, it took some time for the American public to shed the stereotyped perception of the wartime kamikaze as irrational and to accept Japanese pilots as American-like professionals in the cockpit.7

Another mode of qualification took place in the late 1950s and early 1960s, when JASDF established its own Aero-Medical Unit and the U.S. Air Force sought more data and coordination from JASDF. Aviation researchers as well as pilot body data from Japan and the United States crossed the Pacific to learn any differences and accommodate them. In both American and Japanese eyes, the Japanese pilots’ bodies were recognized as small, which could be read as indicating a lack of maturity and masculinity. It seemed necessary to measure the Japanese bodies carefully against the body dimensions of American pilots, so that they would fit comfortably in American-designed flying suits and cockpits. For pilots as well as aviation researchers, the vast space of the Pacific amplified the seemingly undeniable bodily differences between Japanese and American pilots, prompting efforts to register and manage them. For the historical actors, postwar trans-Pacific flights from Japan to the United States meant overcoming somatic, geographical, and cultural conceptions of race. Under the postwar technopolitical regime and lingering racial perceptions, the terms and norms of the flying body and practice were mostly set by the American power, to which the Japanese worked hard to adapt. The Japanese proved themselves, however, to be meticulous and resourceful in re-occupying the cockpit and re-crossing the Pacific.

THE BAN ON AVIATION IN OCCUPIED JAPAN

The first directive issued to the Japanese government by the General Headquarters, Supreme Commander for Allied Powers (GHQ/SCAP) on September 2, 1945, required the Imperial Japanese Headquarters to submit “lists of all aircraft, military, naval and civil, giving complete information as to the number, type, location and condition of such aircraft” and instructed Japan’s

armed forces and civil aviation authorities to “insure that all Japanese Military, Naval and Civil Aircraft remain on the ground, on the water, or aboard ship, until further notification of the disposition to be made of them.”

It was followed the next day by SCAPIN (SCAP Instructions to the Japanese Government) 2, which directed that “[a]ll Japanese aircraft and equipment will be safeguarded pending further instructions.” On September 22, GHQ issued another directive that declared the prohibition of producing “[a]ll types of aircraft, including those designed for civilian use.”

For a brief period between September 14 and October 9, 1945, Japanese pilots were allowed to fly in order to serve the initial needs of occupation forces. Scheduled flights operated by Japanese pilots connected Tokyo and several cities including Osaka, Fukuoka, Nagoya, and Sapporo. The program was called Green Cross Flights, since green crosses were visibly painted on the fuselages of the airplanes. GHQ issued specific instructions for these flights, telling the pilots, for example, to follow the flight path as straight as possible and not to exceed an altitude of 1,200 meters. While participating in the Green Cross Flights, Japanese pilots and aviation personnel hoped that civil aviation activity in Japan could resume soon, even if it would clearly be controlled by occupation forces.

The most comprehensive measure directly aimed at Japan’s aviation was taken in SCAPIN 301 of November 1945. To the surprise of many people in Japan’s aviation circle, SCAPIN 301 instituted the ban not only on aircraft production or military flying but also on nearly all aspects of civil aviation. First, all official bodies engaged in civil aviation were to be abolished by the end of the year. Moreover, necessary measures were to be taken to dissolve all companies and other agencies related to civil aircraft operation and “pilot or other training related to aircraft design, construction, maintenance or operation.” In other words, no channel for potentially hostile aviation activities was left open. After it covered governmental and commercial organizations in aviation, the ban went down to the individual level. With a studied comprehensiveness, the SCAPIN 301 ordered: “On and after 31 December 1945 you

8. SCAPIN 1 “General Order Number 1, Military and Naval,” 2 September 1945. SCAPINs can be found in the Records of Allied Operational and Occupation Headquarters, World War II, Record Group (RG) 331, National Archives, College Park, Md. (hereafter NARA).

9. SCAPIN 2, 3 September 1945.

10. SCAPIN 47, 22 September 1945.

will not permit any governmental agency or individual, or any business concern, association, individual Japanese citizen or group of citizens, to purchase, own, possess, or operate any aircraft, aircraft assembly, engine, or research, experimental, maintenance or production facility related to aircraft or aeronautical science including working models.” By this clause, all Japanese pilots were effectively grounded at the end of 1945 and were not to fly again until the occupation’s official end about six-and-a-half years later.\(^\text{12}\)

All of a sudden, Japan became a nation of no fliers.\(^\text{13}\) The cockpit was declared “off limits” to the Japanese, just as were many buildings, facilities, and areas in Japan.\(^\text{14}\) It was a sudden transition—the cockpit went from being a place of courage and opportunity that invited all Japanese boys throughout wartime to being one strictly closed to all Japanese. Among the many possible ways to disqualify someone as a pilot, the GHQ’s policy was an easy measure to implement. No family history checks, no personality tests, no psychomotor tests, no flight trainer testing, no measure of physical body dimensions, and no primary flight training was needed. Repeated instructions or confirmations were sufficient to keep the Japanese on the ground. With as much importance as that on the aviation manufacturing industry, the ban on flying itself was reiterated and maintained firmly throughout the occupation period. As noted in the “Far Eastern Commission Policy on Reduction of Japanese Industrial War Potential” (August 18, 1948), GHQ continued to prohibit “the participation by the Japanese Government or Japanese nationals in the ownership or airborne operation of civil aircraft.” The fact that such restrictions were a sensitive matter to the occupation forces was indicated by the absence of discussion with the Japanese seeking to revive aviation. Aviation periodicals and their forums were discontinued.\(^\text{15}\) Whenever inquiries were made on aviation matters, GHQ reiterated its policy of not allowing civil aviation activities by the Japanese government or Japanese nationals.

\(^{12}\) SCAPIN 301, 18 November 1945.

\(^{13}\) In calling Japan “a nation of no fliers,” I am drawing upon Peter Fritzsche’s characterization of Germany as “a nation of fliers” in Fritzsche, A Nation of Fliers.


\(^{15}\) One illustration of the complete disappearance of aviation in occupied Japan is that one can hardly find a publication on aviation topics within the Gordon Prange Collection (University of Maryland, College Park), which is the most comprehensive collection of Japanese publications between 1945 and 1949. The Prange Collection, by contrast, has many publications on electrical, automotive, or civil engineering.
By the summer of 1949, discussions in Washington were beginning on the possibility of opening domestic airlines in Japan. Pan American Airways and Northwest Airlines had been flying into and from Japan since the early days of the occupation. In an attempt to appropriate the forced vacuum of domestic airline service in Japan, Pan American Airways and Northwest Airlines had competitively asked SCAP in the summer of 1947 for the right to operate internal service in Japan, though neither airline succeeded at that time.16 The British Overseas Airways Corporation was also keenly interested in the potential of aviation business in Japan. Moreover, Japanese businessmen had been writing letters to SCAP, asking for serious consideration of the need for domestic airline service. Japanese officials who had been interested in reviving Japan’s civil aviation were also preparing for such a change in policy. As an initial step, young officials in the Aviation Safety Agency, some of whom were former wartime pilots, had started attending English conversation classes and were making attempts to meet any American aviation officials visiting Japan. What they sincerely hoped was, of course, to fly again.17

From this early stage of discussion, a clear line was drawn between permitting commercial flights within Japan and permitting the Japanese to pilot those flights. An English-language newspaper *Nippon Times* reported in September 1949 that Washington was contemplating re-opening Japan’s domestic air service. “But under no circumstances,” *Nippon Times* added quickly, would the American Air Force want to see “any Japanese operating or owning planes.” As to why the Japanese should not be allowed to fly, a lesson from recent history was recalled. “We remember,” a high-ranking official was quoted, “when we allowed the Germans to start glider training after the World War I.”18 If Germans were thought to have proceeded toward the Second World War through gliding, then putting Japanese in control of flying machines would mean a step toward similar rearmament and war. SCAP would not make the same mistake in Japan.

