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Taking Off: The Politics and Culture of American Aviation, 1920-1939

A Dissertation Presented for
The Doctor of Philosophy
Degree
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Finally, it goes without saying that any errors or omissions contained in this work are solely the responsibility of the author.

Abstract

Historians have traditionally emphasized the sharp differences between Herbert Hoover's vision of an associational state and the activism of Franklin D. Roosevelt's New Deal. This dissertation highlights an important area of continuity between the economic policies espoused by Hoover—during his tenures as Secretary of Commerce and President—and Roosevelt, focusing on federal efforts to promote the nascent aviation industry from the end of World War I until the passage of the Civil Aeronautics Act in 1938. These efforts were successful, and offer a unique arena in which to document the concrete gains wrought by Hoover's associationalist ideology and Roosevelt's New Deal. Moreover, both Hoover's corporatist policies and New Deal efforts to create aviation infrastructure—largely through the auspices of public works agencies like the Public Works Administration and Works Progress Administration—form a striking example of the government's ability to successfully foster the development of a new industry, even in the midst of the Great Depression. Significantly, both men's efforts represented an alternative to nationalization, the path taken by virtually every European nation during the era. This period thus offers the opportunity to examine how both presidents' aviation policies cohere with their larger visions of government's proper relationship to the economy, to compare and contrast associationalism and New Deal, and to elucidate aviation's role in promoting American economic development.

During these years government actions expanded from having literally no engagement with commercial aviation to subsidizing airmail routes, creating a regulatory infrastructure to promote safe operations by licensing pilots, inspecting aircraft, approving manufacturing operations, and aggressively promoting flying to the American people. Contextualized by the American public's well-documented enthusiasm for flying—particularly after Charles Lindbergh's famous New York-to-Paris flight in 1927—these federal actions created America's modern air transport network, culminating in the passage of the seminal Civil Aeronautics Act of 1938, the construction and improvement of almost a thousand airports around the country, and the growth of a core group of airlines, including United, Delta, and American, that still dominate commercial flying today.

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Chapter 1—Introduction

Between the world wars, American aeronautics experienced a radical transformation. These years witnessed the most dynamic developmental period in the nation's aeronautical history, a period that saw aviation grow from infancy to maturation in less than 20 years. In the years immediately following the Great War the lone barnstormer represented the exemplar of American aeronautics, flying from town to town and offering rides to locals, many of whom had never before seen an airplane. By the eve of the Second World War, however, Americans could take advantage of the world's most extensive air transport network, travel coast-to-coast in less than 24 hours in safety and relative comfort, and arrive and depart from airports much like those we frequent today.

The rapidity of that development speaks to the comprehensive manner in which Americans embraced aviation. According to historian Joseph Corn, this was the period during which Americans became truly "air-minded," that is, "having enthusiasm for airplanes, believing in their potential to better human life, and supporting aviation development."¹ Commentators often refer to this period as the "Golden Age of Flight," an allusion to the romance and achievement of the era. The Smithsonian National Air and Space Museum, the foremost custodian of American aeronautical history, highlights this period with its own gallery. Its introductory placard suggests that we remember this period as being "golden," because "of the many advances in aviation technology, the many record flights, and the intense interest of the public in aviation events."²

Each of those elements speaks to the depth of American engagement with aeronautical development. During the interwar period planes transformed from fabric-covered biplanes that

¹ Joseph Corn, *The Winged Gospel: America's Romance with Aviation, 1900-1950* (New York: Oxford University Press, 1983), 12.

² "Introductory Panel," "Golden Age of Flight" Gallery, Smithsonian National Air and Space Museum, Washington, D.C.

struggled to reach 100 miles per hour to sleek, low-winged metal monoplanes with enclosed cockpits and retractable landing gear able to travel more than four times that speed. These years witnessed the invention of engine cowlings, instrument flight, wing de-icing equipment, air traffic control, airmail, and widespread commercial passenger service. At the same time aerial heroes like Charles Lindbergh, Amelia Earhart, Howard Hughes, and Wiley Post rose to national prominence on the strength of their record-breaking efforts. Lindbergh, in particular, captured the heart of the nation and, for a time, defined the American hero. Public interest in aviation peaked during this era. More than a hundred thousand spectators turned out to watch national air races, Americans clamored to get a glimpse of their flying heroes, and coverage of all things aeronautical dominated newspapers, periodicals, newsreels, and movies.

Federal aviation policy forms an important but under-explored part of that larger context. In the immediate aftermath of the Great War, the federal government had virtually no engagement with aviation. In 1918 the Air Service began a trial airmail run from Washington, D.C. to New York, later turning airmail operations over to the U.S. Post Office. For the next seven years the Post Office expanded that service, eventually establishing a network that stretched from coast to coast. Additionally, federal funds created the National Advisory Committee for Aeronautics (NACA) in 1915, a scientific body that would ultimately make great strides in promoting safety and efficiency in the air. Those operations, however, serve to highlight the limits, rather than the extent, of federal aviation policy. The government had no power to license pilots, no regulatory mechanism to deem aircraft airworthy, no legislation to guide private and commercial operations, and no central authority to coordinate federal action.

By the end of the 1930s the situation had changed radically. A series of legislative actions culminated in the passage of the Civil Aeronautics Act in 1938. That bill created an independent

Civil Aeronautics Administration tasked to oversee private and commercial aviation. The Administration licensed pilots, approved the airworthiness of aircraft, investigated crashes, oversaw navigation aids, ran the nation's air traffic control network, and determined routes and rates for commercial carriers. In short, the CAA created an independent federal agency with power over all aspects of non-military aviation.

The development of federal policy between the world wars is the subject of this dissertation. During that era policymakers including Herbert Hoover, William MacCracken, Walter F. Brown, Hugo Black, Franklin Roosevelt, and Harry Hopkins fundamentally altered the course of American aeronautics. Their efforts resulted in the creation and sustenance of a coherent federal aviation policy that established the conditions for the possibility of commercial growth.

That policy initially emerged from Hoover's associationalist ideology. From the early 1920s Hoover, first as Commerce Secretary and later as President, recognized aviation's ability to change the economic, social, and political outlines of the country and used his power and influence to construct a coherent national policy. With the help of allies like MacCracken and Brown, Hoover worked diligently to promote aeronautical growth by placing the power of the federal government behind the regulation and promotion of American flying. Central to this effort was the seminal Air Commerce Act of 1926. This legislation—primarily the work of MacCracken—created the regulatory apparatus that would guide American aviation until the passage of the Civil Aeronautics Act in 1938. The Air Commerce Act created a Bureau of Aeronautics within the Commerce Department, and for the first time gave the federal government the power to regulate the industry in the interests of safety and efficiency. Simultaneously, the 1925 Contract Air Mail Act—the so-called “Kelly Bill,” after its primary sponsor, Pennsylvania Congressional Representative Clyde Kelly—

privatized Post Office airmail contracts and offered commercial carriers the potential for stable profits.³ Later modified by Postmaster General Walter Brown in order to promote commercial growth and encourage the expansion of passenger service, the Kelly Act for the first time created a solvent American air transport industry.

Federal support for aeronautical growth continued under the Democratic auspices of Franklin Roosevelt's Presidency. Though controversy plagued commercial aviation in the early 1930s, eventually leading to a contentious Senate Special Committee investigation, virtually all interested parties agreed that aviation had value to the nation. Even Hugo Black—a vocal opponent of Walter Brown's policies and the man behind the Senate investigation—publicly stated his commitment to promoting aeronautical growth. Though the 1934 Senate Special Committee ultimately resulted in President Roosevelt temporarily cancelling all private airmail contracts and Congresses' passage of a new Air Mail Act superseding Brown's policies, the uproar ultimately had little long-term effect on the industry. Indeed, in many ways the disruption served to highlight the pervasive influence of Hoover's fundamental vision.

Roosevelt himself demonstrated a consistent focus on promoting aeronautical growth. His early engagement with the airmail controversy in 1934 signaled his willingness to involve himself with the machinations of airmail policy. Subsequently, Roosevelt pushed for the creation of the Federal Aviation Commission, a bipartisan committee tasked to investigate all aspects of American aeronautics with the goal of offering concrete recommendations for how the federal government could continue to support the industry's development. It appears that the Commission's findings played an important role in pushing Roosevelt to support the creation of new aviation legislation.

³ At the time, airlines could not profit from flying passengers alone. Government airmail contracts offered the promise of steady income that would allow nascent commercial carriers to grow and expand.

The President, in fact, played a key role in supporting the creation and passage of the 1938 Civil Aeronautics Act, legislation that in many ways codified Hoover's vision and created the regulatory framework that would guide American flying until deregulation at the end of the 1970s. Roosevelt worked diligently behind the scenes to ensure that the bill conformed to his ideas, and demonstrated a willingness to use the power and influence of his office to secure its passage. Significantly, Roosevelt's actions demonstrate remarkable coherence with those of his predecessor. Roosevelt embraced policies creating continuity between his administration and Hoover's, building upon the Republican's foundational model but giving the federal government even more power to shape aeronautical development.

Simultaneously, Roosevelt supported a separate set of policies that ultimately had at least as significant an effect on American aviation. Largely ignored by scholars of both aviation and the New Deal, Roosevelt's support for public works spending led to the construction of almost five hundred airports across the country, and the improvement of a similar number. Under the auspices of organizations like the Civil Works Agency, Public Works Administration, and Works Progress Administration, New Deal public works agencies funded foundational infrastructure improvements that created the conditions for the possibility of commercial success. Most significantly, Harry Hopkins' Works Progress Administration spent tens of millions of dollars on aviation-related projects around the country. Much more than make-work endeavors, these projects represented a concerted effort to promote the development of aviation infrastructure. In this sense airways and airports represent a permanent physical legacy of the New Deal's success. Roosevelt's public works policy highlights the sophistication with which the New Deal sought to promote economic development, and belies the image of public works agencies privileging short-term employment to the detriment of long-term economic gain.

Collectively, these actions highlight the activist role taken by the federal government in regards to commercial aviation. Hoover, Roosevelt, and other policymakers utilized federal power to foster the growth of a specific commercial interest—with successful results. As such, federal aviation policy during this period serves as an important example of the government’s willingness and ability to positively affect the commercial sector. More specifically, it offers a largely unexplored arena in which to examine concrete gains wrought by Hoover’s associationalist ideology and the New Deal. Those gains are even more intriguing when considering that aviation achieved financial viability during the Great Depression, an unlikely time for commercial growth, and a time of fundamental redefinition of government’s proper role. This period thus offers the opportunity to examine the connections between federal aviation policy and larger conceptions of government’s proper relationship to the economy, and to elucidate aviation’s significance in the larger narrative of American economic development.

By the eve of World War II, federal efforts had resulted in the creation of a mature air transportation network. Taking place in a larger context of dynamic technological development and public fascination with flying, these federal policies created the world’s largest and most efficient commercial aviation industry. This dissertation represents an effort to explore federal engagement with aviation policy. As such, it will define the motivations behind the creation of a coherent vision for aeronautics’ place in America’s future, determine the limits of that vision, trace its development through Hoover and Roosevelt’s presidencies, delineate if and how it changed, describe the intersection of federal policy with aviation’s cultural prevalence, and ascertain the legacy of these federal policies. Though the contemporary air transportation network may appear quite different from its interwar progenitor, that period continues to hold the key to unlocking the narrative of American aeronautical development.

It is hard to overstate the primitive nature of American commercial aviation during the period immediately following World War I. While 1914 witnessed the short-lived launch of America's—and the world's—first scheduled airline service, by the closing months of the war the United States lacked any stable passenger or cargo service.⁴ This soon changed, however, under the joint auspices of the Post Office and the U.S. Army. During the war, Second Assistant Postmaster General Otto Praeger consistently pushed for the Post Office to support the development of regularly scheduled airmail service. Recognizing aviation's potential to revolutionize commercial transportation, Praeger identified a number of potential test routes, finally settling on a short run from Washington, D.C. to New York, with a stop in Philadelphia. Lacking any infrastructure, including pilots, planes, or mechanics, Praeger turned to the army to supply the needed manpower and material. The army inaugurated service on May 15, 1918, running the service for a year before turning operations over to the Post Office, which by that time had hired pilots, purchased aircraft, and initiated plans to expand operations. During the following six years, the Post Office extended the airmail map across the country, inaugurating coast-to-coast service and creating a truly national network before handing over routes to private contractors in 1925.⁵

⁴ The St. Petersburg to Tampa Airboat Line. The fledgling passenger service ferried passengers across Tampa Bay, saving a long train journey around the Bay's shoreline. The airline operated for four months with great success, but floundered following the end of the tourist season. See: Eugene F. Provenzo, Jr., "The St. Petersburg-Tampa Airboat Line," *The Florida Historical Quarterly* Vol. 58, No. 1 (July, 1979), 72-77, and "The World's First Scheduled Airline" Panel, "The Early Years of Air Transportation" Section, "America by Air" Exhibit, Smithsonian National Air and Space Museum, Washington, D.C.

