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Review/Reseña

Dan Hagedorn, *Conquistadors of the Sky: A History of Aviation in Latin America*. Washington, D.C.: Smithsonian National Air and Space Museum; Gainesville, Fla.: University Press of Florida, 2008.

New Flight Paths toward Research on the “Periphery”

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Dan Hagedorn’s nearly 600-page history expands the traditional sphere of aviation development from the North Atlantic to the vast region below the Rio Grande. No work in English or Spanish has attempted such a comprehensive and ambitious treatment of commercial and military aviation in Latin America. The former adjunct curator for Latin American aviation at the National Air and Space Museum in Washington, D.C. lamented that the objects, photographs, and textual narrative at the aviation mecca left visitors with the impression that the “United States, Western Europe, and, to a lesser extent, the former Communist bloc and Japan,” largely monopolized aviation development. Arguing that Latin

American aviation “almost precisely paralleled” the development of flight throughout the rest of the world, Hagedorn chronicles the region’s contemporaneous participation in this transnational phenomenon with a military historian’s obsession with detail: Aircraft, engines, manufacturers, technical specifications, and aviation “firsts” bombard the reader throughout (xi-xii). Yet this exhaustive, scrupulously researched, and richly illustrated book is far more than an historiographic gap-filler for enthusiasts. The encyclopedic *Conquistadors of the Sky* not only is an essential starting point for any Latin American aviation study, it is an entry point into future scholarship on the spatial and temporal diffusion of technological modernity, cultural and economic imperialism on the “periphery,” and particularly the messy entanglement of United States-Latin American relations on multiple fronts.

Hagedorn’s emphasis on aircraft and military applications at times indulges more traditional aviation history. Although he punctures the myth of a modern time lag between peripheral nations and their more industrialized brethren, Hagedorn’s acceptance of the inevitability of aviation propagation reinforces the notion of a singular modernity that began in the West before spreading to far-flung regions. Nonetheless, Hagedorn’s authority on Latin American aviation is unquestioned. The senior curator at Seattle’s Museum of Flight has authored or co-authored *Alae Supra Canalem (Wings over the Canal): The Sixth Air Force and the Antilles Air Command* (1995); *Central American and Caribbean Air Forces* (1993); *Republic P-47 Thunderbolt, the Final Chapter: Latin American Air Forces Service* (1991); and *North American F-51 Mustangs in Latin American Air Force Service* (1985)—all highly technical accounts that appealed to aviation enthusiasts. Although *Conquistadors of the Sky* addresses important figures such as Alberto Santos-Dumont, Hagedorn appears most comfortable discussing aerial artifacts and their military usage, as seen, for example, in a twenty-page exploration of aviation’s role in combating German U-boats in the Caribbean during World War II.

However, Hagedorn’s understanding of important Latin American conferences and international agreements enables him to situate aviation within a broader historical narrative. He argues that the First Pan

American Financial Conference in May 1915 in Washington, D.C., represented a shift in regional economic dependence from Europe to the United States, whose aviation interests eventually dominated in the region into the early post-World War II period (94).

Hagedorn’s work largely proceeds chronologically by country and covers the expanse from Mexico to Brazil with short layovers in Haiti. A brief exploration of pre-Colombian flight myths and eighteenth- and nineteenth-century ballooning attest to Hagedorn’s thoroughness, but a lengthy overview of Santos-Dumont’s contribution to early flight launches his discussion of the modern era. Santos-Dumont, born in 1873 on a coffee plantation in the Brazilian state of Minas Gerais, studied physics, mechanics, electricity, and chemistry in France, where he began piloting dirigibles as early as 1898. Brazilians still regard Santos-Dumont as the “Father of Aviation,” even though his much-acclaimed 197-foot flight in a fixed-wing aircraft on Oct. 23, 1906, came nearly three years after the Wright brothers first went airborne in North Carolina. Hagedorn does not attempt a social or cultural history of Santos-Dumont’s life and work. With a nod to the thirty or so books on the Brazilian’s life, Hagedorn moves beyond the debate over whether Santos-Dumont was the first to pilot a heavier-than-air machine. Instead, the author traces the evolution of the twenty or so Santos-Dumont aircraft designs ranging from airships to more conventional fixed-wing aircraft.