16. Correspondences on this matter are in box 785–12, UD-1168, RG 331, NARA.
Neither official SCAP documents nor media reports show direct indications of Americans’ racialized thinking about Japanese nationals as fliers, but as John Dower discussed in *War without Mercy*, Americans had expressed disparaging, racialized views of the flying capability of the Japanese before and during the war. Various physiological, psychological, and cultural explanations were provided for why the Japanese could not make good fliers. According to the American military writer Fletcher Pratt, “the Japanese as a race” had “a defective sense of balance, the one physical sense in which an aviator is not permitted to be deficient.”

One explanation of this defect was that a Japanese baby’s head tended to swing excessively, as a baby was often strapped to the mother’s back. It was also believed that Japanese pilots were generally myopic and thus unable to maneuver aircraft skillfully. Moreover, the lack of appreciation of “individual life” in the Japanese mind made them “apt to fold their hands across their stomachs and die cheerfully for the glory of the Empire.” As “the Japanese, even more than the Germans, are a people of combination,” they were supposed to be both “poor individualists” and “poor aviators.”

Immediately after the Pearl Harbor attack, therefore, General Douglas MacArthur had a hard time in believing that the attack had been executed by Japanese pilots rather than white mercenaries.

It is against this wartime disbelief and shock that the meaning of grounding all Japanese pilots can be understood. The SCAP’s policy of no aircraft owned or flown by the Japanese was firm and consistent. On June 26, 1950, one day after the Korean War broke out, SCAP finally issued a directive (SCAPIN 2106) that it would permit one airline to be issued a license to operate an internal airline service in Japan. The licensee, SCAPIN 2106 stipulated, should be chosen among those airlines that had been flying into Japan during the occupation. These meant foreign airlines such as Pan American, Northwest, Canadian Pacific, Philippine, CAT, BOAC, and Qantas. Accordingly, SCAP referred to this policy as “non-Japanese civil aviation.”

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23. See, for example, “Revision of SCAP Circular No. 6, International Air Traffic in Japan, 9 March 1949,” 23 June 1950, box 648, UD-1153, RG 331, NARA.
Company and applied for a license. After this proposal did not proceed smoothly, SCAPIN 2106 was revised in January 1951 (SCAPIN 2106/1), so that the license could be issued to a “Japanese controlled juridical person.” This development might have excited the Japanese aviation circle, but it came with a strong conditional clause. A Japanese-controlled company could be allowed only “provided neither the Japanese Government nor Japanese nationals participate in the development, manufacture, assembly, ownership or airborne operation of civil aircraft.”24 This meant that a Japanese-controlled domestic airline company should run air service without owning aircraft and that no Japanese pilot could be allowed to fly for that airline. Its business activity would be limited to what could be done on the ground such as scheduling, marketing, ticketing, customer service, and maintenance, but flight operation would be performed by an international airline with non-Japanese pilots through a contract with this Japanese company.

The Supreme Commander himself summarized this policy clearly. In a meeting with a (U.S.) Civil Aeronautics Administration official held in December 1950, MacArthur offered his “guiding principles” for this internal civil airline project. The first was “No Japanese ‘in the cockpit’ until after the peace treaty is signed.” He considered this airline as necessary not only for “betterment of Japanese economy” but also for the “United Nations military back-up,” and therefore wanted to get it running as early as March 1951.25 But he made it clear that airborne operation of aircraft could not be left to Japanese fliers at all.

MacArthur’s guideline was observed until the end of the occupation. When the question was raised in July 1951 about whether the Japan Domestic Airline Company might use Japanese nationals as co-pilots, the Legal Section in GHQ concluded, “Japanese operation of aircraft in Japan is prohibited, and not contemplated.”26 And when the Japan Domestic Airline Company asked SCAP for a permission to use the U.S. Air Force’s Link Trainer—a ground device to teach basic flight maneuvers and instrument

24. SCAPIN 2106/1, 27 January 1951 (emphasis added). A chronological summary of these events is found in “Brief on Status of Japanese Domestic Air Service” (CTS memorandum), 16 July 1951, box 8768, UD-1810, RG 331, NARA.

25. Dallas B. Sherman (PAA) to Donald Nyrop (CAA), “Domestic Airline for Japan,” 19 December 1950, box 5, entry 22, RG 237 (Records of the Federal Aviation Administration), NARA. The Korean War broke out on June 25, 1950, and the United Nations multinational military forces were deployed to the Korean peninsula to support South Korean troops.

26. Alva C. Carpenter (Chief, Legal Section) to General G. V. Keyser, 24 July 1951, box 8768, UD-1810, RG 331, NARA.
techniques—to train its future Japanese co-pilots and pilots, the request was denied in order to avoid setting an “undesirable precedent.”

In January 1952, only three months before the peace treaty took effect, SCAP finally allowed the use of Link Trainers by Japanese nationals after consulting the State Department. This decision was possible, however, because the State Department understood the Link Trainer quite literally as belonging to “ground activities” just like the training of mechanics and inspectors, which had already been permitted. Probably the State Department did not recognize the fact that the Link Trainer was one of the most widely used pilot training devices in the past war and that its effectiveness and efficiency resulted exactly from not having to be in the air. By contrast, the State Department advised that SCAP keep prohibiting “sport gliding,” since to allow it would mean “the Japanese resumption of any type of airborne operation.”

Although Japanese pilots could now sit in a mock-up cockpit to train themselves, Japan remained a nation of no fliers until the end of Allied Occupation. With these policies, the U.S. exerted absolute spatial control over the skies of Japan and the Pacific.

There is a parallel between the Japanese pilots unable to take off from Japanese ground and the Japanese aeronautical engineers contained within Japan during the occupation. As historian Takashi Nishiyama shows, the sudden ban on aeronautics research and teaching put Japanese aeronautical engineers out of work and made them look for careers in other industries such as automobile design and manufacturing. While this change may have benefited Japan’s postwar economic recovery, much of Japan’s expertise in aeronautical research and development withered. Nishiyama compares the fate of Japanese aeronautical engineers with that of their German counterparts, many of whom, including Wernher von Braun, found new opportunities on the opposite side of the Atlantic, as the U.S. government made conscious efforts to recruit German brains. By contrast, few Japanese engineers were invited to cross the Pacific to continue their careers in aeronautics. Among several reasons for this difference, Nishiyama notes, “the cultural

27. Paul Ruston (Japan Domestic Airline Company) to GHQ/SCAP, “Use of Link Trainers for Japan Domestic Airline Pilots,” 10 August 1951, box 739, UD-1154, RG 331, NARA; Headquarters, Far East Air Forces to SCAP, 2 September 1951, box 739, UD-1154, RG 331, NARA.

backlash against Japanese nationals” made it difficult to generate “flows of information or individuals across the Pacific.” Just as before and during the war, the idea of moving Japanese across the Pacific presented a bigger psychological and cultural distance than that of moving the Germans across the Atlantic, whether they were aeronautical engineers or pilots. And when the Japanese finally made it across the Pacific after the occupation, they were not invited to share their advanced knowledge and skill with Americans, but only to learn from Americans.

LEARNING THE AMERICAN WAY OF FLYING

In principle, Japanese nationals could fly in the air the moment the peace treaty took effect in April 1952. Re-institutionalizing aviation, however, presented many challenges for Japanese authorities and fliers. The terms of the peace treaty stipulated that Japan would apply for membership in the International Civil Aviation Organization (ICAO) within six months after the treaty and would accordingly observe the new international standards set by ICAO. Because ICAO originated from the International Aviation Conference held in Chicago in 1944 and became a specialized agency of the United Nations in 1947, Japan was excluded from this postwar paradigm of international aviation throughout the occupation period. During the last months of the occupation, Japan’s Civil Aeronautics Agency (JCAA) tried to prepare for the upcoming task of joining the international aviation community. In doing so, it had to seek assistance and guidance from the United States.