⁵ For information on the origins and development of U.S. Post Office airmail service, see: William M. Leary, *Aerial Pioneers: The U.S. Airmail Service, 1918-1927* (Washington, D.C.: Smithsonian Institution Press, 1985), and Carl Solberg, *Conquest of the Skies: A*

In 1918, however, preparations for inaugurating airmail service demonstrated just how far American commercial aviation would have to develop. Difficulties presented themselves even before the first flight. Most significantly, New York, Philadelphia, and Washington, D.C. lacked suitable airports. There was literally no ground-based infrastructure from which to operate the airmail service. Under Praeger's direction the Post Office and Army worked together to identify suitable landing fields. In Washington, they settled on the Polo Grounds—not an airport in any formal sense, but a flat, grassy field large enough to allow aircraft to take off and land. In Philadelphia, officials chose a small field near Bustleton, again a venue lacking any formal infrastructure, but a location with easy road access to downtown. New York offered the greatest challenge, and also the most creative solution. There, after rejecting a number of possible sites including parks and gardens, officials turned to Belmont Park. Belmont housed one of the most active racetracks in the country, which on its face made it an odd choice for an airmail terminal. The racetrack, however, had a large, flat infield section that would allow safe aircraft operation. Additionally, the complex had improved road access and was close enough to the city to make operations viable. Remarkably, airmail planes often took off and landed during races, biplanes racing thoroughbreds down the backstretch.⁶

Similar difficulties arose in regard to pilots and aircraft. Although the United States was formally at war in Europe in the spring of 1918, the Army had a pitifully small number of trained pilots. As a result, the pilots assigned to airmail operations lacked adequate training and experience. Of the six pilots initially assigned to fly the mail, two lacked experience flying cross-country, and

History of Commercial Aviation in America (Boston: Little Brown and Company, 1979), 13-29.

⁶ Leary, *Aerial Pioneers*, 10-34.

three had been flying for fewer than four months. Only one pilot, Lieutenant Paul Culver, had what any informed observer would term adequate training for the job.⁷

The airmail service's aircraft exhibited analogous limitations. Praeger had identified the Curtis JN-4—an army training aircraft known as the “Jenny”—as a viable plane for the job. The Post Office contracted with Curtis to retrofit the Jennies with a mail compartment in what would normally serve as the craft's second cockpit. Though Praeger mandated that the airmail service's Jennies receive more powerful engines, their cargo capacity was nonetheless limited to the weight of a flight trainee: 160 pounds. The planes were also saddled with numerous other limitations—a lack of instrumentation, leaking fuel tanks, unreliable engines—all of which represented the norm rather than the exception for the day.⁸

In spite of these challenges, the inaugural airmail flight from Washington, D.C. on May 15 began auspiciously. President Woodrow Wilson attended the event, along with his wife and, notably, Assistant Secretary of the Navy Franklin Roosevelt. According to *The Washington Post*, this inaugural flight represented “one of the epoch making events in the [history of] the United States postal service,”⁹ a sentiment echoed by *The New York Times*. The latter publication reported that “the day will go down in history as marking the advent of a new epoch . . . the forerunner of a network of aerial mail lines which will cover the entire world.”¹⁰ This official recognition boded well for the new service, and Army and Post Office officials did their best not to disappoint.

Despite some initial problems starting the plane's engine—it later emerged that the ground crew had forgotten to fuel it—the flight departed to great fanfare. The pilot, Lieutenant George

⁷ Ibid, 30-34.

⁸ Ibid, 33-50.

⁹ “Aero Mail A Success,” *The Washington Post*, May 16, 1918.

¹⁰ “First Air Mail in Washington in 200 Minutes,” *The New York Times*, May 16, 1918.

Boyle, took off smoothly and proceeded on his way—in exactly the wrong direction. Boyle, lacking experience in cross-country navigation, used a road map to guide his way to Philadelphia.

Apparently, however, he lacked a strong sense of direction and followed his chosen railroad-line guide south from the city rather than north. Failing to realize his error, Boyle flew for almost an hour before landing in Waldorf, Maryland—25 miles south of the capital.¹¹

Boyle's blunder notwithstanding, the service achieved great success during its first months of service. These early days of operations, however, only further served to demonstrate the primitive conditions facing air transport operations. Pilots had to deal with notoriously unreliable compasses—one of the contributing factors in Boyle's misadventures. Incongruously, the compass represented the only instrument in these early aircraft, yet pilots found that it would often spin aimlessly or provide demonstrably false readings. Ironically, Captain Benjamin Lipsner, the operations officer for the service, identified the Jennies' control stick as a contributing factor in these problems. Apparently the stick, made of metal, would cause the compass "to go into a crazy little spin" when pilots pushed it forward toward the instrument panel. Even after mechanics switched the metal control stick for a wooden one, Lipsner reported that pilots could seldom rely on their compasses. Instead, "smoking chimneys, railroad tracks, creeks, rivers, and similarly outstanding landmarks," offered the most reliable navigational aids.¹²

¹¹ Unfortunately, Boyle's tribulations were far from finished. Two days later Boyle again lost his way trying to reach Philadelphia. According to historian William Leary, Boyle's superiors carefully briefed him to keep the Chesapeake Bay's shoreline on his left as he traveled north. Unfortunately, Boyle interpreted these instructions a bit too literally, keeping the shoreline on his left even after crossing the Susquehanna river and traveling south down Maryland's eastern shore. After more than three hours, Boyle reached the end of his fuel supply—and the end of the shoreline while coming face-to-face with the Atlantic Ocean. See: Leary, *Aerial Pioneers*, 40.

¹² Benjamin B. Lipsner, *The Airmail: From Jennies to Jets* (New York: Wilcox & Follett Company, 1951), 35.

Pilots also had to contend with myriad other navigational problems. During this period there were no aerial navigation maps, meaning that pilots utilized ordinary road maps—hardly the most reliable when operating cross-country. In addition, navigation aids such as radios or even beacon lights were nonexistent. Two years later, as the Post Office attempted to prove the viability of cross-country service, it employed a veritable army of volunteers across the western half of the country to light bonfires to help guide airmail pilots flying at night. Responding to these prevailing conditions, pilots quickly found the most effective strategy to be to memorize all aspects of their specific airmail route. In fact, pilots frequently created detailed notebooks containing prominent landmarks, areas with tricky wind conditions, and potential emergency landing fields. Adding to their difficulties, poor weather conditions often forced pilots to fly at extremely low altitudes. Lacking adequate instrumentation, pilots could not fly in clouds for risk of losing control of their aircraft. At times this led to harrowing tales as pilots flew just above—and at times below—the treetops. During the early years of airmail service several pilots reported near collisions with trains while following railroad tracks at extremely low altitude in bad weather.¹³

The primitive nature of these early operations, however, offered pilots options that would have been unthinkable even a few short years later. Pilots who lost their way or ran out of gas often resorted to landing in convenient fields, walking to the nearest house, and asking the owner for aid. Major Rueben Fleet, the air officer in charge of the Army's trial airmail service, resorted to just this tactic while attempting to deliver an aircraft to Philadelphia for the inaugural airmail flight. Fleet lost his way on the flight from New York and landed to ask directions from a farmer. Resuming his journey, Fleet again became confused and set down on a golf course to ask for directions, damaging

¹³ See: Leary, *Aerial Pioneers*, 30-221; Lipsner, *The Airmail*, 1-212, and David Courtwright, *Sky as Frontier: Adventure, Aviation, and Empire* (College Station: Texas A&M University Press, 2004), 58-64.

his aircraft in the process. After making the necessary repairs and turning the aircraft over to a more experienced pilot, darkness set in, causing Fleet to ask passing motorists for assistance. After persuading several to stop and light the “runway” with their headlights, the aircraft took off and made it safely to the airmail field at Bustleton.¹⁴

Circumstances like these defined the primitive nature of early air transport operations. Pilots had to fly by the proverbial seat of their pants, trusting instinct and experience to get them through difficult situations. Unreliable equipment and unproven operating procedures combined to make flying regularly scheduled routes an iffy proposition at best. In these conditions, comfortable, safe and reliable passenger service was only a dream. When early airmail carriers did consent to carry passengers, the hapless travelers often found themselves sitting atop mail sacks in open cockpit biplanes. In the late 1920s government airmail subsidies made mail far more valuable to carriers than passengers, resulting in many passengers being unceremoniously denied their ticketed seat when mail volume proved too great to fit both correspondence and passenger. Adding to these difficulties, until 1926 the government had no power to license pilots, inspect aircraft, and assure that aircraft manufacturers conformed to basic safety standards. Collectively, these circumstances highlight the fact that before 1925, American commercial aviation remained very much in its infancy.

By 1939, however, the industry had experienced fundamental changes. Federal regulation, technological development, and commercial growth combined to create a mature commercial network. Passengers could choose to fly a number of established airlines—many of which are still in operation today.¹⁵ Those airlines utilized modern terminal buildings—at least in large cities—with regular ticketing and baggage procedures. The Douglas DC-3 ruled the skies, a twin-engined aircraft

¹⁴ Leary, *Aerial Pioneers*, 35.

¹⁵ Notably United, Delta, and American.

that could comfortably seat more than 20 passengers. The DC-3 had engine cowlings, retractable landing gear, de-icing equipment in its wings, a full slate of navigational and communication equipment, and the ability to cruise at more than twice the top speed of the early airmail craft. Passengers could travel from coast to coast in less than 36 hours on regularly scheduled passenger routes. Those routes included radio communications with ground-based dispatchers, radio-based navigational aids, and emergency landing fields if something should go wrong. A national air traffic control system guided aircraft in the skies, maintaining spacing between flights and guiding aircraft to crowded airports in bad weather. If money and time allowed, Americans could board a Pan American Airways Clipper flying boat and fly to Europe, Hawaii, or even Hong Kong while enjoying gourmet food, the attentions of a highly trained cabin crew, and comfortable sleeping berths.¹⁶

Americans who took to the air could rest assured in the knowledge that the government policed the aviation industry through the auspices of a dedicated organization, the Civil Aviation Authority. Federal officials licensed all pilots for private, multi-engine, instrument, and commercial flying. They inspected manufacturers and awarded airworthiness certificates for all new or significantly modified airframes. Federal employees operated the air traffic control system, and the government released continuing funds for technological research into new communication, engine, and airframe technologies. Additionally, the federal government continued to fund a massive program of aviation-related infrastructure creation. Hundreds of millions of federal dollars paid for airport improvements, new fields, and air marking campaigns around the country. As a result, the vast majority of

¹⁶ See: R.E.G. Davies, *A History of the World's Airlines* (London: Oxford University Press, 1964), 123-150; Solberg, *Conquest of the Skies*, 149-172, 206-225, and Courtwright, *Sky as Frontier*, 97-105.

American population centers with more than 5,000 residents had a modern airport, complete with lighting, radio communication, a control tower, and multiple concrete or asphalt runways.

Federal efforts to regulate and promote aviation did not emerge in a vacuum, however. In fact, they reflected a logical—though still significant—development of pre-existing American transportation policy stretching back more than 150 years. Although the federal government played a minimal role in crafting transportation policy until the mid-nineteenth century, almost from the moment of the United States’ founding, state and local governments began to aggressively promote transportation infrastructure. Often haphazard, these efforts aided the creation of toll roads, turnpikes, canals, wagon roads, and ferries. As Americans increasingly pushed west, state and local support of transportation infrastructure became increasingly important to economic growth, particularly after the invention of steam-powered boats.¹⁷ Communities desiring to play an active role in emerging commercial networks worked diligently to create sufficient infrastructure and make themselves attractive to commercial interests.¹⁸

The federal government, however, generally proved loath to involve itself with transportation, at least until the midpoint of the nineteenth century. Although early in the century Henry Clay’s promotion of the “American System” of internal improvements provided modest support for infrastructure development, according to Robert Dilger “prior to 1850, the national government’s involvement in transportation policy is best characterized as indirect and limited.”¹⁹

¹⁷ For example, during the 1800s state governments provided approximately 70 percent of the \$125 million spent on canal construction. See: Robert J. Dilger, *American Transportation Policy* (Westport: Praeger Publishers, 2003), 5-6.

¹⁸ Ibid, 5.

¹⁹ Ibid, 8.