Hagedorn argues that Santos-Dumont and other Europeans were aware, if only vaguely, of the Wrights’ somewhat clandestine 1903 experiments and that “for much of the world in the early 1900s, [Santos-Dumont] was accepted as having been first to achieve heavier-than-air, controlled flight in an aircraft which launched under its own power.” Hagedorn cites Santos-Dumont’s innovative use of high power-to-weight engines as one of his principal contributions. Latin American excitement over Santos-Dumont’s exploits in part accounted for the regional thirst for French airplanes and aviation knowledge in the first decade of flight (17-30).

Even in the early 1908-1914 stage, the arrival of European aircraft and parts, the presence of foreign pilots, and the return of native sons with

European and North American brevets underscored the transnational—and transplanted—nature of Latin American aviation. When the Great War stalled the endeavor, regional aviation visionaries “recognized their dependence on the industrialized nations for aeronautical leadership” (94). This entwinement with Europe and North America evokes an older paradigm in Latin American scholarship. In the 1960s and 1970s, *dependentistas* blamed regional underdevelopment on Latin America’s unfavorable integration into a “world system,” which placed industrialized nations at the core and banished the rest to hierarchically lower spheres on the periphery. Theorists maintained that incoming technology and capital from the European and North American center and outflowing raw materials and cheap labor suspended developing countries in a constant state of backwardness.¹ With varying degrees of success, Hagedorn attempts to avoid the dependency trap by demonstrating that Latin American nations were not, in the words of scholars Michael Geyer and Charles Bright, passive “lackeys and dupes” on the world historical stage but rather enthusiastic and self-determining historical actors.² Although wartime shortages affected the availability of airplanes, pilots, and training, Hagedorn suggests that Latin Americans not only set the terms for their engagement with aviation but also demonstrated remarkable resourcefulness that led to innovative indigenous solutions.

This approach simultaneously disrupts Eurocentric history and reinforces it. Exploring what else was going on in the world at important moments in Western civilization de-centers the Western historical narrative while presenting its own perils. Although this strategy demonstrates the importance of local context to a “universal” technological phenomenon, Timothy Mitchell and other postcolonial theorists have shown that the search for alternative modernities suggests an endless play

¹ Among many others, see Francis Fukuyama, *The End of History and the Last Man* (New York: Free Press, 2006), 100.

² Michael Geyer and Charles Bright, “World History in a Global Age,” in *The Global History Reader*, ed. Bruce Mazlish and Akira Iriye (New York: Routledge, 2005), 22.

on a Western original and does not help us unpack why Eurocentric modernity has served as a powerful organizing force on the ground.³

Hagedorn clearly demonstrates that Latin America was no latecomer to this powerful symbol of Western advancement and superiority. Though he is not the first to explore aviation’s role in the Mexican Revolution, his account suggests a unique appropriation of military flight beyond the North Atlantic before the Great War. On Nov. 30, 1911, Mexican President Francisco I. Madero became the first sitting head of state of any country to fly when he went up with a French aviator in a two-place monoplane. The president was so impressed with the Moisant International Flyers that he ordered five Moisant copies of the Blériot monoplane, the first government purchase of standard aircraft (70-71). Hagedorn’s discussion focuses on efforts by various civil war factions to employ aviation as a military arm. European, North American, and Mexican pilots flew reconnaissance missions, dropped leaflets, and released innovative bombs—dynamite, hand grenades, and small-caliber artillery shells placed in water pipes (104-105). Flying for Venustiano Carranza forces in May 1913, French aviator Didier Masson and a bombardier carried out the first aerial attack on warships in combat when they dropped dynamite bombs, although federal ships apparently escaped damage (76). Pancho Villa’s fleet of aircraft and aviators included several North American adventurers (110). In what Hagedorn calls possibly the first aerial combat in Latin American history, two U.S. pilots—one flying for the *constitucionalista* side, the other for the Villa forces—emerged unscathed after exchanging mid-air pistol shots. If aviation was not a decisive factor in the revolution, it did “bring an awareness of the potential of the science to Mexicans of all walks of life and exposed much of the populated regions of the nation to the phenomenon much earlier than elsewhere in Latin America” (112-113).