The most challenging of all tasks was to obtain and train new personnel to take care of all aspects of aviation: aircraft inspection, air traffic control, maintenance, and, of course, piloting. Japan’s Civil Aeronautics Agency was well aware that the ban on aviation during the occupation stripped Japan of its aviation capacity to such an extent that it would not fulfill its mission “unless the training for such personnel is started immediately.” In January 1952, JCAA asked SCAP if it could train twenty aircraft inspectors at the training courses of the Far East Air Force (FEAF) within Japan. SCAP

31. Director, Civil Aeronautics Agency, Ministry of Transportation (Japan) to Chief, Transportation Section, GHQ/SCAP, “Training for Aircraft Inspectors,” 7 January 1952, box 739, UD-1154, RG 331, NARA.
agreed as this would not only contribute to Japan’s aviation development but also work as “an effective means of furthering friendly relations between the Japanese Government and any residual Security Forces.”\(^{32}\)

These efforts for “friendly relations” between the United States and post-occupation Japan played a significant role in reviving Japan’s civil aviation. While aircraft inspectors and other ground crew began to be trained within Japan, it seemed necessary to send pilots to the United States and have them trained there first, until Japan’s own pilot training could start. In the spring of 1952, the Japanese government sent six aviation personnel, who were veteran pilots from the past war and had been grounded for nearly seven years, to the Aeronautical Center in Oklahoma City for training. Two of them, Hidemaro Nagano and Yoshikazu Itonaga, were now affiliated with the newly formed Japan Air Lines. According to the newsletter of the aeronautical school in Tulsa, Oklahoma, where they first trained for commercial rating, “from active participation in aviation . . . during the recent conflict to enrolling in the Spartan School of Aeronautics under the sponsorship of their State Department is a long step to be taken in seven short years.” Recognizing the symbolism of the arrival of former Japanese pilots, the aeronautical school described itself as “A Small United Nations,” to which the Japanese government sent its representatives to “help re-establish the island’s airlines.”\(^{33}\)

The veteran Japanese pilots in Oklahoma learned the American way of flying. Although Japanese aviation officials believed that the “excellent aviation technique and quality before and during the war” would give their own pilots “sufficient qualifications to reach world standards,” they still needed to get approval by the American system.\(^{34}\) After the first group attended courses in Oklahoma, the U.S. CAA proposed that it train fifty-five Japanese per year, who would help “establish, operate and maintain civil aviation in their country.” The CAA expected that some of those Japanese sent to the United States for aviation safety training would have “previous flight experience” from wartime, but it still recommended that

\(^{32}\) Aileen M. Webster (GHQ) to Commanding General, Far East Air Forces, “Training of Employees of the Civil Aeronautics Agency, Ministry of Transportation, Japanese Government,” 11 January 1952, box 739, UD-1154, RG 331, NARA.


\(^{34}\) “Reconstruction Policy for Japan’s Civil Aviation” (Report of Aviation Council to Minister of Transportation), 12 November 1952, attached as an enclosure to “Report of Special Civil Aviation Study (Tokyo, 1952),” box 5, entry 22, RG 237, NARA.
they be given “a refresher course,” so that they could get CAA’s commercial certificate as well as instrument rating and airline transport rating. After the first group of six people returned to Japan, a second group of eleven Japan Air Lines pilots, led by Saburō Ejima, a veteran aviator, went to Oakland, California, in November 1952, to train at the TALOA Academy of Aeronautics run by the Transocean Air Lines, which was also providing pilots and engineers for JAL.

Even before these trainees went to the United States, they had had chances to experience the new American way of flying in Japan. In September 1951, when JAL was established but was not allowed to own or operate aircraft, Hidemaro Nagano sat curiously at the back of the cockpit in a test flight of JAL’s first Martin 202, chartered from Northwest Airlines and flown by an American pilot. As the plane flew from Tokyo to Sapporo through thick clouds within two-and-a-half hours, Nagano realized that things had changed radically from his wartime flying experience. The “technique gap” between American and Japanese pilots was made most conspicuous when the pilot did a GCA (Ground Controlled Approach) landing on Tokyo’s Haneda airport on a rainy night with extremely low visibility. Looking back on this flight ten years later, Nagano said that as a pilot he had not experienced this innovation, noting that “six years’ blank” left all Japanese pilots behind the times. Ejima and his colleague veteran pilots experienced similar surprises as they received training at TALOA academy in Oakland. There were many terms and techniques that he had never heard of before—range beacon, NDB (non-directional beacon), GCA, ATC (air traffic control), and position report. Ejima compared his four-month training in Oakland to a happy occasion in which “fish acquired water,” but the water seemed to have changed since the last time the fish swam in it. To these early groups of Japanese trainees, the American way of flight instruction was characterized by its emphasis on various safety measures during emergencies as well as theory-based instruc-

35. Harold J. Carrick, “Budget Discussion—Japan,” 30 October 1952, box 5, entry 2, RG 237, NARA.
tions. As the Japanese saw it, the American training centered on how to deal with potential failures of various instruments. They compared this American way with the prewar and wartime Japanese way, which, they remembered, focused on getting the plane into the air. The American way of training, moreover, seemed more advanced, systematic, and rational than the rigid military discipline they had practiced in wartime Japan.38

This Japanese perception of the American way of flying persisted as the Japan Air Self-Defense Force, established in 1954, started to receive USAF-style training, often by American instructors. Just like many other ideas, things, and practices in postwar Japan, the American method of flight training for the JASDF pilots was dubbed, by a Japanese aviation magazine, as a “new [flight] operation instruction method.” The magazine’s article on the JASDF’s training outlined the “basic principles” of USAF as a new standard. The first was to teach how to make a safe and accurate flight, and the second was to have pilots acquire “rational operation method” within a short time. What this American-style training purported to produce was “a new pilot.” In the Japanese perception of American flying, a pilot was “a driver” who “operates a machine called an airplane and faithfully abides by the rules with caution and accuracy.” No longer relevant was a definition of the pilot as embodying “mysterious talents unique to Oriental people, the breadth of personal character, or the senses uniquely possessed by an individual.” The Japanese aviation writer suggested that the progress of “modern science,” which presumably included modern aviation, had something to do with making “even an idiot” be able to “operate switches without mistakes.” In the scientific and rational way of American flying, at least as understood by the Japanese in the 1950s, there was no longer room for “legendary” tales of an individual pilot and his “tours de force.” Just as “modern science” tended to “replace human talents and brains with vacuum tubes,” modern flying would make human beings “adapt to disciplines and customs.” To achieve this, the USAF training method was said to “classify, systematize, make patterns of, and scrutinize” all dimensions of flying.39

39. The phrase “new [flight] operation instruction method” is the translation of atarashī sōju kyōiku, which does not include the word for “flying” or “flight.” The word “operation” (sōju) implies the operation of an aircraft. The phrase “rational operation method” is the translation of gōri-teki na sōju, “Jieitai no atarashī sōjukyōiku,” Kokū jobō [aviation information], June 1956, 36–37.
The Japanese aviation magazine article quoted above mentioned “new” pilots and flying, but nothing was said of what had gone before, although it can be inferred that the old way of making pilots was substantively different from the new one. This was a typical postwar negation by the Japanese themselves of prewar and wartime Japanese practices as unscientific and even irrational. This self-critique of the Japanese way of flying, however, may be put into perspective by recalling the wartime thinking of American researchers, most notably Norbert Wiener, who gave Japanese pilots an ontological status of the “calculating enemy,” as distinct from the racialized or anonymous images of the Enemy Other. As historian of science Peter Galison wrote of Wiener’s wartime research, the targets of Allied antiaircraft fire, such as Japanese and German pilots, were considered by Wiener and other researchers as “neither invisible nor irrational” but instead “so merged with machinery that (his) human-nonhuman status was blurred.”