This federal reluctance, however, began to diminish as railroads began to play an increasingly important role in American commerce. By the middle of the nineteenth century, the federal government embraced several policies focused specifically on promoting the growth of American railways. First, in 1838 the government designated all railroads as postal routes, thus offering the possibility of subsidy through mail carriage. At the same time, a growing federal consensus that railroads offered an effective means to promote interstate commerce resulted in efforts to subsidize expansion. Constitutional limitations forbade direct federal subsidies, but lawmakers effectively circumvented these constraints by donating nationally owned land to states. States then sold that land at auction and gave the proceeds to railways. By the turn of the twentieth century, the federal government had provided more than 130 million acres of land for railroad improvements, with states contributing almost 50 million more.²⁰

By the beginning of the twentieth century the federal government also turned its attention to roads. Throughout the nineteenth century state and local governments had continued to support road development on a limited basis, but by the early 1900s the increasing prevalence of the automobile signaled an ever-increasing need for additional infrastructure. Responding to that need, in 1916 the federal government passed the Federal Road Act, approving an expenditure of \$75 million to improve rural postal roads.²¹ At the same time, states began to increase their regulation and oversight of highways. In 1913 New Jersey became the first state to mandate a driver's license for anyone operating a motor vehicle, a requirement gradually adopted by other states in following years.²²

²⁰ Ibid, 8-9. For more information on federal engagement vis-à-vis railroads see: Gabriel Kolko, *Railroads and Regulation, 1877-1916* (Princeton: Princeton University Press, 1965).

²¹ The funds were provided to specific states on a 50-50 matching basis, over a period of five years. See: Dilger, *American Transportation Policy*, 11-13.

²² See: "New York's Auto Imports Increase," *The New York Times*, July 14, 1913.

At the same time, the federal government began to play a more active role in regulating transportation, largely through the auspices of the Constitution's Interstate Commerce Clause. Following the creation of the Interstate Commerce Commission in 1887, the government embraced newfound responsibilities to oversee the use of American transportation systems. Largely a reaction to the perceived growth of unhealthy monopolies in the railroad industry, the ICC signaled a new federal willingness to referee commercial growth and regulate commercial interests in the nation's interest.²³

Collectively, this history demonstrates that by the early years of the twentieth century, the federal government embraced an ever-expanding role in the promotion and regulation of American transportation. Federal funds—indirect though they may have been—played a crucial role in promoting railroad growth, and federal engagement with the regulation of both railroads and vehicular travel suggested a growing consensus that lawmakers saw themselves as having at least some measure of responsibility over these commercial interests.²⁴

Commercial aviation, therefore, emerged during a period of growing federal activism with regard to transportation. In this context federal efforts to regulate the nascent airline industry and promote commercial development through informal subsidization—specifically through the auspices of the Post Office—reflect the ongoing emergence of a political consensus. At the same time,

²³ Dilger, *American Transportation Policy*, 10-11.

²⁴ Notably, Gabriel Kolko argues that during the Progressive era this increase in federal activity in many cases reflected a desire to regulate *for* business. Kolko suggests that governmental regulatory policies emerged out of a broad consensus shared by lawmakers and businessmen alike that emphasized the positive aspects of private economic growth. As such, business leaders in many ways defined the agenda for lawmakers, and in fact played a key role in delimiting federal policies. For Kolko, this epitomizes the conservative nature of the American economic sphere at the turn of the 20th century and highlights the lack of a coherent opposing vision. See: Gabriel Kolko, *The Triumph of Conservatism: A Reinterpretation of American History, 1900-1916* (New York: The Free Press, 1963).

however, aviation's fragile nature, its relative danger, and its association with daring and glamour indicate that federal efforts to shape the industry's growth do differ in significant respects from other forms of transportation. Most significantly, these factors suggest that policymakers like Herbert Hoover, Walter Brown and William MacCracken were remarkably prescient in their recognition of aviation's potential for future growth, safety, and profitability. These men's vision emerged very early in aviation's commercial development—far earlier in fact than comparable federal engagement with railroads or automobiles—and highlights their particular focus on an exciting but unproven technology.

The relative positions of railroads and aviation make clear the remarkable disparity in their influence in 1920s and 1930s America. The early 1900s still represented the zenith of America's railroad age. As late as 1932 there were more than 20,000 locomotives in service across the country, railroad stations dominated the American urban landscape, and taking the train remained synonymous with long distance transport of people and cargo. In contrast, Washington Airport, one of the busiest in the country at the time, saw only about 250 passengers a day walk through its terminal.²⁵ In fact, according to historians Mark Rose, Bruce Seely and Paul Barrett, "even in 1940, airplanes presented no serious challenge to long-distance railroads, or even buses."²⁶ In this environment, policymakers' identification of aviation's potential is even more significant.

²⁵ William Manchester, *The Glory and the Dream: A Narrative History of America, 1932-1972* (New York: Bantam Books, 1974), 8.

²⁶ Mark Rose, Bruce Seely, and Paul Barrett, *The Best Transportation System in the World: Railroads, Trucks, Airlines, and American Public Policy in the Twentieth Century* (Columbus: The Ohio State University Press, 2006), 36. In fact, this disparity goes a long way towards explaining why railroads offered virtually no opposition to federal efforts to support aeronautical growth. Aviation remained so fragile in the years before World War II, and passenger numbers and cargo volumes so small, that airlines presented little or no direct competition for railroads during the period. At the same time, during the 1920s the railroads were immersed in a fight with the ICC over efforts to consolidate America's

While the American air transport network experienced fundamental changes during that twenty-year period, aviation remained at the center of the American consciousness throughout the era. As the introductory panel to the National Air and Space Museum's "Golden Age of Flight" exhibit relates to visitors, the American public consistently demonstrated an "intense interest" in all things aeronautical. In the immediate aftermath of World War I, this interest seems to have primarily been focused on the Barnstormers—individuals and groups of pilots traveling across the country to give rides, perform air shows, and hopefully gain a modest living from their piloting skill. Aviation historian Martin Caidin describes how these men and women "hopped and struggled across the face of America from one pea patch to another, in the process caroming from cloud to cloud, dashing down valleys, and much too often barely evading mountains obscured within clouds and fog." In many ways these flyers personified American values of independence, individualism, daring, and self-sufficiency. Through their actions they introduced "millions of people" to flying, in the process bringing an "unexpected respectability" to American aeronautics.²⁷

As aviation grew, Americans increasingly focused their interest on air races and record-setting flights. As early as 1920, more than forty thousand spectators braved a cold November day on Long Island to witness America's first major air race, the Pulitzer Trophy.²⁸ The public's focus on races,

railways into a relatively small number of regional systems. The fight to maintain their autonomy formed the central thrust of railroad lobbying efforts during the era, obscuring other issues. Finally, in the years before World War II, trucks represented a much more established, and much more dangerous threat than air transport. As a result "few [in the railroad industry] took notice as new technological possibilities . . . began to alter . . . every aspect of the nation's transportation system." Ibid, 28-29.

²⁷ Martin Caidin, *Barnstorming* (New York: Bantam Books, 1991), 5-6.

²⁸ Pulitzer Trophy races occurred annually between 1920 and 1925. These races were wildly popular, but quickly became an inter-service rivalry between the Army and Navy, who expended tremendous capital on their racing planes. The lack of independent

long distance flights and emerging aerial heroes grew exponentially in the following years. In 1932 more than fifty-five thousand Americans attended the National Air Races in Cleveland, Ohio, and numbers continued to increase throughout the Depression years.²⁹

The American media readily acknowledged this phenomenon, coming to equate the National Air Races with the country's most prestigious sporting events. In 1934 *Newsweek* opened its coverage with an article entitled "AIR RACES: Cleveland Skies Hum With Aviation's Big Event." Attempting to contextualize the event's significance, the magazine related, "just as baseball fans have the World Series, racing fans the Kentucky Derby, and speed drivers the Indianapolis races, so United States fliers have their annual meet—the National Air Races." Continuing its coverage, the article reported that "tens of thousands" of rabid enthusiasts "braved traffic snarls" to view the event.³⁰ According to historian Don Vorderman, the number of attendees that year topped the sixty thousand mark.³¹

American passions for air racing peaked in the latter half of the 1930s. As household names like Roscoe Turner—who adopted a pet lion, Gilmore, as his mascot—Jimmy Doolittle, and Jacqueline Cochran came to dominate the proceedings, Americans demonstrated ever more enthusiasm for both the pilots and the races in which they took part. By 1937 this led to "well over

entrants ultimately doomed the Pulitzer races to failure, as they quickly became a military-only affair. For more information see: Don Vorderman, *The Great Air Races* (New York: Bantam Books, 1991).

²⁹ Vorderman, *The Great Air Races*, 52, 160. Following the demise of the Pulitzer Trophy races in 1925, Americans turned to the excitement offered by the National Air Races. First held in 1929, the event ran annually for the next 10 years. Usually held in Cleveland—aside from several years when the venue switched to Los Angeles—the National Air Races included closed course racing around low-level pylons, and a cross-country time trial called the Bendix Trophy.

³⁰ "AIR RACES: Cleveland Skies Hum With Aviation's 'Big Event,'" *Newsweek* September 8, 1934, 23.

³¹ Vorderman, *The Great Air Races*, 176.

one hundred thousand spectators” attending the National Races. The next year, approximately forty thousand die-hard fans traveled to the Los Angeles airport in the middle of the night to witness the staggered start of the cross-country Bendix Trophy race—between 1:45 and 3:45 in the morning.³²

The American media displayed at least as strong an interest in aviation during the period. Both *Time* and *Newsweek* offered readers a specific aviation section every week.³³ Usually around two pages, these sections included a number of articles on a wide variety of aviation-related topics. Commercial aviation, safety, air races, record-setting flights and technological innovations all received significant coverage, and both publications made an effort to keep their readers fully up-to-date with the latest aviation news. *Life* magazine offered its readers fewer articles, but provided a rich tapestry of photos of planes, flights and notable flying personalities. Monthly magazines like *Reader's Digest* and *The Saturday Evening Post* contained articles about flying in almost every issue, and the latter publication's short fiction section featured a number of aviation-related stories.³⁴ More intellectually focused magazines like *The Nation* also included a significant number of articles

³² Ibid, 205, 211.

³³ *Newsweek* entitled this section “Aviation,” while *Time* utilized the term “Aeronautics.” After 1934 *Time* moved to a more inclusive “Transport” section that nonetheless remained dominated by coverage of aviation and related topics.

³⁴ More than 20 during the 1930s alone. Many of these short stories, book excerpts, and nonfiction accounts represented the work of actual pilots. Numerous writers took to the skies during the period, and literary figures like Ernest J. Gann provided Americans with compelling and thoughtful stories about myriad aspects of flying. Their inclusion in periodicals like *The Saturday Evening Post*, moreover, suggests that this genre—and these authors—had achieved some measure of respectability with the literary community.

related to aviation,³⁵ though these pieces usually focused on more complex issues like commercial development or the government's role in regulating air commerce.³⁶

Within this larger context, Charles Lindbergh deserves special attention. Lindbergh's famous New York-to-Paris flight in 1927 galvanized an American public already interested in aviation-related matters and thrust aeronautics to the center of American consciousness. According to historian Joseph Corn, "literally overnight," Lindbergh's name "became synonymous with aviation."³⁷ More significantly, the pilot's exploit had an immediate effect on aviation's commercial standing. The Smithsonian National Air and Space Museum's recently opened exhibit,³⁸ "America by Air," refers specifically to a "Lindbergh boom" following his successful trans-Atlantic passage. "Interest in flying skyrocketed," the exhibit script informs visitors, and "aviation stocks rose in value."³⁹

After his flight to Paris Lindbergh continued to play an active role in American flying. He undertook several publicity tours following his return from Europe, flying around the country to raise awareness for American aeronautics and satisfy Americans' desire to see their hero. Lindbergh also immersed himself in the air transport industry, serving as a consultant to Transcontinental Air Transport—the forerunner of TWA—and later working for Pan American Airways.

³⁵ More than 40 during the period. *The Nation's* coverage generally focused on substantive aeronautical issues such as safety, regulation, commercial progress, and industrial growth. Representative articles include "Is it Safe to Fly" (October 22, 1930), and "The Air Disasters" (April 22, 1936).

³⁶ Other publications like *The Commonweal* also presented aeronautical coverage. Like *The Nation*, however, the Catholic magazine's articles generally focused on safety and related concerns, though some issues did include articles like "Tomorrow in Aviation" (March 5, 1930), which offered insight into the rapidly changing aeronautical landscape.

³⁷ Corn, *The Winged Gospel*, 17.

³⁸ In the fall of 2007.

³⁹ "Who Was Lindbergh?" Panel, "Airline Expansion and Innovation" Section, "America by Air" Exhibit, Smithsonian National Air and Space Museum, Washington, D.C.

Lindbergh's public stature and his continued engagement with aeronautics served to maintain aviation at the forefront of American media consciousness. Lindbergh's influence was so strong, in fact, that by 1930 *The Nation* proclaimed, "from the day that Lindbergh landed in Paris, our journalists have eagerly picked up and published, often at great length, every scrap of news that they could get from above ground level."⁴⁰ *Time* named the pilot its "Man of the Year" for 1927, and he appeared on the cover again in 1932. Lindbergh's sustained popularity reflected his status as a genuine American hero, but it also highlights the American public's continuing fascination with flying—an interest no doubt heightened by Lindbergh's continuing involvement. In this sense Lindbergh's popularity with the American public and media represents both a cause and an effect of American aeronautical consciousness. Regardless, it is clear that after 1927 Americans' obsession with aviation experienced a precipitous increase.