Although substantial scholarship has examined North American intervention in Latin America dating to the 1823 Monroe Doctrine, which targeted European colonization in the Americas, aviation offers a unique

³ See Timothy Mitchell, “Introduction,” in *Questions of Modernity*, ed. Mitchell (Minneapolis: University of Minnesota Press, 2000).

window into U.S. commercial, military, and political influence after the Great War. Initially the United States ceded a large part of the regional aviation market to Europeans, the efforts of Curtiss Aeroplane and Motor Corporation representative C.W. Webster notwithstanding (131-132).⁴ Between the end of World War I and 1927, the number of French, British, German, Italian, Dutch, Swiss, and Swedish aircraft outnumbered U.S. airplanes (311).⁵ The promiscuous blending of nationalities, manufacturers, and training methods betrayed the haphazard progression of a project for which there was no blueprint in either hemisphere and created logistical and organizational challenges. For example, in the 1930s, Peru's Cuerpo Aeronáutico purchased aircraft from different countries to guard against overreliance on one source, but diversification forced Peru to attempt to field and service British, U.S., French, and Italian aircraft (503).

The United States' seeming passivity in the region did not last. Concerns that the U.S. might permanently lose out on a potentially lucrative market, and unease over foreign aircraft within striking distance of the Panama Canal, ignited a more aggressive policy and commercial strategy. With the threat of fascism in the 1930s, North American fears grew along with German and Italian commercial and military influence in the region. The military and naval missions that fanned out to nearly every Latin American nation served as an essential vehicle for U.S. intervention. Although they ostensibly aimed to train the air forces of the host countries, missions also sought to standardize military aircraft and equipment –in favor of U.S. manufacturers– and to discourage non-Western Hemispheric meddling (312-313). By 1940, the U.S.-backed Escuadrilla Interamericana, a fraternal organization formed to bring private aviators together, set a goal of funding 500 scholarships so Latin American pilots, engineers, and mechanics could train in the United States. Its geopolitical importance was unmistakable: The Escuadrilla “was visualized as a means of furthering

⁴ Webster covered nearly all of South America for twenty years beginning in 1919. Hagedorn writes: “Through his efforts, Curtiss products saw service in every mainland South American nation between 1919 and 1940, a record that few other manufacturers can match” (131-132).

⁵ Wesley Phillips Newton, *The Perilous Sky: U.S. Aviation Diplomacy and Latin America, 1919-1931* (Coral Gables, Fla.: University of Miami Press, 1978), 21-25.

U.S. efforts at neutralizing Axis influence while, at the same time, promoting U.S. aviation equipment, training, and philosophy” (300).

The change in Washington’s stance on Latin American aviation foreshadowed a more formal foreign-policy doctrine that remains influential today. Historian Greg Grandin has argued that Latin America was not just a staging ground for North American power but indeed the training program in which foreign policy wonks learned to spread power through non-military means.⁶ More broadly, international relations professor Andrew J. Bacevich has traced the genealogy of twenty-first-century U.S. wars to decades of foreign-policy paranoia if not outright delusion, a chronic sense of apocalyptic doom, and ginned-up fears of always falling behind.⁷

So was U.S. obsession with German and Italian encroachment in Latin America warranted? Although Hagedorn concedes that the possibility of an air attack by nations bordering the Panama Canal Zone seems “absurd” today, he argues that the fears they aroused in the United States were real at the time (344). A 1941 letter from General George C. Marshall, the U.S. Army Chief of Staff, captured the tenor of the era:

We all agree that German controlled airlines in South America provide Germany with the means for spreading Nazi propaganda, for communication with German agents and sympathizers in South America, and for familiarizing German military personnel with South American terrain. They also provide bases which would be of great strategic value to an invader. Consequently, these airlines constitute a definite threat to the security of the United States in the event of war with Germany (332).

Whether it was paranoia or sound foreign policy, Hagedorn concludes that even before the 1941 Pearl Harbor bombing, the United States had effectively gone to war with the Axis politically and economically and had limited Axis-owned or -operated aircraft in South America (339).