It is ironic, then, that Japanese aviation commentators in the mid-1950s were saying that they had lacked exactly the “rational” way of flying and that they should now become rule-abiding and calculative aircraft operators by foregoing all “mysterious talents unique to Oriental people” and accepting “modern science.”

No less ironic was their labeling of modern, rational understanding of flying as typically “American,” given that wartime Japanese aviation research, especially aviation psychology, had also explored the view of a pilot as a “skilled technician” who carefully operated the machine by the rule. But the pre-1945 Japanese research and practice were rarely referenced in the post-occupation Japanese discussion of aviation. Given the U.S. power over Japan’s politics, everything about flying had to be remodeled after the American norm. The Japanese pilots and aviation commentators did not appreciate the fact that the postwar “rational” practice of pilot training was


41. The wartime Japanese psychologist Mamoru Mochizuki wrote in 1944 about what it meant to be a pilot: “Needless to say, the job of becoming a pilot is chiefly a matter of becoming the skilled technician who, while bound by certain limitations, knows well these limitations, and who can manipulate his machine in spite of them with maximum efficiency. There must be rigid fidelity to the natural laws which govern the machine.” Mamoru Mochizuki, *Kokū shinri* [aviation psychology] (Tokyo: Koyama Shoten, 1944). As of 1947, this book was believed by American psychologists to be “the only book in the world carrying the title ‘Aviation Psychology.’” Frank Geldard (University of Virginia) to Morris Viteles (University of Pennsylvania), 14 October 1947. Records of the Committee on Aviation Psychology, the National Academies Archives, Washington, D.C.
something new even in the American context. Nor did they take into consideration the fact that the now disreputable reliance on “mysterious talents unique to Oriental people, the breadth of personal character, or the senses uniquely possessed by an individual”—if only one substituted “American” for “Oriental”—had been no less prevalent in American aviation. The figure of the modern pilot, which American researchers and practitioners had constructed during the recent war, acquired its distinctive Americanness when it crossed the Pacific to postwar Japan and encountered the Japanese fliers struggling between their own experiences and the new model imposed on them. The Pacific stood as a huge techno-cultural gap, informed by prevalent misperceptions of pilots that lingered in the postwar period on both sides of the ocean.

Among all the new ways of American flying, what felt undeniably American to the Japanese pilots was the fact that they had to speak English while flying.42 Even during the occupation when aviation was still banned, Japanese officials including Nagano prepared for a possible resumption of aviation by attending English conversation courses.43 The English language became a serious problem, as the Japanese started to train both in the United States and in Japan. For Ejima’s group, the four-month stay in Oakland was “entirely a battle against English.” As their training was conducted “in English, from morning to evening,” some of them reached a state of “nervous breakdown.” Ejima was not surprised to see this happen, since everyone was “under such a pressure from English.”44 While flying a DC-3 with one’s own eyes was relatively easy, another trainee remembered, listening to English without seeing was not. Even after they returned to Japan, English was a big hurdle for Japanese pilots. It was thought that this English problem was part of the reason it took more time for Japanese pilots to start working on scheduled commercial flights. Communications in English from air traffic controllers were often hard to understand. It seemed remarkable that Japanese pilots flying in the Japanese sky should use only English, but they had no choice. Finally, Masao Kimura, who was known to be good at English, became the first Japanese co-pilot for DC-4 aircraft in August 1953, almost a year after the first Oklahoma group returned.45

42. Sei, “Kusawake no koro,” 17–19.
The problem of flying in English was not limited to those sent to the United States in the immediate post-occupation period. Japanese pilots who were trained within Japan faced the same language issues. Any Japanese who wanted to fly again or anew had to learn English as the new language of the cockpit. The very first stage of the JASDF pilot training program was four-month long English instruction at the Special English Instruction Unit in Hamamatsu for both novices and those with flying experience. Only after finishing the language course could the cadets be transferred to Ozuki air base for basic ground and air training. When a Japanese aviation magazine reporter asked about “the most difficult aspect” in training, one student enrolled in a P (Primary) course at Ozuki answered, “It’s English.” At the time of the previous war’s end, this student had been enrolled in the Imperial Navy’s preparatory flying course. Then he went to Hōsei University, majoring in economics and graduating there before he joined JASDF. Even this well-educated man felt “squeezed by English,” an experience he had not anticipated. “Using English from morning to evening,” another student interviewed at Ozuki said, “I get nervous breakdown.” While the classroom instruction at Ozuki included subjects on aircraft maneuvering, communication, maintenance, engine, meteorology, and aviation law, this student said he was “spending thirty to forty percent of the brain on English.” Impressed by these answers, the reporter asked, “Is English that important?” The student’s response was more abstract: “Anyhow, we are now making strenuous efforts to catch up with advanced countries. The attitude is that we absorb all things just as they are.”46

The English problem remained a concern even at the top level of JASDF, since it vividly represented the challenges the new JASDF faced in all of its activities. As the JASDF Chief of Staff Sadamu Sanagi told a reporter in 1957, the biggest difficulties in JASDF consisted in overcoming “ten years’ blank” and managing “the relationship with the American forces.” As the “blank” was being filled by “American style” maintenance, training, and so on, differences in “manners and customs” and even in “the way of thinking” became conspicuous. And of course, there was the “language problem.” The chief of staff pointed out that more recent pilots showed better English capability than their predecessors, but he clearly knew that the problem remained unresolved. Speaking of a recent accident, which was in part

46. Kazuo Baba, “Nobiyuku hinomaru no tsubasa, Jieitai no kōkū kichi meguri,” Kōkū jōhō, June 1956, 31–43, quotes on 31–32. A chart of the JASDF training courses is on p. 82 in this issue of Kōkū jōhō.
attributed to miscommunication of flying altitude, Sanagi gave a concrete example of the difficulties in pronouncing numbers in English. “To the ears of a Japanese,” he explained, it was hard to tell “thirteen” from “thirty,” which could lead a pilot or an air traffic controller to mistake 13,000 feet for 30,000 feet. Moreover, reading the number 10,000 as “ten thousand” was strange to the convention of Japanese language, which has separate units for 1,000 and 10,000 (sen and man). All of these linguistic differences could be critical in high-speed flying situations. Not being native to English language became a serious safety issue in flying, putting all Japanese pilots at a disadvantage. As some people saw it, it was perhaps “Japan’s tragedy” that one must speak English “while in the sky of Japan.” But everyone agreed that it was an unavoidable challenge for postwar Japan and its pilots. Only by overcoming it through hard work and practice could Japanese pilots master the new American way of flying and sit next to American pilots in the cockpit.47

AMERICANS IN THE JAPANESE COCKPIT

While the Japanese pilots were trained or re-trained, the flight operations of Japan Air Lines by necessity used foreign pilots, mostly Americans. Starting from October 1951, pilots and planes chartered from the Northwest Airlines flew on JAL’s domestic routes. As the charter contract with the Northwest ended in September 1952, JAL purchased its first DC-4 planes. JAL marked this occasion as the beginning of “independent operation,” but American pilots from the Transocean Air Lines continued to occupy the cockpits. Japanese pilots entered the cockpit only gradually. Following Kimura as the first Japanese DC-4 co-pilot (August 1953), Nagano became the fifth DC-4 co-pilot in December 1953. The honor of becoming the first Japanese captain since the war’s end went to Ejima in October 1954, two years after the beginning of “independent operation” and eight months after the beginning of the first international Tokyo–San Francisco route.48 As late as November 1954, Japan had only 38 pilots with commercial licenses, a small number when compared with 1945 when there were 4,800 commercially licensed pilots. Moreover, most of them were working as co-pilots.49 For Japanese

officials in aviation, this situation was a source of “great regret.” Japan was failing to achieve “independent flight” in the fullest sense of the phrase even after it was allowed to do so and was spending a lot of money on employing foreign pilots. Reporting in November 1952, Japan’s Aviation Council urged the government to take measures “to insure aircraft navigation by Japanese pilots themselves.”