Aviation's cultural prevalence formed a powerful context that facilitated the development of federal policy. Media coverage combined with air races and a succession of record-setting flights to keep aviation at the forefront of American consciousness. Lindbergh's 1927 flight forms the most significant of a range of events that served to highlight Americans' excitement about flying, and their desire to sustain the technological and commercial development of the industry. As such, any thorough examination of federal policy must be undertaken against a backdrop of aviation's pervasive presence in American life.

Women and African Americans, however, for the most part failed to find a place in aviation's increasing centrality to Americans' lives. Famous aviatrixes like Amelia Earhart and Jacqueline Cochran found a ready audience for their aerial exploits, but these accomplishments did not translate

⁴⁰ "Flying High," *The Nation*, September 10, 1930, 262.

into engagement with commercial flying.⁴¹ In fact, in the years before World War II women were virtually excluded from airline cockpits. Instead, they found themselves serving as stewardesses—a desirable job at the time, but a position that quickly established firm gender roles sharply differentiating service in the cabin from that in the cockpit.⁴² According to historian Suzanne Kolm, this pattern was initially established largely through the actions of one woman: Ellen Church. In 1930, Church had applied for a position as a pilot with Boeing Air Transport, but was refused consideration because of her gender. Undeterred, Church suggested to BAT's traffic manager that she could still be of service to the airline. Citing her status as a registered nurse, she successfully found employment as the first formally recognized cabin attendant.⁴³

Church's pioneering efforts, Kolm suggests, established a paradigm for women's roles vis-à-vis commercial flying that lasted until the 1970s, a paradigm with significant implications for both parties. Her research demonstrates that female cabin attendants found that their distinctive status "brought benefits that had specific value and meaning to them." Airlines, however, viewed these women's status more cynically. According to Kolm "the gender of the nurses [serving as cabin attendants] was valued by airlines because they hoped that the presence of women would tame the

⁴¹ For more information see: Susan Butler, *East to the Dawn: The Life of Amelia Earhart* (Reading: Addison-Wesley, 1997); Doris L. Rich, *Amelia Earhart: A Biography* (Washington, D.C.: Smithsonian University Press, 1989); Jacqueline Cochran, *The Stars at Noon* (Boston: Little Brown and Company, 1954), and Doris L. Rich, *Jackie Cochran: Pilot in the Fastest Lane* (Gainesville: University Press of Florida, 2007).

⁴² Notably, Joseph Corn argues that women played a key role in selling aviation to the American public by reducing its perceived danger. In his opinion, "prejudice begat opportunity . . . Because they appeared to the public as less capable than they really were, women fliers became marvelous advertisements for the ease of piloting and the safety of flying." At the same time, however, those overarching prejudices simultaneously circumscribed women's aerial opportunities. Specifically, Corn relates that airline cockpits remained strictly off limits for women. See; Corn, *The Winged Gospel*, 71-90.

⁴³ Suzanne L. Kolm, "'Who Says It's a Man's World?': Women's Work and Travel in the First Decades of Flight," in Dominic Pisano, ed., *The Airplane in American Culture* (Ann Arbor: University of Michigan Press, 2003), 148-149.

image of flight.”⁴⁴ In other words, during an era in which airlines struggled to prove the safety and reliability of their operations to the American public, commercial carriers hoped that trained female nurses would provide a comforting presence to passengers, and foster an image of safety and responsibility.⁴⁵ This role offered women the potential for professional employment, significant responsibility, and high standing with the public, but also sharply differentiated their role from that of the flight crew. As a result, women like Amelia Earhart could enjoy tremendous public acclaim, but she and her peers could never realize the goal of flying commercial aircraft.

The choice of female cabin attendants also held important implications for African Americans’ relationship with the emerging air transport industry. Though blacks dominated the ranks of Pullman porters for railroads, that status did not translate to service on aircraft. Connecting the gendered and racial implications of women’s service as stewardesses, Kolm argues that “the feminine presence” of cabin attendants “helped highlight the masculine competence of the cockpit crew, just as the white skin of the cabin crew helped to distinguish air travel from the rival Pullman service.”⁴⁶ Hiring white women, in this view, created a visible reminder of the radical difference embodied by the new transportation form.

African Americans’ exclusion from the ranks of cabin attendants reflects a more general trend of exclusion from commercial aviation. Though the interwar era did witness the emergence of

⁴⁴ Ibid, 147, 149.

⁴⁵ It should also be noted that in an era when aircraft cabins were not pressurized and aircraft flew at relatively low altitudes with significant turbulence, the presence of a trained medical professional held significant value. airsickness, inner-ear difficulties, and even physical injuries from severe turbulence were common during this era, and airlines recognized the desirability of employing cabin attendants with the personal and professional skills needed to deal with these types of situations. For more information on the passenger experience see: Daniel L. Rust, *Flying Across America: The Airline Passenger Experience* (Norman: University of Oklahoma Press, 2009).

⁴⁶ Kolm in Pisano, ed., *The Airplane in American Culture*, 149.

several notable black fliers—most notably Bessie Coleman and William J. Powell—blacks found few possibilities in the emerging commercial industry. Instead, it appears that African Americans increasingly viewed aviation through one of two lenses. According to Jill Snider, on one hand blacks “focused primarily on the military menace of the airplane,” viewing the new technology as a further instrument of white oppression. This view informed Marcus Garvey and his many followers, who strove to distance themselves from the new and potentially dangerous implications of aeronautics. On the other hand, a larger proportion of American blacks “emphasized the economic opportunity offered by the nascent aviation industry, and . . . touted the possibilities for social change.”⁴⁷ For this latter group, however, the interwar period would encompass extremely limited gains. Commercial aviation in particular remained almost exclusively the purview of whites.

The interstate nature of commercial flying, however, had interesting implications for the racial politics of the day. Historian Catherine Barnes documents that almost without exception, airlines did not segregate their aircraft, even when flying from Southern terminals. That fact, however, probably reflected the small number of black passengers, rather than any coherent push for equality, and no Southern state, in fact, went so far as to demand segregated seating aboard aircraft.⁴⁸ Airports, though, were segregated throughout the South. “Most common in dining facilities in air terminals, then in rest rooms, and lastly in waiting areas,” segregation was widespread, though more common

⁴⁷ Jill Snider, “‘Great Shadow in the Sky’: The Airplane in the Tulsa Race Riot of 1921 and the Development of African American Visions of Aviation, 1921-1926,” in Pisano, ed., *The Airplane in American Culture*, 115.

⁴⁸ At least in part this reflected the inherent difficulties in segregating an interstate conveyance, particularly a relatively speedy one. Doing so had the potential to require different seating arrangements every hour or two, depending on laws in the specific states overflown.

in the deep South.⁴⁹ Regardless, these conditions again reflected African Americans limited ability to share in the possibilities offered by the emerging air transport industry, relegating both the commercial and cultural implications of the emerging technology primarily to whites.

Issues relating to gender and race notwithstanding, Americans' enthusiasm for aeronautics has transcended the interwar period. That continued popularity, however, has not resulted in concomitant historical scholarship. Although books about aviation abound—from popular histories of specific planes and famous pilots to thematic works detailing subjects like barnstorming and air racing—scholarly interest in American aviation has been remarkably sparse.⁵⁰ The development of federal

⁴⁹ Catherine A. Barnes, *Journey From Jim Crow: The Desegregation of Southern Transit* (New York: Columbia University Press, 1983), 14, 137. Airport segregation also suggests some of the limits of the New Deal state. Though more than 100 Southern airports received public works funding from the Roosevelt administration, those funds had no effect on racial policy. It appears that this was largely a reflection of the type of work these funds supported, as federal expenditures were not, for the most part, utilized for terminals themselves, instead funding infrastructure like runways, hardstands, lighting, and drainage. Regardless, it remains significant that airport-related public work expenditures had no effect on prevailing racial practices.

⁵⁰ Numerically, books written for a popular audience dominate the field of aviation literature. Series like the *Smithsonian History of Flight* and *Bantam Air and Space* provide the most prominent examples of a whole genre of aeronautical literature. Written primarily for aviation enthusiasts, these works chiefly rely on interviews and anecdotal evidence to examine specific planes, pilots, or themes. Martin Caidin is perhaps the most well known writer in this genre with more than thirty publications to his credit on subjects ranging from the P-38 fighter plane to a history of Alaskan Bush pilots. Within the realm of popular literature there also exist a significant number of works devoted to military aviation. Many of these focus on World War II, but biographies and books about particular aircraft also predominate. See, for example: Walter J. Boyne, *Beyond the Wild Blue: A History of the U.S. Air Force* (New York: St. Martin's Griffin, 1997) and *Clash of Wings: World War II in the Air* (New York: Simon and Schuster, 1994); Bernard C. Nalty, ed., *Winged Shield, Winged Sword: A History of the United States Air Force* (Washington, D.C.: The United States Air Force, 1997); Eric Bergerud, *Fire in the Sky: The Air War in the South Pacific* (Boulder: Westview Press, 2000); James J. Hudson, *Hostile Skies: A Combat History of the America Air Service in World War I* (Syracuse: Syracuse University Press, 1968); John C. McManus, *Deadly Sky: The American Combat*

policy, in particular, has been largely overlooked until very recently. This dearth suggests the need for further investigation—specifically an attempt to offer a comprehensive analysis of the development of federal aviation policy under Hoover and Roosevelt.

Existing aviation-related historical scholarship naturally separates into several distinct thematic units. First, a number of scholars provide narrative histories of aeronautical development. Henry Lass Smith's *Airways: The History of Commercial Aviation in the United States* offers the foundational work in this genre. Originally published in 1942, Smith's work provides a comprehensive overview of the interwar period. His analysis, however, demonstrates the limitations of the time during which he wrote. Smith's scholarship relies on interviews and media sources, as he lacked access to both public and private archival documents. Additionally, Smith's ambivalent take on Hoover's aviation policy—particularly the actions of Walter F. Brown—reflects the prevailing influence of New Deal politics and assumptions that the preceding Republican administrations had mismanaged the economy. Despite these drawbacks, however, Smith offers an insightful analysis, in fact one that, until recent years, served as the authoritative source on American commercial aviation.

Indeed, Smith's research colors several notable works appearing in his wake. Noted British aviation historian R. E. G. Davies' *Airlines of the United States Since 1914* and *A History of the World's Airlines* provide unmatched accounts of commercial development in the U.S. and the world,

Airman in World War II (Novato: Presido, 2002); Mark K. Wells, *Courage and Air Warfare: The Allied Aircrew Experience in the Second World War* (London: Frank Cass, 1995); Richard J. Overy, *The Air War, 1939-1945* (Washington, D.C.: Potomac Books, Inc., 2005); Roger A. Freeman, *The Mighty Eighth: A History of the Units, Men, and Machines of the U.S. 8th Air Force* (London: Cassell & Co., 2000) and Zemke's *Wolfpack: The True Story of Hub Zemke and the 56th Fighter Group—Top Aces Over Europe in World War II* (New York: Pocket Books, 1988); Edward Jablonski, *Flying Fortress: The Illustrated Biography of the B-17s and the Men Who Flew Them* (New York: Doubleday, Inc., 1965), and Norman Fortier, *An Ace of the Eighth: An American Fighter Pilot's Air War in Europe* (New York: Ballantine Books, 2003).

respectively. Both works are enormous achievements, offering readers encyclopedic information on virtually every airline in history. That scope, however, means that Davies has little time for analysis, and seems to have taken Smith's findings at face value with regard to American federal policy. Similarly, Carl Solberg's *Conquest of the Skies: A History of Commercial Aviation in America* in many ways rehashes Smith's analysis of the interwar period. Published in 1979, Solberg's work certainly goes beyond the earlier monograph, but he adds no additional primary source research and his conclusions thus vary little from Smith's.

In recent years other scholars have authored narrative histories that touch to varying degrees on interwar commercial flying. While a number of authors focus on specific airlines or aircraft manufacturers, few attempt to provide a broader perspective.⁵¹ Most notably Roger Bilstein's seminal work, *Flight In America: From the Wrights to the Astronauts*, provides readers with a remarkably comprehensive overview of all aspects of American aviation from its origins to the end of the twentieth century. Though not focused specifically on commercial flying, Bilstein nonetheless offers insight into the technological and commercial development of the interwar years. His work, however, barely touches on federal policy, concerning itself primarily with a descriptive overview of aeronautical development.⁵²

⁵¹ See, for example: *Pedigree of Champions: Boeing Since 1916* (Seattle: Boeing, 1985); Robert Daley, *An American Saga: Juan Trippe and his Pan American Empire* (New York: Random House, 1980); David W. Lewis and Wesley Phillips Newton, *Delta: History of an Airline* (Athens: University of Georgia Press, 1979), and Crosby Maynard, *Flight Plan for Tomorrow: The Douglas Story* (California: Douglas Aircraft Company, 1962).