Hagedorn’s related exploration of the North American Lend-Lease Act is one of his finest. The 1941 initiative subsidized neutral or Allied

⁶ Greg Grandin, *Empire’s Workshop: Latin America, the United States, and the Rise of the New Imperialism* (New York: Metropolitan Books, Henry Holt and Company, 2006), 3.

⁷ Andrew J. Bacevich, *The Limits of Power: The End of American Exceptionalism* (New York: Metropolitan Books, Henry Holt and Company, 2008), 102-113.

nations with \$47.9 billion in arms, equipment, and training, about \$400 million of which went to Latin America. In return the United States benefited from the elimination of perceived Axis threats, helped organize and rally collective defense, and obtained access to raw materials and airfields. After the war, exposure to North American training and sociocultural experience had shifted geopolitical allegiances and brought Latin American military aviation up to world-class standards (325-327, 337). Although only a fraction of Lend-Lease funding targeted aviation, most countries retained their aircraft at a fraction of the price (445). Hagedorn argues that “Lend-Lease completely transformed the face of military aviation in Latin America—with the notable exception of Argentina—for the next twenty years.” Argentina, which did not sever its Axis ties until 1944, nonetheless became an eager post-war market for North American airplanes and equipment (414).

Argentina’s precocious civil and military aviation development occupies a prominent place in Hagedorn’s study. By 1925 Argentina’s infrastructure “predated a similar federal effort in the United States by two years. Plans for well-developed and logically situated aerodromes throughout the republic had reached fruition, enabling the expansion of both commercial and private aviation in the country much earlier than in any other Latin American nation” (204). By the end of the 1920s there were at least twenty established aerodromes and routes extending to 5,606 miles, and Argentina’s civil aviation was comparable to any nation’s in the world (234, 250).

Although the period up to the end of World War II occupies nearly four-fifths of the book, Hagedorn broadly traces the post-war boom in commercial and civil aviation. The Lend-Lease Act served as the primary catalyst. The author concludes that “the growth in aviation in Latin America witnessed between 1946 and the 1970s has not been equaled. By the end of 1961, there were an astonishing 9,350 purely civil and commercial aircraft registered in the nations of Latin America” (417). The 1947 Rio Pact, a mutual defense alliance, was part of a nearly thirty-year effort to craft an elaborate hemispheric collective-security system, in which aviation played a key role (456). Many Latin American nations, feeling

slighted when U.S. aid planning turned to more pressing Cold War issues elsewhere, began “weaning themselves from reliance on U.S. largesse for the supply of equipment—of all kinds.” (469). Hagedorn asserts that Argentina and Mexico led the way in developing an indigenous aircraft industry. Today’s Lockheed Martin Aircraft Argentina S.A. traces its lineage to the Talleres de El Palomar, founded in 1915 (477). Hagedorn also reserves praise for Brazilian aircraft manufacturing. To avoid an overreliance on North American aircraft in the late 1930s, Brazil’s army and navy reached an agreement to build German Focke-Wulf Flugzeugbau using components mixed with Brazilian parts. The Empresa Brasileira de Aeronáutica, founded in 1969, is now “one of the leading conventional aircraft manufacturing firms in the world” (490-495).

One area that illuminates Latin America’s contribution to Western modernity—as problematic as that notion is—is aircraft design. World War I restrictions prompted Carranza, then Mexico’s president, to create the Talleres Nacionales de Construcciones Aeronáuticas, which produced a Serie A two-place biplane. Hagedorn writes:

At a time when the neighboring United States was just gearing up for mass production of the immortal Curtiss JN-4 Jenny and its complementary Curtiss OX-5 90-horsepower engine ... Mexico had designed, financed, and started series production of its own general-purpose trainer—to include the Aztátl (Stork) six-cylinder engine and Anáhuac propellers. (113-114)

Others modified or redesigned U.S. aircraft. In the late 1920s, Chile’s Línea Aérea Nacional acquired seven U.S.-built Fairchild FC-2 transports, which eventually required a total rebuild and extensive modifications. What resulted was the Fairchild FC2c Tipo LAN in 1931-1932 (498). A short time later in Peru, North American Elmer Faucett, the founder of Faucett Airlines, built single-engine aircraft using 550-horsepower Pratt & Whitney Wasp engines. He based these on Stinson designs but altered them to meet Peru’s unique flying conditions. The resulting Faucett F.19 was “the first commercial-transport aircraft designed, built, and operated in series in Latin America” (276).