A highly publicized aviation event made conspicuous the absence of certified Japanese captains. On August 23, 1954, Emperor Hirohito of Japan (or, the Shōwa Emperor), accompanied by his wife and the staff for the imperial family, boarded a Japan Air Lines aircraft for a specially scheduled flight from Sapporo to Tokyo. It was the first time in Japanese history that an emperor flew in an airplane. Japan Air Lines carefully orchestrated this historic flight, hoisting the national flag outside the cockpit window, reviewing the route of the imperial motorcade at the Sapporo airport, arranging the order of boarding, cleaning a carpet for the ramp at Tokyo and sending it to Sapporo (while getting a new one for Tokyo), preparing the imperial meal under the watch of an Imperial Household Agency officer, and calculating the time between the emperor’s getting off the plane and getting into his car (two to three minutes). JAL even prepared a special transcript for the in-flight announcements regarding departure, landing, no-smoking signs, and the like. As the aircraft was flying over many regions of Japan, there were brief explanations of those areas in the manner of a tour guide. The aircraft designated for this special flight was the City of Tokyo, a DC-6B plane usually used in international routes. The JAL staff carefully inspected the conditions of the aircraft, cleaning the toilets, installing a new curtain, and installing new seat belts for the emperor and the empress.

JAL’s Japanese staff worked hard for this historic flight, but it was notable that the captain who flew the emperor was an American, Claude Turner. Another American, Sydney Joiner, served as the first officer, while Ejima sat in the cockpit as the second officer. By contrast, all other crew members—flight engineers, navigators, and flight attendants—were Japanese, except for the flight engineer James Henderson. In this high-profile flight for the emperor of Japan, the cockpit was the only place where a Japanese crew member could not play a major role. A few days after the flight, Turner,

50. “Reconstruction Policy for Japan’s Civil Aviation.”
51. The planning documents are in a photo album that was created for this imperial flight and has been kept at the JAL Archive Center in Tokyo.
Ejima, and the chief stewardess Kikuko Sasaki were presented with imperial gifts for their good work.52

In this and many other flights for which American and Japanese pilots worked together, relationships in the cockpit could be socially tense. Throughout the 1950s, there were more than fifty American pilots who came from the TALOA in Oakland, in addition to a smaller number of flight engineers, navigators, and dispatchers. As there were no Japanese pilots qualified to fly the newly introduced American aircraft before and immediately after the peace treaty took effect, the former Japanese pilots now employed at JAL could only stare at the cockpit with an envious eye. While they waited for the day they could fly again, many of them worked as pursers (the chief among the cabin crew) instead, serving the passengers in the cabin.53 Soon more and more Japanese pilots began to fly after training, which was a huge savings for JAL’s budget but threatened the jobs of the Americans who received salary about five times higher than that of the Japanese pilots.

An even more fraught issue, however, was the shared experiences of the past war. Some of the American pilots had bombed Japan or engaged in battles against Japanese pilots during the war. In the country they helped to defeat and occupy, these American pilots now occupied the cockpits, often accompanied by former enemy pilots as compliant co-pilots. Sometimes, the Japanese pilots felt that the American pilots, still living with memories of the war, were intentionally giving them a hard time in their instruction as captains. These juxtapositions could be quietly dramatic. Iyozo Fujita, who had participated in the Pearl Harbor attack and the Battle of Midway and flown the famous Zero aircraft, had an encounter with a former enemy, an American pilot of a B-26 at Midway. W. E. Murray, now working as a captain for JAL, sat next to Fujita as a safety captain to observe Fujita’s performance in the test to qualify as a DC-4 captain.54 An experienced fighter pilot of the

52. Imperial flight planning documents, JAL Archive Center.
Zero was being tested by an American former bomber pilot, both of them now wearing the JAL uniform.

“JAPANESE PILOTS TO FLY PACIFIC”

By October 1955, JAL had replaced all American pilots with Japanese pilots on domestic routes, but it took much longer to do so for international flights. Japan’s re-entry into international aviation was generally welcomed, but there were some lingering reservations and doubts. Given the American influence on postwar Japanese aviation, it is not surprising that the Japan Air Lines’s first international destination was San Francisco. But the symbolism of Japanese planes crossing the Pacific into the United States did not go unnoticed. The permit to operate a route into the United States was presented to JAL in the office of Vice President Nixon in January 1954. Japan’s acting ambassador, Ryūji Takeuchi, told reporters about the significance of this event for the “friendly relations” between the two countries. For the Japanese ambassador, this San Francisco route meant Japan’s “re-entering international aviation after an absence of more than ten years.” The New York Times, though, chose a title that must have resonated more directly with American readers and would have sounded quite different if the year had been 1941: “Japanese Planes to Cross Pacific.” Many of the forty-six American passengers on JAL’s demonstration flight of the new route could see the “blazing red circle, symbol of the Land of the Rising Sun” on the wings and tail of the DC-6B, and recognized that “this was the first time a plane with that insignia had penetrated American territory on a peaceful mission in more than a decade.”

As if to comfort American readers and future passengers, however, these reports about JAL’s first international route also pointed out every American element in it. “Strangely enough,” the New York Times reporter Paul Friedlander noted, the JAL plane was virtually indistinguishable from its American competitors on the same route. Except for “a few typical Japanese decorations and drawings” inside the cabin and “pure Japanese delicacies” in the in-flight meals, the JAL plane was “an American built and furnished airplane.” But the lack of uniquely Japanese features on the JAL’s plane and flight was “no

drawback.” Rather, it was a “comfort on the long, long overwater jumps” to
know that the plane was being taken care of by a maintenance crew from
United Airlines. Above all, the plane with the “blazing red circle” would be
flown by American pilots, co-pilots, and flight engineers who had originally
been with the Transocean Air Lines based in Oakland, California. It was also
noted that even in JAL’s domestic routes a Japanese co-pilot was being
accompanied by an American captain. Friedlander finished his article with
a candid explanation of his preference for American pilots:

There is no chauvinism in the passengers’ interest in having American
pilots at the controls in this part of the world. It merely recognizes that the
Pacific offers few earthy harbors for its airplanes, and that it is hard to
relax in your seat unless you know that the men up front take as serious
and safety-conscious a view of the practical business of flying as do the
passengers who put up $650 for one-way, $1,170 for round-trip passage
between San Francisco and Tokyo.58

Despite all their training in the United States and Japan, this passage implied,
Japanese pilots were not yet considered “serious and safety-conscious” enough
about “the practical business of flying.” Another version of this statement was
given in the form of a question from an American customer to one JAL
employee stationed in Los Angeles: “Are your pilots one-way kamikaze?”59
The Japanese might know how to fly, but doubts remained as to whether
they could be trusted with an American’s life.