⁵² Also relevant is T. A. Heppenheimer's *Turbulent Skies: The History of Commercial Aviation* (New York: John Wiley & Sons, Inc., 1986). Heppenheimer focuses primarily on technological development, eschewing discussion of specific airlines and national policies. Truly global in scope, his focus on the interwar United States is largely confined to the engine, airframe, and safety advancements of the period.

The relationship between aviation and American culture forms the second prominent scholarly theme. All works in this genre reflect the powerful influence of Joseph Corn's seminal work, *The Winged Gospel: America's Romance with Aviation, 1900-1950*. Originally published as a series of articles, Corn's monograph focuses on Americans' longstanding connection to what Corn terms the "prophetic creed of flight." Couching his analysis in theological language, Corn argues that Americans have historically experienced a unique relationship with aeronautics. Connecting aviation to Americans' focus on technological prowess and national development, Corn argues that the United States embraced aviation as a "gospel" because it held untold promises for the country's future. For Corn, aviation's "prophesies" included the potential to bring peace, foster social equality, usher in a new global community, and even promote health and wellness. Though Corn makes no attempt to detail federal aviation policy, American passions for aviation during the interwar period form a central facet of his argument. Highlighting the 1920s and '30s as the highpoint of Americans' embrace of the "winged gospel," Corn suggests rapid technological development and the prevalence of aerial heroes like Charles Lindbergh and Amelia Earhart made all things seem possible. Even during the Depression aviation held hope for the nation, as continued technological and commercial progress highlighted promising future possibilities.

Subsequent cultural studies have built upon Corn's foundational thesis. In *Sky As Frontier: Adventure, Aviation and Empire*, David Courtwright utilizes the metaphor of a frontier—defined as "a shifting zone of interaction between indigenous and nonindigenous population"—to contextualize a narrative history of American aviation.⁵³ He suggests that early aviators, like settlers in the historical American frontier, were predominantly male, and that their daredevil attitudes mirrored those of earlier frontiersmen. The sky, Courtwright suggests, exemplified an area of impermanent

⁵³ Courtwright, *Sky As Frontier*, 8.

settlement, particularly considering the unreliability of early aircraft. However, like other frontiers, the sky gradually became more densely settled, safer, and filled with populations more representative of the general American populace. As it matured flying became safer, more democratic, and ultimately less exciting and distinctive.

As in Corn's work, the interwar period figures prominently in Courtwright's analysis. Specifically, the latter argues that Lindbergh's flight across the Atlantic fundamentally altered America's view of aviation. In his words, Americans had formerly viewed flying as "dangerous and expensive," but after Lindbergh's success—and concomitant developments in safety and other technologies—"attitudes shifted toward hopeful ambivalence."⁵⁴ Though Courtwright considers the development of federal policy only briefly, his thesis suggests that governmental regulation played a key role in this transformation.⁵⁵

⁵⁴ Ibid, 91.

⁵⁵ A number of other scholars have focused on the enduring connections between aviation and culture, though the majority of these works touch only briefly—if at all—on the United States. Most prominently, Robert Wohl's series *Aviation and the Western Imagination* (New Haven: Yale University Press, 1994; 2005) offers powerful insight into the widespread prevalence of aeronautical themes in European and American culture, though he focuses the majority of his analysis on European subject matter. Also of relevance is Lawrence Goldstein's *The Flying Machine in Modern Literature* (Bloomington: Indiana University Press, 1986), which demonstrates that flying appears prominently in western literature from Da Vinci to Norman Mailer, while Peter Fritzsche's *A Nation Of Fliers: German Aviation and the Popular Imagination* (Cambridge: Harvard University Press, 1992) suggests that America is not the only nation with powerful cultural connections to aeronautics. Finally, edited collections from Dominick Pisano and Roger Launius and Janet Daly Bednarek offer insight into some broader aviation-related themes. Both *The Airplane in American Culture* and *Reconsidering a Century of Flight* (Chapel Hill: University of North Carolina Press, 2002) embrace an explicitly American context, and both works present readers with numerous essays offering insight into a variety of aviation-related themes. These include public perception, race, gender, and art, but ultimately suggest little in the way of connections between culture and technological development or political actions.

Moving from culture to politics, several scholars offer specific analyses focused on the structural elements of federal policy. In this genre, two monographs deserve particular mention: Nick Kommons's *Bonfires to Beacons: Federal Aviation Policy Under the Air Commerce Act, 1926-1938*, and F. Robert van der Linden's *Airlines and Airmail: The Post Office and the Birth of the Commercial Aviation Industry*.⁵⁶ Kommons' work offers a comprehensive narrative history describing the creation and implementation of the initial period of formal federal regulation over aviation. Specifically, Kommons traces the political machinations that led to the creation of the 1926 Air Commerce Act, and the Commerce Department's efforts to promote both safety and regulation as it oversaw the creation of a national air transport network. Within this context, Kommons focuses prominently on figures such as Herbert Hoover,⁵⁷ William MacCracken, Clyde Kelly, and Walter F. Brown while detailing their efforts to promote American aeronautical development through federal oversight. *Bonfires to Beacons* evidences impressive archival research, and Kommons' efforts result in a detailed and comprehensive treatment of the Air Commerce Act. That focus, however, also limits the works' larger value, as it adheres tightly to the promise embodied in its title.

⁵⁶ F. Robert van der Linden, *Airlines and Airmail: The Post Office and the Birth of the Commercial Aviation Industry* (Lexington: The University Press of Kentucky, 2002); Nick A. Kommons, *Bonfires to Beacons: Federal Civil Aviation Policy Under the Air Commerce Act* (Washington, D.C.: Smithsonian Institution Press, 1989). Also of relevance are Janet Daily Benarek's *America's Airports: Airfield Development, 1918-1947* (College Station: Texas A&M University Press, 2001), and Stuart Banner's *Who Owns the Sky?: The Struggle to Control Airspace From the Wright Brothers On* (Cambridge: Harvard University Press, 2008). Both of these works offer narrow analyses of specific topics—each valuable, but ultimately of limited relevance to the larger context of American aeronautical development.

⁵⁷ David Lee's excellent essay, "Herbert Hoover and Commercial Aviation Policy," which appears in Roger Launius and Janet Daly Bednarek's edited collection, *Reconsidering a Century of Flight*, provides additional insight into Hoover's motivations both as Secretary of Commerce and as President. Lee suggests that Hoover's associationalist economic philosophy guided his aviation policy, and that his intense interest in new technologies like aviation and radio led him to take an active role in promoting new industries he felt had value for the nation.

In *Airlines and Airmail*, van der Linden's analysis moves beyond specific legislation to make a larger argument regarding the foundations of the modern American airline industry. Focusing on Post Office airmail policy, van der Linden persuasively argues that informal airmail subsidies formed the core of a range of federal initiatives that created the foundations for American commercial aviation during the 1920s. Leading this charge, he relates, were Progressive Republicans like Clyde Kelly, Herbert Hoover, and Walter Brown, who applied Theodore Roosevelt's concept of "New Nationalism" to use the power of the federal government to support the creation of a group of "good" aviation "trusts." With federal guidance, these "trusts"—large airline holding corporations that included airframe and engine manufacturers and airlines—were able to create a new industry while avoiding unnecessary predation and inefficiency. van der Linden argues that this Progressive Republican vision held sway until 1934, when Hugo Black and Franklin Roosevelt—adherents of Woodrow Wilson's "New Freedom" and thus the idea that any form of economic concentration was harmful—undid the prevailing policies and ushered in a new era of federal oversight. Ultimately, *Airlines and Airmail* makes a compelling case for the Post Office's central role in creating American commercial aviation. Unfortunately, however, van der Linden's focus on the distinctions between Republican and Democratic Progressive attitudes toward business obscure and oversimplify a much more complex political context.

Surprisingly, historians detailing both Hoover and Roosevelt's political histories pay scant attention to aviation policy.⁵⁸ Joan Hoff Wilson's influential biography, *Herbert Hoover, Forgotten Progressive*, briefly touches upon aviation. Like David Lee, Wilson connects Hoover's interest in

⁵⁸ Significantly, William Leuchtenburg's seminal work, *Franklin D. Roosevelt and the New Deal* (New York: Harper, 1963), is notable only for almost entirely overlooking aviation, an omission shared by Paul Conkin's *The New Deal* 3d ed. (Wheeling: Harlan Davidson, Inc., 1992).

promoting aeronautical development to his larger associationalist economic philosophy.⁵⁹ Ellis Hawley's scholarship also addresses aeronautics, albeit briefly. Several of his essays, most significantly "Three Facets of the Hooverian Associationalism: Lumber, Aviation, and Movies, 1921-1930," published in Thomas McGraw's *Regulation in Perspective*, offer limited insight into Hoover's aviation policy. Here Hawley focuses primarily on Hoover's efforts to promote safety regulation through the Commerce Department, again highlighting the central role Hoover's associationalist philosophy played in guiding his actions. In his seminal work, *The New Deal and The Problem of Monopoly*, Hawley again addresses aeronautics, focusing on industry leaders' attempts to define aviation as a special case warranting federal assistance. Hawley emphasizes that Republicans in the Hooverian mold argued that aeronautical development was vital to national defense. Aviation's pioneering status, these lawmakers held, mandated federal support, a fact codified in legislation from 1925, 1926, and 1930.⁶⁰ Hawley argues that Democratic efforts to modify this system were largely unsuccessful, leading to the passage of the Civil Aeronautics Act, confirming aviation's status as a "natural monopoly" warranting continued governmental support.

These brief treatments offer limited insight into the development of federal policy, but ultimately raise more questions than they answer. Wilson's analysis provides a cursory overview of Hoover's aviation policy and lacks engagement with archival sources. Hawley's scholarship provides more depth, but fails to adequately account for the complex motivations behind federal

⁵⁹ "Associationalism" refers to Hoover's embrace of an economic ideology predicated on voluntary cooperation between government and business. Historian Joan Hoff Wilson suggests that this philosophy emerged from a progressive, pragmatic, utopian view of the economic sphere most easily defined as a type of liberal corporatism. In addition to promoting connections between business and government Hoover's ideology emphasized administrative efficiency and decentralization. See: Joan Hoff Wilson, *Herbert Hoover: Forgotten Progressive* (Prospect Heights: Waveland Press, Inc., 1992), 56-69.

⁶⁰ The Watres Act, largely the creation of Walter F. Brown, modified the specifics of the 1925 Kelly Act to promote the development of larger, more efficient airline operations.

support for aeronautics. More surprisingly, *The New Deal and the Problem of Monopoly* almost totally ignores Roosevelt's engagement with the issue.⁶¹ All of these works, moreover, fail to adequately account for the extent to which federal actions successfully promoted aviation's commercial development. Scholars of the New Deal, in particular, generally fail to recognize the concrete gains brought about by public works agencies. New Deal public works, in fact, created one of the most significant commercial success stories emerging from the period—the almost total revamping of American aviation infrastructure. Agencies like the PWA and WPA certainly put Americans to work, but at least with regard to aviation, this was a means to a larger end.

Despite their contributions, all of these scholars provide an incomplete, and in some ways misleading view of aviation during this period. Governmental actions occurred in an environment dominated by popular enthusiasm for aviation; thus, examination of specific elements within this larger context cannot adequately explain the motivations for, and implications of, aeronautical development. Further, aviation owed its development to a number of separate, yet interrelated governmental policies that are not individually sufficient to explain its dynamic growth. All of these policies, moreover, drew inspiration and support from an American public and media entranced with Lindbergh's transatlantic flight, the national air races, and myriad record-setting aerial endeavors. As

⁶¹ Roosevelt's enigmatic nature and unwillingness to document his thoughts makes it difficult for historians to accurately determine his engagement with this issue—and many others. Another monograph that touches tangentially on the President's actions vis-à-vis aviation is Jason Scott Smith's *Building New Deal Liberalism: The Political Economy of Public Works, 1933-1956* (New York: Cambridge University Press, 2006). Smith focuses little of his attention on the President, but offers a compelling defense of the Roosevelt administration's public works programs. Far more than make-work, Smith argues, these programs created a visible legacy of New Deal action. Within this context, Smith focuses limited attention on aviation, but does suggest that public works expenditures played a significant role in promoting aeronautical development through the construction and improvement of more than 900 airports around the country.

such, only a comprehensive analysis can adequately explain the machinations of federal aviation policy.