Hagedorn’s study raises important questions for modernity and science and technology scholars: What does the parallel development of aviation on the “periphery” tell us about the homogenizing power and

seduction of Western modernity? Does the fact that Latin Americans beat other Western powers to aviation milestones or improved aircraft design interrupt or reinforce the notion of a Eurocentric historical narrative? And did aviation foster economic, political, and cultural dependence in a region with an already ambiguous and ambivalent relationship to the West? The book rarely attempts to answer these questions. Mitchell has argued that although studies on how the periphery has contributed to universal phenomena help restore the importance of the local, they also run the risk of rigidifying a singular modernity that began first in Western Europe and then spread to the rest of the world. Such studies unintentionally suggest a singular modernity with infinite variations in local contexts around the globe.⁸

Latin American elites sought aviation as a means to overcome geographic barriers, strengthen militaries, and bolster commerce. However, *Conquistadors of the Sky* often presents this pursuit as pristine and inevitable. To cite just one example beyond the book, especially in the 1920s and even into the 1930s and 1940s, the horrific number of accidents that Peruvian pilots suffered made some of their countrymen wonder if the Andean nation was somehow inferior to its North American and European counterparts. Was it somehow fated to remain a self-perceived “backward” country?⁹ Hagedorn, however, does not overly romanticize Latin American aviation. The author asserts that regional aviators suffered a sobering number of accidents due to equipment failure, bad weather, and pilot error. In 1929 in Mexico, four pilots and seven passengers died in accidents that destroyed five aircraft and damaged seven others (242). In general, however, the accident rate did not surpass that in Europe and the United States. Hagedorn concludes that the “Latin American ratio was, per capita, no worse than for the major powers, even though a combination of youthful exuberance, inexperience, and comparatively primitive weather forecasting conspired to make Latin American military aviation a hazardous business” (293).

⁸ Mitchell, xii.

⁹ See Willie Hiatt, “The Rarefied Air of the Modern: Aviation and Peruvian Participation in World History, 1910-1950” (Ph.D. diss., University of California, Davis, 2009).

What is clear is that Latin American aviation was messily intertwined with that of Europe and the United States. At no time was this more apparent than during World War II, when the shortage of pilots, aircraft, and parts forced Latin Americans to rely on dangerously few resources. Yet Hagedorn’s study makes the case for future research with a more narrow focus. How did Latin Americans view their contributions to piloting, design, and manufacturing? Did they regard their skills, innovations, and modifications as unique contributions to technological modernity, a way to Latin Americanize a global phenomenon? Or did they view their performances and aircraft as inferior to and imitative of European and North American counterparts?

And seen from the North Atlantic, did regional efforts advance aviation, or merely represent a “contamination” of a universal technology? One of Hagedorn’s few references to North American condescension about Latin American pilots was telling. In December 1923, Lt. John M. Clark of the U.S. Army Air Service argued that

in general, it may be said that Latins lack the nerve to succeed to any marked degree in the flying game. They are fundamentally lacking in that mechanical ability so essential to the competent flyer. Preferring the spectacular and sensational, they have neither the patience nor the inclination to master the mechanical rudiments of aeronautics. (xiii)

Hagedorn’s work demonstrates that Latin Americans could not participate in this global phenomenon completely on their own terms. They constantly trained an eye on the North Atlantic, which many Latin American elites considered the epicenter of all things modern. Aviation on the periphery was never organic and pure. At times Latin Americans appeared to imitate, copy, and transplant a foreign phenomenon into radically different social, political, and cultural soil. At other times they not only adapted to but excelled at this high-tech pursuit despite old aircraft and serious funding shortages. The question remains whether their often uncritical pursuit of the modern closed off more authentically local alternatives.