The absence of Japanese men in the cockpit during this landmark trans-
Pacific flight was contrasted with the unmistakable presence of Japanese
female attendants in the plane. The New York Times reporter took it as
another comforting fact that these Japanese women spoke English and wore
blue uniforms that looked like those of United Airlines. Rather than weak-
ening these women’s association with Japan, however, it must have had the
effect of confirming the American passengers’ assumptions about Japanese
women’s hospitality.60 As noted by the American embassy in 1957, American
passengers and observers gave a very warm reception to Japanese stewardesses,
who were regarded to be “naturally good” in service and therefore “an asset of

58. Ibid.
also quoted in Nihon Kōkū Kabushiki Kaisha Chōsaisetsu, Nihon Kōkū 20-nenshi [20 years’ history
60. Friedlander, “By Air to Tokyo.”
great value to JAL. Inside the JAL airplane, then, one could observe two related cultural markings simultaneously: the strengthening of the images held by Western men (and women) of Japanese women as docile and subservient and the denial of Japanese men’s ability and reliability to occupy the cockpit. The so-called Madame Butterfly myth was updated while the masculinity of pilots continued to be suppressed. Together with “a few typical Japanese decorations and drawings” and “pure Japanese delicacies,” the female attendants stood for Japanese culture (to Western eyes), offsetting the lingering memories of irrational kamikaze men. The power dynamics in the airplane reflected a broader shift in American cultural perception, in which Americans began to associate the Japanese with soft and sophisticated femininity instead of harsh and hostile masculinity.

It took a little more than two years from JAL’s inauguration of international flights in February 1954 to the first Japanese pilot taking control of the cockpit for that route. On April 16, 1956, the 42-year-old Ejima, who had had the honor of becoming the first Japanese captain at JAL in October 1954, took control in a Tokyo-San Francisco flight. The American embassy in Tokyo reported this news to Washington with the title “Japanese Pilots to Fly Pacific.” Whereas the New York Times had written about “Japanese Planes to Cross Pacific” back in 1954, this time the emphasis was on “Japanese pilots,” newly in charge of the international route. Captain Ejima, however, would hand over control at Wake Island “until he becomes familiar with trans-Pacific flying,” the embassy report added. This shift in flight crew was expected to occur gradually, probably in the course of three or four years, since there would need to be nineteen pairs of Japanese captains and co-pilots in addition to the Japanese navigators and flight engineers who had already been working this route since the spring of 1955. As the American embassy

61. American Embassy, Tokyo, to the Department of State, “Civil Aviation in Japan,” 10 July 1957, box 5401, Central Decimal File 1955–1959, RG 59 (General Records of the Department of State), NARA.
63. Social anthropologist Sheila Johnson wrote of the occupation period: “rather than concentrating on Japanese men, American attention was suddenly focused on the charms of Japanese women, and the martial arts of the nation were played down in favor of such arts as ceramics, painting, architecture, and flower-arranging. Growing American appreciation of these aspects of Japanese culture proved to be an important bridge between the two countries, as well as being of great importance to Japan’s economy in the immediate postwar years.” Johnson, Japanese through American Eyes, 91.
64. Klemmer to the Department of State, “Japanese Pilots to Fly Pacific.”
observed a year later, JAL was taking “extreme caution” in replacing American pilots with the Japanese. In addition to giving Japanese pilots “maximum training,” the embassy noted, this slow process was intended to “minimize the risk of losing American passengers—some of whom, for one reason or another, prefer to fly with American pilots.”65 In contrast to the female flight attendants, male Japanese fliers were the last group among all aviation personnel to be accepted by Americans.

Eventually, it took another year or so from Ejima’s first flight to Wake Island to the first all-Japanese crew flight across the Pacific. Ejima and another Japanese pilot underwent a “checking out” process with American colleagues in order to extend their control in the cockpit as far as Honolulu and San Francisco. While this first flight all the way to San Francisco by a Japanese captain was expected to be “a milestone in Pacific and Japanese civil aviation,” the Pacific Stars and Stripes did not forget to mention that twenty-eight American pilots would continue to fly in this route “for a long time.” Although the newspaper stated that JAL had been “training and retraining Japanese pilots” and carefully testing them from domestic lines to the Western Pacific segments, the ultimate question remained the same: would American passengers feel comfortable flying with a Japanese captain and a Japanese co-pilot at the control? Are they as reliable as American pilots? Given the fact that nearly all foreign passengers on JAL’s international routes were Americans, this question was a vital matter that was relevant not only to Americans’ historical memory but also to JAL’s corporate interest. Turner, the American chief pilot at JAL who had flown for Hirohito in 1954, offered an optimistic but nuanced prospect: “I think in a matter of time the American flying public will accept Japanese captains the same way they have accepted the pilots of KLM (Dutch), Swissair, and Scandinavian airlines.”66 Passing exams and obtaining certificates were not sufficient for the Japanese to be trusted as pilots in the Western-dominated world of fliers. The burden of history and racial stigma made it slower and harder for Japanese pilots to cross the Pacific, both physically and psychologically.

**JAPANESE BODIES IN AMERICAN COCKPITS**

By the late 1950s, an increasing number of Japanese pilots replaced their American colleagues in the cockpits of JAL planes, and the JASDF pilots

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65. American Embassy to the Department of State, “Civil Aviation in Japan.”
were also working hard to set up their own system of flight training. From political, economic, and cultural perspectives, Japanese fliers were gaining recognition, legitimacy, and confidence as new participants in the postwar international system of aviation. In other words, they proved that they could fly just like Americans did. A close look at the cockpit occupied by the Japanese pilots, however, reveals a more mundane kind of scrutiny that they had to go through; their bodies were measured and compared against those of American pilots. The difference in American and Japanese body dimensions was first recorded and discussed by Japanese aviation medicine researchers at JASDF, but soon became a mutual concern of American and Japanese aviation circles, calling for coordinated interventions for the maximum accommodation of Japanese bodies.

About the same time that Saburō Ejima became the first Japanese captain to take control in a JAL flight from Tokyo to San Francisco, four Japanese researchers went to the United States for training in aviation medicine. Masamitsu Ōshima, a forty-one-year-old medical doctor and physiologist, and three other Japanese were sent in April 1956 by JASDF to the Randolph Air Force Base in San Antonio, Texas, to study at its School of Aviation Medicine. A graduate of Tokyo Imperial University Medical School, Ōshima served in the Japanese Navy’s aviation medicine unit during the war. After the war ended and all aviation research was banned, Ōshima worked at the Labor Research Institute for a decade. As the establishment of JASDF required the resumption of aviation medicine research in Japan, Ōshima was called in once again to rebuild the discipline and start a JASDF unit in that field. As indicated by the fact that Ōshima’s trip to the United States for training was four years later than the initial Oklahoma trip by Japanese pilots, the “blank” period was even longer in aviation medicine than it was in flying itself.67

At the Randolph School, Ōshima’s group enrolled in a three-month basic course in aviation medicine. Just like other Japanese sent to the United States for training, Ōshima had difficulty studying in English, but nevertheless worked hard, eating only two meals a day. There Ōshima attended a lecture by Hubertus Strughold, a well-known German researcher in aviation and space medicine, who came to the United States after the war and whose book Ōshima had read passionately a long time ago. After graduating from the course as the oldest member of his class, Ōshima stayed two more

weeks at Strughold’s laboratory, trying to absorb the frontier research of the field as well as making personal connections. After leaving San Antonio, Ōshima toured other aviation medicine research facilities in the United States, spending a month at Holloman Air Force Base in New Mexico and then another month at Wright-Patterson Air Force Base in Ohio. His overall impression from a six-month stay in the United States was that American aviation medicine was, like American flight instruction, “systematic” and the researchers were “creative.” After returning to Japan, Ōshima organized the Temporary Aero Medical Experimental Group in November 1957, which dropped the “temporary” from its title a year later, and he became its first director.68