These complexities highlight the foundational nature of interwar aviation policy. Decisions made during the Hoover and Roosevelt administrations had long-lasting implications for the continued development of commercial aviation in the United States. Increased federal regulation, airmail contracts, and support for aviation infrastructure—like airports, lighted airways, and radio transmitters—created the conditions for the possibility of aviation’s growth into a dominant force in the transportation of both people and cargo. In addition, these governmental actions supported the growth of the airlines—Pan American, United, American, and TWA, in particular—that dominated commercial aviation until deregulation in the 1970s and beyond. Indeed, without this depth and breadth of federal support there is a distinct possibility that aviation would never have achieved its contemporary prominence in the commercial sector. In a very real sense, the organization, infrastructure, and oversight of modern commercial aviation is a legacy of policy decisions from the period between Lindbergh’s flight and World War II.

That fact necessitates a reevaluation of federal aviation policy during the interwar years. Only by examining the development of federal policy and the connections between that policy and aviation’s cultural influence can we fully appreciate the origins of today’s air transport network. Federal actions moved beyond airmail subsidies and beyond regulation to encompass a broad-based and comprehensive project specifically designed to foster the growth and development of commercial flying. From the early 1920s until the period immediately before World War II, policymakers like Herbert Hoover, William MacCracken, Walter Brown, Franklin Roosevelt, and Harry Hopkins consistently supported the development of American aeronautics. That support

remained remarkably consistent throughout the period, and evidenced noteworthy continuity through both Republican and Democratic administrations. Though historians have suggested that the airmail scandal of 1934 represented a sharp break with Hoover's associationalist policies—at least until 1938—in fact, Roosevelt, Hugo Black and others shared many of the same foundational assumptions about aviation's value to the nation. Indeed, in many ways Roosevelt expanded federal engagement with aviation through his commitment to utilizing public works agencies to support aviation infrastructure development. Collectively, these federal policies created the foundation for today's air transportation network and played a significant role in shaping the contours of modern America.

An investigation of interwar federal airmail policy also suggests the ongoing necessity of reexamining both Herbert Hoover and Franklin Roosevelt's legacies. Hoover's foundational contributions to American aeronautical development emphasize the need to acknowledge the ability of his associational philosophy to successfully foster commercial growth. With regard to aviation, Hoover must appear as a visionary reformer who played a pivotal role in supporting economic development. This analysis builds upon the work of scholars like Joan Hoff Wilson who look beyond Hoover's Depression-era leadership and instead seek to assess Hoover through a broader lens.

Similarly, Roosevelt's engagement with American aviation suggests the continuing need to reconsider the New Deal's legacy. FDR's connections to American aeronautics—particularly through New Deal public works agencies—confirm the necessity of moving beyond discussions of the New Deal's ability to pull the United States out of the Depression. Roosevelt's aviation-related actions demonstrate the presence of important elements of continuity between his economic policies and those of his predecessor. Simultaneously, they also highlight FDR's willingness to radically expand federal responsibility over aviation in the interests of both the industry and the larger American

economy. Like Jason Scott Smith's work, this analysis emphasizes the New Deal's productive capacity—its ability to create infrastructure with the potential to radically alter the American landscape. The New Deal certainly put Americans to work, but with regard to aviation it also promoted the creation of airways and airports that endured far beyond the New Deal era.

In the endeavor to offer a comprehensive analysis of federal aviation policy between 1920 and the onset of World War II, this dissertation will begin by exploring the origins of Herbert Hoover's drive to support aeronautical development. Almost from the moment he took office as Commerce Secretary, Hoover began to apply his associationalist ideology to aviation. He maintained that focus through his Presidential administration, consistently working to foster technological development and commercial growth. Hoover's efforts, supported by key allies like William MacCracken and Harry New, created a vision for aviation's place in America's future that persisted until the late 1970s.

Publically, however, Hoover's policies drew the ire of both Congressional Democrats and select airline executives—parties that did not share in Hoover's associationalist vision. Largely as a result of policies enacted by Hoover's Postmaster, Walter F. Brown, this opposition grew steadily after 1930 and eventually resulted in the creation of a Senate Special Committee to investigate supposed collusion and fraud in the air transport industry. Led by Alabama Senator Hugo Black, the Senate investigation resulted in the cancellation of Post Office airmail contracts in early 1934 and a reorganization of the industry. Black's actions, however, appear to have emerged from a genuine desire to support aeronautical growth, though the Democratic Senator's differing economic ideology resulted in strident opposition to many of Hoover and Brown's policies.

The Black Committee's investigation, and the subsequent cancellation of airmail contracts offer the first glimpse of Franklin Roosevelt's commitment to promoting American aviation. Although his decision to have the U.S. Army fly the mail as Black worked to reorganize the Post Office's bidding process led to the deaths of 12 Army pilots and resulted in a public-relations disaster, FDR's increasing engagement with aeronautics signaled his willingness to take up Hoover's mantle. Subsequently, Roosevelt pushed for the creation of an investigatory commission tasked to gather information on all aspects of American aviation in the hopes of further defining federal policy. The commission's findings offered a concrete model for federal action, and appear to have motivated Roosevelt's central engagement with the crafting and passage of the seminal 1938 Civil Aeronautics Act. Throughout, it appears that Roosevelt's actions demonstrate remarkable continuity with those of his predecessor, notwithstanding their differing political philosophies.

Roosevelt's dedication to public works also highlights his commitment to promoting American aviation. An examination of the motivations behind aviation-related public works policy, and investigations of several representative Works Progress Administration (WPA) projects suggest that Roosevelt, Harry Hopkins, and other New Dealers shared a genuine desire to use public works to promote long-lasting commercial growth. Those efforts echo the larger findings of historian Jason Scott Smith and suggest that, for aviation, public works offered a new and dynamic way to deploy federal power to support economic growth.⁶²

Finally, this dissertation will reflect on the lasting effects those federal policies have engendered. A brief examination of American commercial aviation in the years after World War II highlights the seminal role pre-war actions played in creating the foundations of dynamic growth. The consensus created by the passage of the Civil Aeronautics Act created the conditions for the

⁶² For Smith's thesis, see: *Building New Deal Liberalism*, 1-6, 19-20.

possibility of American airlines spanning continents and oceans, embracing jet propulsion, and democratizing air travel to the extent that a majority of Americans could—and often did—fly. Deregulation shattered that consensus, and ushered in a new and much more contentious era for commercial flying. Airlines created hub and spoke systems, competition intensified, and many airlines went out of business. Simultaneously, a wave of new issues rose to the fore, from concerns over noise and pollution to security threats. Collectively, these conditions have radically altered our contemporary view of air travel. The same conditions, however, serve to highlight the lasting significance of the interwar period. Americans still fondly reflect on the era, a fact embodied in the Smithsonian National Air and Space Museum’s “Golden Age of Flight” exhibit. Regardless of our many frustrations with modern air travel, it seems, Americans are still captivated by flying.

Chapter 2—Herbert Hoover and the Origins of American Aviation Policy

In July of 1921, only a few months after assuming the post of Commerce Secretary, Herbert Hoover organized an informal Conference on Aviation. Calling representatives from the Society of Automotive Engineers, the Aero Club of America, the National Aircraft Underwriters Association, and the Manufacturers Aircraft Association to his office in Washington, D.C., Hoover hoped to clarify the Commerce Department's relationship with the emerging air transport industry. In his notes for the "meeting of the air craft men," Hoover revealed his already firm grasp of the central issues shaping the development of aeronautics in the United States.⁶³ Stating that the "development of civil aviation depends . . . on the establishment of some sort of federal governmental agency which shall immediately codify and present rules for interstate flying and map out air lines and so on," Hoover presciently articulated the pressing need for uniform regulation. Hoover also saw the necessity of federal oversight of licensing, commenting on his desire to see the " immediate development of an inspection service and . . . some pilot license system." Hoover believed that such a system would "protect the public against incidents and prevent civil aviation from getting into bad repute because of its development as a stunt or sight seeing character under operators who may or may not be technically competent to have charge of flights."⁶⁴

Hoover's recommendations stemmed from his impressive grasp of the state of American civil aviation. Almost from the moment that he assumed his position as Commerce Secretary, Hoover established close connections with parties interested in the development of American aeronautics. In fact, his notes for the Conference on Aviation include references to recent talks with "four or five of

⁶³ Hoover's phrasing here highlights the embryonic nature of aviation terminology. Terms like "airline," "airmail," and even "airport" had not yet become set in the vernacular, leading to many and varied spellings.

⁶⁴ "Notes for Meeting With the Air Craft Men," July 16, 1921, Box 39, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

the air craft manufacturers”⁶⁵ on a recent tour of navy facilities. During the remainder of his time as Secretary of Commerce, and later during his Presidency, Hoover consistently supported the development of American aviation—most specifically through efforts to foster the rational growth of a self-sustaining national air transport network. That support ultimately yielded positive results, with the creation of a mature commercial aviation network standing as one of the most significant yet overlooked legacies of Hoover’s political career.

Hoover’s efforts clearly reflected the influence of his commitment to what historians have termed the associational state. Joan Hoff Wilson has argued that Hoover’s economic ideology emerged from a pragmatic, progressive utopianism most clearly defined as a type of liberal corporatism. Wilson contends that Hoover’s efforts at both the Commerce Department and in the White House reflected a firm dedication to administrative reorganization, decentralization, and the desire for voluntary cooperation between government and business. In this effort, Hoover believed that the government’s proper role was to provide information, coordinate activities and supply guidance, but not act as a coercive force or involve itself in production or distribution. Ideally, the government would serve as a facilitator, helping Americans pursue their own self-interest in a cooperative and productive manner.⁶⁶ Hoover’s commitment to making government the ally of business was particularly strong in the field of emerging technologies—most notably radio and aviation.⁶⁷ For these nascent industries, federal support for research, cooperative organization, and regulation had the utmost potential to help stimulate growth.

⁶⁵ Ibid.

⁶⁶ Joan Hoff Wilson. *Herbert Hoover: Forgotten Progressive* (Prospect Heights: Waveland Press, Inc., 1992), 56-69.

⁶⁷ For more information on Hoover’s attempts to apply the associative state to specific industries, see: Ellis Hawley, “Three Facets of the Hooverian Associationalism: Lumber,

Aviation represents the most significant—and successful—example of Hoover’s implementation of associationalist ideology. His focus on associationalism provided Hoover the means through which to support the development of a nascent industry, protecting it from the harsh realities of the truly free market while avoiding the specter of nationalization. Politically, the latter path would have been untenable in the United States, but, economically, the creation of a national carrier represented a rational option at the time. This, in fact, was the avenue through which European commercial aviation developed during the era, and by the early 1930s virtually every European nation had a nationalized airline. These nations discovered that in the European context—embracing myriad international routes and direct competition from other nations’ carriers—airlines could simply not compete without direct governmental subsidies for technological development, manufacturing, and operations.⁶⁸

The American context obviously encompassed important distinctions, but it remains significant that Hoover eschewed any push for nationalization and instead applied his associational ideology to support aeronautical development. It was clear that in the 1920s American commercial aviation had little hope of surviving without some form of federal support, and Hoover’s policies offered financial assistance in a politically tenable package. As both Commerce Secretary and President, Hoover consistently strove to use federal power to facilitate rational, structured growth without resort to public ownership.

Aviation, and Movies, 1921-1930,” published in Thomas McGraw’s *Regulation in Perspective* (Cambridge: Harvard University Press, 1981).

⁶⁸ During this period virtually no country outside of the United States and Europe possessed an airline. Though countries like Canada and Australia did begin to offer limited commercial service by the late-1920s, it took years for them to develop anything close to a coherent air transport network, or any airlines worthy of the name. For more information see: R.E.G. Davies, *A History of the World’s Airlines* (London: Oxford University Press, 1964), 56-70, 151-217.

In this effort, Hoover embraced several specific policies. He focused on creating legislation to regulate the industry and improve safety, pushed for the utilization of federal funds to create and improve infrastructure such as navigational aids and radio communications, and authorized federal support for research into new technologies. Hoover also worked diligently to publicize aviation to the American people. Finally, he worked with the Post Office to establish a system of informal subsidies to help fund the emerging airmail network—in so doing creating the conditions for the possibility of solvency for private air carriers. Collectively, Hoover's actions created a coherent vision for federal aviation policy and reflected a keen understanding of both the political and economic landscape in the early 1920s. That vision led to the origins of commercial air transport in the United States and persevered through Franklin Roosevelt's Democratic administrations. In fact, Hoover's basic template came to serve as the basis for the 1938 Civil Aeronautics Act, legislation that guided the continuing growth of commercial aviation until the end of the 1970s.

A number of crucial allies supported Hoover in this effort. Specifically, Hoover's relationships with members of the Commerce Department and his focus on utilizing airmail routes to encourage private growth created opportunities for other federal officials who shared his vision. Postmaster Generals Harry S. New and Walter F. Brown consistently pursued postal support for private air carriers, and Brown's efforts went so far as to result in allegations of collusion with the industry.⁶⁹ Hoover's support for the creation of an Aeronautics Division within the Department of Commerce created the foundation for federal regulation and oversight. Assistant Secretary William MacCracken and Clarence Young of the Aeronautics division worked tirelessly to regulate and promote aeronautics. These men's actions formed the core of a range of federal initiatives that legitimized

⁶⁹ The details of Brown's efforts and their consequences will be taken up in the next chapter.

commercial flying and laid the foundation for a mature aviation industry in the United States. Without their efforts it is unlikely that Americans would have had access to a national air transport network before the Second World War.