The main subjects of research of this new Aero Medical Experimental Group, later renamed as the Aero Medical Laboratory, were of course the Japanese pilots at JASDF. But in many cases, what the Laboratory had to study was specifically the Japanese pilots in American cockpits. Japan’s wartime capacity of aircraft production had been decimated during the occupation, and aeronautical engineers who had worked on the Zero and other military aircraft during the war migrated at the war’s end to more peaceful engineering projects such as the railroad.69 Japan Air Self-Defense Force, established with guidance and help from the U.S. Air Force, had to rely on American aircraft during its early years. It was imperative, therefore, to check how Japanese men sat and performed in American machines. As the Aero Medical Laboratory researchers started to examine the JASDF pilots, one of their first findings was that Japanese bodies seemed relatively small for the American cockpit.70

In postwar Japan, the airplane cockpit was not the first space where the smallness of the Japanese body was recognized in comparison with an American one. A much more striking and public incidence of such revelation had

68. It is notable that a former German researcher could be respectfully brought to the United States to teach and research aviation and space medicine, while a former Japanese researcher was only able to try to start from scratch after a long research ban. Ibid., 103–19; Kōkū Igaku Jikkentai, Kōkū Igaku Jikkentai ichinen no ayumi [One year’s progress of the Aero Medical Experimental Group] (Tokyo: Kōkū Igaku Jikkentai, 1958), 1–2.
69. Nishiyama, Engineering War and Peace in Modern Japan.
70. There are some subjective elements in evaluations of the relative sizes of cockpits, and it is difficult to say that one cockpit is definitely smaller than the other. A U.S. AAF Information Intelligence Summary (No. 59, 4 September 1942) had the following observation on the cockpit of the Mitsubishi A6M, the famous Japanese Zero: “Although perhaps somewhat smaller than average, the cockpit provides ample room for a pilot of normal size,” quoted in Donald Nijboer, Cockpit: An Illustrated History of World War II Aircraft Interiors (Erin, Ontario: Boston Mills Press, 2006), 126.
already happened in Douglas MacArthur’s Tokyo residence in September 1945. In the historic photograph of General MacArthur and Emperor Hirohito standing side-by-side, the Japanese people first witnessed the declining political stature of their emperor, who traveled the streets of Tokyo to visit the residential quarters of the head of the occupying forces.\textsuperscript{71} What was also unmistakable was the difference in physical stature. As the emperor stood straight and the general put his hands on the hips, Hirohito was only as high as MacArthur’s ears. In the wake of a lost war, Japan as a nation was overwhelmed by the political and military power of the United States, and the Japanese as individuals were beginning to meet Americans who were taller and bigger. As Dower showed in his analysis of cartoon representations of the U.S.-Japan relationship during and after the war, the smaller stature of the Japanese was regarded by many Americans as “an apt physical representation of broader racial and cultural inferiority, backwardness, immaturity, and irrelevance.”\textsuperscript{72} Historian Naoko Shibusawa also wrote that, whereas the Americans viewed the Germans as “a mature race” with both culture and physical stature comparable to their own, the smaller height of the Japanese contributed to the American perception of “Japanese immaturity.”\textsuperscript{73}

Thus, in 1957, twelve years after the Hirohito-MacArthur photo, the physical difference between the American and the Japanese was not news.\textsuperscript{74} In the JASDF body measurements, however, the difference was not discussed mainly for its political or cultural implications, but instead understood in technical terms related to machine operation. The smallness of Japanese pilots was now being registered in terms of its fit or misfit with a machine, which was designed and made in America and brought to Japan to accommodate the Japanese body. Instead of presenting an image of difference in stature, as in the Hirohito-MacArthur photo, exact measurement and

\textsuperscript{71} Dower, \textit{Embracing Defeat}, 292–95.
\textsuperscript{73} Shibusawa, \textit{America’s Geisha Ally}, 92.
\textsuperscript{74} It should be noted that the height gap has not remained at a fixed number. The average height of the Japanese population has increased noticeably since wartime, while the American average height has changed little. These two contrasting trends are cited as examples of the influence of nutritional and other socio-economic conditions on the population’s average stature. See Phyllis Eveleth and James Tanner, \textit{Worldwide Variation in Human Growth}, 2nd ed. (Cambridge: Cambridge University Press, 1990); John Komlos and Marieluise Baur, “From the Tallest to (One of) the Fattest: The Enigmatic Fate of the American Population in the 20th Century,” \textit{Economics and Human Biology} 2 (2004): 57–74.
recording of the difference between airplane design and Japanese bodies was necessary for the JASDF aircraft operation. The body of the JASDF pilot shed many of its previous cultural markers as a masculine and racialized flier and was instead subjected to numerical and functional analysis.

The Aero Medical Experimental Group conducted physical examinations of flying cadets and flying officer candidates from December 1957 to July 1958. The subjects consisted of 71 officer candidates and 184 flying cadets, whose ages spanned twenty-two to twenty-six and eighteen to twenty-two, respectively. The physical examination measured thirteen items of each examinee: height, weight, chest circumference, vital capacity, respiratory standstill, grasping power, pulse rate, distant vision acuity, near vision acuity, point of convergence, accommodative power, blood pressure, and hearing acuity. In their analysis of the data, the researchers reported, “the most remarkable point of the results was found in the body size.” What they meant by “the body size” was in fact the difference in body size between the American and the Japanese. When the bodies were measured for the airplane cockpit, the numerical data of the Japanese would be most meaningful when compared with American ones. The Japanese body size data became that of difference, always measured against the American body.75

How different were they? The existing data of the general population had already shown a remarkable height difference between the Japanese and the Americans, but the data related to physical standards for fliers revealed more specific differences.76 The Japanese height range accepted for flying duty was between 158 and 193 centimeters, while the American Air Force accepted those between 163 and 193 centimeters. JASDF had a lower bottom limit than the American one by about 5 centimeters, which seemed necessary given that an average Japanese male could barely reach the lower end of the American standard. Indeed, the data of the total 255 flying cadets and candidates showed that more than 30 percent of them were shorter than 163 centimeters. Had they been Americans, these people could not even have entered flight training. Even those who met the minimum height requirement also tended to gravitate toward the lower limit. Almost half of them (119 subjects) fell between 163 and 169 centimeters, and only one subject was taller than 182 centimeters. The height gap between MacArthur

76. Kōkū Igaku Jikkentai, “Result of Physical Examination.”
and Hirohito, which had carried such symbolic significance, could also be seen here in the gap between an average Japanese pilot and an American pilot in 1957. Its significance would be less public but could arguably have higher stakes.

REGISTERING AND MANAGING THE DIFFERENCES

By 1961, it was well understood that the Japanese bodily constitution was different enough to deserve official recognition by the U.S. Air Force. The occasion that helped initiate a larger-scale, more systematic measuring project was the Joint JASDF–USAF–MAAG–Japan Pressure Suit Conference in Tokyo in March 1961. The CSU-4/P Partial Pressure Assembly had been developed by the U.S. Air Force Systems Command, and JASDF planned to introduce it to be used by their pilots with Lockheed F-104J aircraft. At this point, the difference in body size between the Japanese and Americans came into focus again.77 The U.S. eight-size Height–Weight Program used for the flying garment design was based on the 1950 anthropometric data of USAF flying personnel. During the Tokyo conference, several measurements of Japanese male bodies showed that the dimensions were “sufficiently different from those of USAF personnel to effectively preclude the use of the UASF sizing system for JASDF personnel.” A different system of sizing would be necessary “to properly fit the JASDF pilots” with the American flying garment.78

An American participant in the conference, Milton Alexander of the Anthropometry Section of the Wright Air Development Center, proposed an anthropometrical survey of a large group of Japanese pilots “to clarify the physical difference” and “to obtain necessary information for the design of Japanese-sized pressure suit.”79 JASDF agreed to this proposal and Alexander


gave a group of Japanese flight surgeons from several air bases a quick training in anthropometric techniques used by USAF. The flight surgeons went out to five air bases and measured 62 body dimensions for 239 Japanese pilots, about 20 percent of the JASDF fliers, during an eight-week period “under severe time limitations and trying circumstances.” The data thus collected were sent to the USAF Aerospace Medical Laboratory in Ohio, which contracted with Antioch College for statistical analysis of the data.80

The survey produced sixty-two tables of body dimensions, each consisting of parallel columns of JASDF and USAF data. Although the sample size was quite different between the two populations (239 JASDF pilots in 1961 and approximately 4,000 USAF flying personnel in 1950), the data confirmed the findings of earlier physical examinations of JASDF. The average heights were 166.89 centimeters and 175.54 centimeters, respectively, while the average weights were 61.12 kilograms and 74.30 kilograms. More interesting results were found in sitting height and crotch height. Sitting heights differed by only 0.5 centimeters (90.78 vs. 91.28), whereas there was an almost 9-centimeter difference in crotch height (74.53 vs. 83.40).81 While the initial Japanese report of the survey presented only the dry data without further comments from Japanese researchers, the results were remarkable for the American analysts in Ohio who wrote a subsequent report for the sizing scheme: “The 50th percentile Crotch Height value for the Japanese pilots was found to be comparable to the 1st percentile value of the USAF sample.”82

Now it was officially recognized by both parties that the Japanese pilots were not only “lighter and smaller” but also equipped with differently proportioned trunks and legs. This had serious implications for the USAF personnel charged with developing sizing systems for different flying populations. The Japanese body proportion, not the raw values of height or weight, would make the garment based on American dimensions uncomfortable for the Japanese pilot. “The USAF garments would in all likelihood,” a 1964 report on garment sizing pointed out, “be extremely short and tight in the trunk with excessive length in the appendages, particularly the legs.” There would have to be a modified sizing method “based upon Japanese body sizes.”83

83. Ibid, 3–6.
As long as American aircraft were used in Japan, it became almost a necessity to compare the Japanese pilot’s body with the American one, whether the measurement was done on military or civilian pilots and by American or Japanese researchers. The same pattern repeated in a 1967 study by researchers at the Tokyo Medical College. The Japan Air Lines commissioned the study “with the purpose of making aircraft with cockpit seats that suit the Japanese.” The motivation was that the dimensions and arrangements of cockpit seats and controls did not match the Japanese body properly, causing “inconvenience” to pilots’ operation. The subjects were 51 Japan Air Lines pilots and the American data for comparison were drawn from the 1955 paper “Physique and Success in Military Flying” by American physical anthropologist Albert Damon. The two sets of data were displayed side by side in a summary table, confirming the findings of earlier studies. Among the nineteen body dimensions, the measured values from the Japanese were smaller than the Americans in all but three. The Japanese had larger eye height when sitting, elbow-to-elbow breadth, and head breadth by 1 centimeter, 2.3 centimeters, and 2.7 millimeters, respectively. As confirmed many times before, the Japanese were shorter by 11 centimeters, but the Japanese sitting height was smaller by only 3.5 centimeters. If the differences in body size were taken into account, the article concluded, the seat height and depth as well as the distance to the pedals for the Japanese would have to be smaller than the American standard.84

These differences would have not mattered much if the United States had not been exerting such an influence on postwar Japanese aviation. There also would not have been a need to make a comparison table with the American data every time. This particular form of comparative anthropometrical work was both a product and a part of the postwar and post-occupation relationship between the United States and Japan. The causes of such differences were not the concern of those studies in aviation medicine—in neither of these anthropometrical surveys of Japanese pilots was there any discussion of whether the differences in body dimensions were due to the genes in the Japanese race, malnutrition during and after the war, or something else. Still, the difference seemed significant to the researchers. The Japanese body constitution could not be left as a disqualifying factor for Japanese pilots.

The comparison was made to accommodate the differences between populations, so that the JASDF pilots would be fully functional and operational in their cooperative mission with USAF. The United States needed the Japanese pilots to fly as members of its Cold War allies. The constitutional differences and consequent awkward postures in the cockpit had to be rectified by deliberate design measures, whether they were garments, flight controls, or cockpit seats. For both parties, the Japanese and the Americans were unmistakably different groups, but for practical postwar purposes, the differences were deemed manageable.

CONCLUSION

As historian Jenifer Van Vleck showed in her study of the relationship between aviation and geopolitical imagination in the “American century,” aviation offers a unique perspective that considers “technology as central to the history of international relations in the twentieth century” and embeds seemingly technical issues within political and cultural environments. In following the intertwined movements of airplanes, languages, and bodies across the Pacific, both aviation history and the broader history of science and technology become much more relevant to the history of international relations in the Pacific, and vice versa. In postwar Japanese aviation, entry into the cockpit and the flight across the Pacific were closely associated with issues of historical memories, gender and racial perceptions, and postwar American hegemony.

During the two decades after the war’s end, people, planes, language, knowledge, and techniques crossed the Pacific both ways. American pilots came to the nation of no fliers and flew in support of the occupation forces and then for a Japanese airline. For the Japanese former pilots as well as aviation authorities, these Americans embodied, literally and figuratively, the American way of flying—technically advanced, systematic, rational, rule abiding, and English speaking. At the same time, veteran Japanese pilots went to the United States to be refreshed and re-trained into a Japanese version of the American pilot. After they returned to Japan, many other Japanese fliers were trained on the same American model. Even the scholars who wanted to study Japanese pilots had to travel to the United States to learn how to do so. Concurrent with this human traffic of pilots and researchers, the American

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and Japanese data of pilots’ bodies moved across the Pacific as well. The anthropometric data of American pilots came to Japan as a norm against which the Japanese compared their own bodies. As soon as the Japanese data were aggregated using the American techniques of measurement, they were transported back to the United States to become an entry in the Aerospace Medical Research Laboratory’s “Anthropometric Data Bank.”

This trans-Pacific history of flying and fliers well illustrates American perceptions and anxieties about post-surrender and post-occupation Japan as well as Japanese struggles and strategies to prove themselves to Americans. From the occupation period to the 1960s, American policies and attitudes toward Japanese pilots changed from outright prohibition to qualified acceptance to active accommodation and management of difference. Simply lifting the ban on paper did not put the fliers of “a sovereign Japan back into the air” all at once. Every effort had to be taken to train and re-train aviation personnel, especially pilots, by the standards and procedures of American aviation. Even with American training and certificates, however, the question of whether and how the Japanese should be allowed to sit in the cockpit again could not be neatly resolved. The Japanese had to prove that they were not just technically capable but also trustworthy and conforming in the cockpit.

As a prewar and wartime nation of fliers turned into a postwar nation of no fliers and then returned as a nation of new fliers, aviation was not merely a means of transportation. Like any other mobility technology, an airplane never moves by itself; physical movement is always enabled by human operation and institutional arrangement and imbued with political and cultural meanings. The airplane, however, is a distinctive kind of spatial technology; its movement of things and people is more geographically nimble, crossing a vast distance of land and ocean, in a way unmatched by other mobility systems. This distinctiveness has invoked new imaginations of space and made it inseparable from politics and culture.

Mediating the postwar U.S.-Japan relationship, the airplane as an iconic spatial technology participated in defining the space between them—the Pacific—not only as a huge mass of water but as a space of difference in technique, body, race, and gender. The overwhelmingly white, male American


87. American Embassy to the Department of State, “Civil Aviation in Japan.”
pilots in Japanese cockpits with female Japanese attendants working in the cabin symbolized the U.S. hegemony that spanned across the Pacific and beyond. The cockpit flying over the Pacific was a medium in which contested meanings of Japanese and U.S. cultures came into contact and negotiation. These relations were inseparable from how Japan became, once again, a trans-Pacific nation through new engagements with the U.S.-dominated postwar order. In this process, the cockpit and the Pacific served as a crucial frame of reference for the Japanese as well as the Americans.

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