During this era, aviation's cultural prevalence formed a powerful context within which Hoover and his allies sought to promote commercial growth. In the early 1920s, aviation came to form an increasingly significant cultural presence in American lives, largely through the activities of barnstormers, air shows, and pilots' establishment of ever-increasing speed, altitude, and endurance records. These activities facilitated a widespread fascination with flying, but led to a majority of Americans perceiving aviation to be an exciting and dangerous form of entertainment—not a commercial reality.⁷⁰ As such, American enthusiasm for aviation created conditions ripe for the possibility of commercial growth by raising awareness among lawmakers and public officials, but also highlighted the commercial industry's nascent status. Indeed, even to refer to an “industry” during this period is a bit of a misnomer. Although numerous airframe manufacturers and fledgling commercial operations existed in the years following World War I, these disparate corporate entities had little direction or financial success.

Although the pre-war period witnessed the creation of early “flying circuses” and air shows, in the years following World War I Americans truly began to become “air minded.” In the wake of the Armistice, the government sold thousands of war-surplus aircraft at clearance prices. These planes—mostly Army JN-4 “Jenny” trainers—allowed unprecedented numbers of Americans to take to the skies for the first time. Led by military pilots discharged at the cessation of hostilities, a new army of

⁷⁰ For more on Americans' contemporary cultural perceptions of aviation, see: David Courtwright, *Sky As Frontier: Adventure, Aviation and Empire* (College Station: Texas A&M University Press, 2005), 3-70.

so-called “barnstormers” began to migrate across the country. Lured by the freedom flying offered and the commercial possibilities of selling rides to their fellow countrymen, these pilots crisscrossed the country in the years after World War I. They introduced untold Americans to aviation for the first time, and at the same time created a rapidly growing pool of men and women with aviation experience.

Barnstormers’ activities, however, took place in an environment totally free from federal oversight, and with virtually no aviation-related infrastructure. Airports were almost non-existent at the time, and there were no mechanisms for licensing pilots, certifying the safety of aircraft, or regulating commercial activities. As a result, although flying captured many Americans’ imaginations as they saw barnstormers or took short rides, aviation remained something of a sideshow—an exciting yet dangerous pastime.

Barnstormers’—and indeed almost all pilots’—utilization of war surplus aircraft combined with irregular maintenance, little or no pilot training, and no formal mechanisms to assess the airworthiness of aircraft to result in a dismal safety record. Crashes were common, often injuring or killing pilots as well as their passengers and even spectators on the ground. Indeed, by the mid 1920s many localities began prohibiting flying circuses from performing within city or town limits to protect against death and injury. Adding to pilots’ difficulties, their basic aircraft lacked instruments to allow flight in bad weather and most pilots lacked any training in instrument flying. There were no formal airways, and pilots often struggled to navigate across the country using road maps and attempting to follow railroad tracks. Air traffic control was nonexistent even where municipalities or the military had established primitive airports, and, in any event, pilots did not have the ability to communicate with the ground because of the lack of suitable radio transmitters. Finally, there were

no mechanisms to assess the safety and quality of new aircraft, resulting in a trial and error approach that often didn't reveal flaws in design or manufacturing until after the sale of aircraft to consumers.

In spite of these difficulties, in the years immediately after World War I, both the government and private interests engaged in limited attempts to organize commercial flying ventures. The Army's inaugural airmail line from Washington, D.C. to New York offers the most significant example, and even achieved modest success. The operation demonstrated the ability of aircraft to perform a commercial function on a regular schedule with minimal delays. In August of 1918 the Army turned the airmail route over to the Post Office Department. The Post Office immediately began plans to expand the airmail network west from New York, establishing stops in Cleveland and Chicago in 1919 and completing a transcontinental line to San Francisco by September of 1920.⁷¹

The same period also witnessed several private corporations' inauguration of commercial ventures. As early as 1914, the St. Petersburg-Tampa Airboat Line promised twice-daily flights across Tampa bay, saving passengers a lengthy rail journey. The service continued for four months, ultimately carrying over 1,200 passengers.⁷² In 1919 Edward Hubbard organized a mail service from Seattle to Vancouver. Hubbard launched a daily service in October of 1920 with limited commercial success. Aeromarine West Indies Airways operated a similar service between Miami and Nassau beginning in November 1919. The latter carrier serviced wealthy vacationers, but also carried thirsty passengers eager to escape Prohibition to less restrictive locales.⁷³

These private ventures demonstrated the commercial possibilities aviation offered, but saw limited financial success. In addition, it is of no small significance that all three employed the use of

⁷¹ Davies, *A History of the World's Airlines*, 40.

⁷² Ibid, 5.

⁷³ Ibid, 41. See also William M. Leary, Jr., "At the Dawn of Commercial Aviation: Inglis M. Uppermer and Aeromarine Airways," *The Business History Review* Vol. 53, No. 2 (Summer, 1979), 167-190.

seaplanes, thus avoiding the problems associated with a lack of airport infrastructure. They also eschewed flying at night or in bad weather—a realistic acknowledgment of their planes’ and pilots’ limitations, but a policy that sharply limited their operations’ commercial potential. Regardless, it quickly became clear to prospective airline operators that flying passengers was simply not profitable. Hubbard’s and Aeromarine’s postwar efforts were only kept afloat by securing government airmail contracts for international routes, and in subsequent years dozens of attempts to open passenger service in the U.S. ended in commercial failure. It would not be until the passage of the 1925 Contract Airmail Act that the government offered up national airmail routes to private corporations. These airmail contracts offered the possibility of profitability through government subsidies, and came to represent a cornerstone of federal aviation policy.⁷⁴

Aircraft manufacturers also struggled during these early years. Although firms like Curtis had rapidly expanded their operations during the war to fill military contracts, the vast majority of manufacturers were small, informal operations. For example, Boeing, which ultimately grew to become the largest manufacturer of commercial aircraft in the world, used a barn as their production center during the early 1920s. William Boeing, the company’s founder, headed a total staff of less than a dozen employees who designed, built, and tested airframes entirely by hand. During this period, aircraft were constructed largely of wooden frames covered with fabric, making aircraft construction more akin to carpentry than industrial design. Aerodynamics was a trial and error process, governed by the slide-rule and the knowledge gained by test flights. Corporations like Boeing, Douglas, and Beechcraft struggled to find buyers for their products—large orders were still measured in the single digits until well into the latter half of the decade. Early airlines often operated

⁷⁴ The details of this legislation will be examined later in the chapter.

with a total inventory of four or five aircraft, hardly enough demand to stimulate the expansion of production facilities.

Collectively, these conditions created a divergence in American cultural perceptions of aviation. First and foremost, Americans viewed aviation as an exciting but dangerous form of entertainment. David Courtwright argues that barnstorming, in fact, played a central role in marginalizing aviation's commercial appeal. Referring to barnstormers' "plane-swapping . . . death-dive acts," he suggests that these aerial performers "reinforced every stereotype of flying as a dangerous and disreputable sideshow." Those perceptions, moreover, were "magnified by the newsreels [and] tabloids that specialized in spectacles and disaster," and movies like "Wings" and "Hell's Angels" that focused on the violence and death associated with military flying.⁷⁵ As late as 1930 *The Nation* ran a cover story entitled "Is it Safe to Fly?"⁷⁶ Though the article stressed that flying was becoming safer by the year, its prominence suggests that Americans continued to worry about traveling via aircraft. Even more forceful was an article published in the July 1934 edition of *Reader's Digest*. Unequivocally titled "Flying is Still Dangerous," the articles urged readers to look beyond the dramatic gains in speed brought about by air travel and "look at the price [flying exacted] . . . in human lives."⁷⁷ As these articles suggest, Americans struggled to embrace aviation's commercial possibilities.

Simultaneously, however, the possibilities that aviation offered inspired utopian hopes. According to historian Joseph Corn, the rapid advance of aeronautical technology led to ever greater aerial feats, galvanizing the American public and leading to dreams that the airplane could help to

⁷⁵ Courtwright, *Sky As Frontier*, 52.

⁷⁶ Francis D. Walton, "Is it Safe To Fly?" *The Nation*, October 22, 1930, 438-439.

⁷⁷ Kenneth Brown Collings, "Flying is Still Dangerous," *Reader's Digest*, July, 1934, 40-42.

cure society's ills and usher in a new "air age." In his words, "the gospel of aviation held out a glorious promise, that of a great new day in human affairs once airplanes brought about a true air age." This age promised the end of poverty, world peace, and even embraced hopes for immortality. Utopian visions "were both an expression and a cause of the great popular enthusiasm shown for aviation" and suggested that at least some Americans embraced hopes that aviation would quickly become a foundational element of Americans' lives.⁷⁸

These divergent visions, it appears, coexisted uneasily during the interwar era. While virtually all Americans embraced the excitement aviation embodied, there remained a sharp cultural divide between hopeful and fearful visions of aviation's social and economic possibilities. This context profoundly shaped federal efforts to promote aviation, and helps explain policymakers' consistent focus on emphasizing safety and reliability. As flying became safer, aircraft more reliable, and federal regulation stricter, Americans increasingly moved to accept aviation's commercial possibilities. Simultaneously, however, prominent deaths at national air races, the disappearance of pilots like Amelia Earhart on long-distance flights, and airline crashes—such as the one resulting in the death of Nevada Senator Bronson Cutting—continued to highlight aviation's danger. While the pendulum steadily swung in the direction of aviation's positive associations as the era progressed, policymakers remained cognizant of the need to focus on issues related to safety.

Within the prevailing cultural, economic, and developmental context facing aviation in the early 1920s, Hoover's actions seem even more remarkable. In a period during which there was no established "industry" as such for either airlines or aviation manufacturers, and most Americans still

⁷⁸ Joseph Corn, *The Winged Gospel: America's Romance With Aviation, 1900-1950* (New York: Oxford University Press, 1983), 27.

associated flying with dangerous entertainment, the Commerce Secretary worked to bring disparate interests together to work out the best path for future growth. Not only did Hoover facilitate the creation of a coherent industry, he also had the foresight to identify the pressing need for governmental guidance.

Hoover's focus on aviation policy began almost as soon as President Warren Harding appointed him Commerce Secretary in March of 1921. In April he helped to organize a Committee on Air Navigation, bringing together representatives from the Smithsonian Institution, Army, Navy, Commerce Department, Post Office and civilians. The Committee's purpose was to "draft a national aviation policy" consistent with military, commercial, and private interests. Representatives proposed a program "based on national defense almost wholly" while addressing issues of legislation, oversight, aerial navigation, and promotion. Arguing "commercial flying will not be important for some years," the Committee suggested that "when it really becomes important it will secure civilian control." In the meantime, however, representatives concluded, "the Army and Navy may bear the brunt of aviation at present."⁷⁹

In spite of their pessimistic assessment of contemporary commercial aviation, the Committee did make a number of specific recommendations designed to promote commercial growth. Arguing that progress depended on the establishment of federal legislation and appropriations, representatives agreed on four specific recommendations: continuation of separate War, Navy and Post Office air services, the creation of a Department of Aeronautics in the Department of Commerce to regulate air navigation and "carry out policies which may be adopted to encourage civil and commercial aviation," a continuation of War Department efforts to establish air routes, and continued support for

⁷⁹ Memorandum for Secretary Hoover: Air Navigation Committee, April 5, 1921, Box 39, Hoover Commence Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

scientific research carried out by the National Advisory Committee for Aeronautics (NACA).⁸⁰

While these recommendations emphasized the military's role in promoting American aeronautical development, representatives nonetheless exhibited prescient insight regarding the current state of U.S. aeronautics. They correctly identified an urgent need for legislative oversight, highlighted the value of formal airways, and focused on the necessity of further research. In addition, the Committee displayed a ready willingness to use the power of the federal government to support the growth of civil and commercial aviation. The prescience of their conclusions would be borne out in the years to come, and it appears that Secretary Hoover took these early lessons to heart.

Hoover also established contacts with many members of the emerging aviation industry in the immediate wake of assuming his post as Commerce Secretary. In March 1921 Hoover corresponded with Charles Walcott, Chairman of the NACA, regarding the Advisory Committee's annual report and the potential for short-term Congressional legislation pursuant to aeronautics.⁸¹ The NACA report, like Hoover's later Committee on Air Navigation, argued for the necessity of federal legislation to regulate the emerging aviation industry. NACA officials worried that in the absence of

⁸⁰ The NACA, progenitor of NASA, functioned as a government-sponsored center for aeronautical research. Created by Woodrow Wilson in 1915, the NACA formed the foremost center for aeronautical development during the interwar period. NACA scientists and aerodynamicists made numerous breakthroughs that helped create the technological foundation for aviation's continued growth. Key among these were the "NACA cowl" that streamlined engines, wing de-icing equipment, and the use of a wind tunnel to identify more efficient airfoils. For more information see: Roger D. Launius, "The Wright Brothers, Government Support for Aeronautical Research, and the Evolution of Flight," and William M. Leary, "A Perennial Challenge to Aviation Safety: Battling the Menace of Ice," in Roger Launius and Janet Daly Bednarek, eds., *Reconsidering a Century of Flight* (Chapel Hill: University of North Carolina Press, 2003), and Memorandum for Secretary Hoover: Air Navigation Committee, April 8, 1921, Box 39, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

⁸¹ Charles Walcott, Letter to Herbert Hoover, March 23, 1921, Box 39, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

federal legislation, “independent and generally conflicting legislation by the various states will be enacted which will greatly hamper the development of aviation.” The report went on to suggest that governmental support for commercial aviation would offer a two-fold benefit to the nation. First, supporting the “development of aviation as the backbone of military preparedness would be much less [costly] than the waste that would result from unprepared entry into war.” Secondly, the Committee argued that support for commercial aviation “would, in itself, in time of peace yield adequate return in promoting and strengthening our means of transportation, advancing the progress of civilization, and increasing the national wealth.”⁸² Admittedly, the NACA mission was to help foster aviation’s development, but its recommendations echoed a growing consensus regarding aviation’s place in America’s future. The connection between commercial development and military preparedness in particular would come to dominate discussions of federal policy in years to come.

Hoover’s apparent interest in commercial aviation drew the attention of industry leaders. As early as June of 1921 the President of Aeromarine Airways wrote the Secretary to note his gratitude that Hoover was taking “an active interest in the development of civilian aviation and the Federal Regulation of Aerial Routes.”⁸³ This correspondence formed the beginning of a series of communications between Hoover and airline executives, manufacturers, and members of leading aviation organizations. In fact, the manufacturers and airlines themselves played a key role in pushing for greater federal oversight over aviation, correctly identifying the need for federal leadership in promoting safety and standardizing licensing. Hoover’s decision to appoint an Aviation Consulting Commission in June of 1921 emerged in large part from industry efforts. More than fifty executives representing nascent airlines, aircraft and engine manufacturers and pilots petitioned the

⁸² Ibid.

⁸³ C. F. Riddin, Letter to Herbert Hoover, June 22, 1921, Box 39, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

President for greater federal leadership in aeronautical development. Hoover worked closely with these executives, eventually calling many of them to Washington, D.C. for the previously mentioned July Conference.

Emerging connections between Hoover and members of the aviation industry signaled the beginning of a continuing relationship between governmental officials and industry executives that would prove foundational to aviation's commercial development. Cooperation between government and business was nothing new for Hoover, and the Secretary's support for emerging industries formed a key aspect of his associationalist ideology. Indeed, his focus on information gathering, cooperative planning, and, ultimately, the creation of business-friendly regulation vis-à-vis aviation offers the clearest example of associationalisms' ability to successfully promote a commercial interest.

Even Hoover, however, was at times surprised at the extent to which industry officials pushed for federal action. In a 1921 letter to New York Congressman Frederick Hicks, Hoover remarked that aviation was "the only industry that favors having itself regulated by the federal government."⁸⁴ While certainly unusual, the aviation industry's desire for federal regulation represented a rational response to conditions aircraft manufacturers and airlines faced in the early 1920s. Aviation historian Nick Kommons refers to this period in aviation's commercial development as suffering from the "chaos of laissez faire." Indeed, commercial aeronautics ironically found its potential for growth limited by a lack of federal oversight. The industry's small size meant that there was as yet virtually no competition between airlines. In addition, both manufacturers and airlines struggled against cultural perceptions associating aviation with danger and entertainment, and, in any event, only the

⁸⁴ Herbert Hoover, Letter to Frederick C. Hicks, December 30, 1921, quoted in Nick Kommons, *Bonfires to Beacons: Federal Civil Aviation Policy Under the Air Commerce Act, 1926-1938* (Washington, D.C.: Smithsonian Institution Press, 1989), 22.

province of the rich. Further, a lack of formal regulation meant an uncertain future for manufacturers and carriers alike. Manufacturers hoped that airworthiness certificates would weed out unsafe designs and instill public trust in certified aircraft. Airline executives worried a dearth of federal regulation over licensing, operations, navigation, and airports would result in a hodgepodge of state and local statutes, complicating operations and hindering expansion.⁸⁵ Finally, commercial interests desired that the federal government take the lead in establishing a national network of airways. The military and Post Office had already begun by constructing a limited number of airfields and experimenting with signing and lighting air routes, but much more work would be needed to create the foundations for a viable commercial system. These conditions pushed aviation executives to lobby forcefully for federal intervention. They believed that only the power of the federal government could rescue the industry from chaos and provide the necessary leadership to see the industry to maturity.

Federal leadership necessitated both the willingness and ability to organize a coherent national aviation policy. Hoover's actions in the early 1920s demonstrate his understanding of the issues involved, but at that time there remained insufficient support for federal action. While legislators—including Senator Morris Sheppard (D-Texas), Congressman Murray Hulbert (D-New York), Congressman Norman Gould (R-New York), and Senator Harry New (R-Indiana)—introduced several bills to Congress favoring some level of federal aviation legislation during those years, none

⁸⁵ For a comprehensive treatment of legal issues related to aviation, see: Stuart Banner, *Who Owns the Sky?: The Struggle To Control Airspace From the Wright Brothers On* (Cambridge: Harvard University Press, 2008).

gained traction.⁸⁶ Further, while Hoover himself worked actively to support American aeronautics, any federal action necessitated the creation of a legal framework.

In fact, two separate aspects of federal engagement would be necessary to create a viable private commercial air transport industry. First, airlines' ability to achieve solvency increasingly appeared to necessitate federal assistance. Most obviously, this could be facilitated through airmail subsidies—in many ways the same policy that helped underwrite railroad expansion in the previous century. Secondly, federal officials and airline executives alike recognized the need for some form of overarching federal oversight. Most specifically, both sides looked to the government to certify and police airline safety. Ultimately, these goals would be realized through the passage of two foundational pieces of legislation—the 1925 Contract Airmail Act, or “Kelly Bill,” and the 1926 Air Commerce Act.

Before 1925, however, several obstacles stood in the way of these bills. It appears that lawmakers' inability to pass legislation before that time reflected the influence of a related set of factors. Americans' cultural association of flying with danger continued to limit aviation's commercial potential. David Courtwright argues that well into the 1920s, a majority of Americans viewed flying as a pursuit dominated by “spectacles and disasters,” hardly a firm basis for stable commercial service.⁸⁷ Additionally, the persistent inability of American airlines to remain solvent meant that Americans lacked examples of successful commercial ventures to combat that cultural perception. As Nick Kommons argues, in the absence of public pressure, Congress had no popular mandate to act. Instead, impetus came from a special interest group—the aviation industry itself—

⁸⁶ Significantly, New later served as Postmaster General under Hoover and played a key role in promoting commercial aviation through airmail contracts. For further information, see Kommons, *Bonfires to Beacons*, 35-64.

⁸⁷ Courtwright, *Sky as Frontier*, 52.

that did not carry the weight of the American public. Although pressure for federal action built steadily within that group, it had little effect until 1925.

Contemporary commercial aviation also had yet to demonstrate the ability to undertake safe and reliable transport operations. Though the Army and the Post Office inaugurated airmail service in 1918, those efforts grew slowly and took time to influence lawmakers and the American public alike. By the mid 1920s, however, the Post Office's transcontinental airmail service conclusively demonstrated that aircraft could be used to transport mail reliably, day and night, and in all types of weather.⁸⁸ That example did much to establish public confidence in commercial flying and offered concrete evidence for those wishing to establish aviation-related legislation.

By 1925, in fact, both legislators and commercial interests looked forward to the transfer of Post Office airmail routes to private interests. The Post Office airmail service had never been intended as a permanent solution. It was, in effect, a trial run to demonstrate the viability of such a model. Having accomplished their goal, Post Office officials—most notably Second Assistant Postmaster General Paul Henderson—looked to transfer airmail routes to nascent airlines. According to Kommons, Henderson was an ardent cheerleader for privatizing these routes. Establishing close connections with business interests, Henderson focused on preparing airline executives for the

⁸⁸ It should be noted, however, that the Post Office's airmail service largely failed to prove that long-distance air transport routes could be operated with minimal physical risk to pilots and passengers. In fact, flying the mail for the Post Office was one of the most dangerous jobs in the country. Of the forty pilots initially hired by the Post Office, only eight were alive eight years later. In 1920 alone, a sixth of airmail pilots perished in the line of duty. The implications of those deaths, however, were for the most part overshadowed by laudatory reports about the service. See: Courtwright, *Sky as Frontier*, 59.

takeover. He did his job well, attracting more than 2,000 inquires from aspiring airmail carriers, and drawing interest from no less a figure than Henry Ford.⁸⁹

Henderson's efforts, both overseeing Post Office airmail service and promoting eventual privatization, played a key role in making aviation legislation palatable to Congress. Support from business leaders like Henry Ford did much to dispel worries about aviation's danger,⁹⁰ and the Post Office's excellent record of regular service offered a concrete example that aircraft could be effective in transporting cargo quickly and reliably. Simultaneously, Hoover's work behind the scenes to create and sustain close relationships between federal officials and aviation executives allayed worries about safety. As early as 1921 Hoover had made clear his desire to establish safety regulations in order to "prevent civil aviation from getting into bad repute because of its development as a stunt," and his continuing push for federal oversight helped establish confidence in aviation's ultimate commercial viability.⁹¹

These efforts culminated in the passage of seminal new legislation. In February of 1925, Pennsylvania Congressman Clyde Kelly—Chairman of the House Post Office Committee—introduced a bill establishing the commercial foundation for private airlines. Kelly's bill formally authorized the transfer of airmail routes from the Post Office to private contractors, creating the potential for government-guaranteed profits for contract mail carriers. The bill authorized a special ten-cent-per-ounce airmail rate, and promised airmail carriers 80 percent of operating revenues.

⁸⁹ Kommons, *Bonfires to Beacons*, 67.

⁹⁰ Humorist Will Rodgers offered a telling statement of Ford's influence, writing in 1926 that Ford "wouldnt [sic] leave the [proverbial] ground unless things looked pretty good to him up there." See: Ibid, 67.

⁹¹ "Notes for Meeting With the Air Craft Men," July 16, 1921, Box 39, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

These provisions opened new financial possibilities for commercial aviation, offering consistent revenues and federal support for the continued expansion of the airmail network.

Kelly's bill sailed through Congress, and in February 1925 President Calvin Coolidge signed it into law. The bill's passage signaled a new era for American commercial aviation, but its general popularity obscured the need for further clarification of the government's responsibility to commercial aeronautics. It allayed aviation industry fears by providing a stable basis for growth in the form of government contracts. It also circumvented initial Congressional worries about governmental subsidization of the industry by guaranteeing airmail carriers revenues from postal receipts, rather than from general tax revenues.⁹² The bill's passage, however, ultimately served as the beginning, rather than the end of the debate concerning the federal government's proper relationship to this emerging commercial concern.

Significantly, the Kelly Bill made no mention of federal regulation; its focus was purely the privatization of airmail contracts. As such, its passage focused Congressional attention on the need for a federally enforced regulatory framework—in effect mandating some form of federal oversight lest private airmail carriers operate in an environment totally free from supervision. In that sense the Kelly Bill created the conditions for the possibility of additional federal engagement; its passage represented a tacit admission that Hoover's desire for federal safety and licensing guidelines necessitated immediate legislative action, as private carriers would now be entrusted with the safety of the U.S. mail.

Congressional Representatives and officials at the Department of Commerce agreed on the government's need to codify both fiscal and regulatory policy, but disagreed sharply regarding the

⁹² F. Robert van der Linden, *Airlines and Airmail: The Post Office and the Birth of the Commercial Aviation Industry* (Lexington: University Press of Kentucky, 2002), 10.

proper extent of federal power. For instance, there was pressure from members of Congress, state governors, and local and municipal officials to allow individual states and municipalities to license pilots and develop air traffic rules—a situation that flew in the face of Hoover’s efforts to promote a national basis for stable growth.⁹³ Additionally, although the Kelly Bill avoided a direct governmental subsidy for airmail carriers from tax revenue, it still provided for federal fiscal support of a specific industry. This was nothing new for the government, and, in fact, virtually everyone in Congress and Commerce supported some measure of federal economic support. There was significant discord, however, concerning the definition of “subsidy,” and exactly what form federal aid should take. Despite its easy passage, the Kelly Bill served to encourage, rather than close, debate on this topic, an issue that would continue to dog commercial aviation for the next decade.⁹⁴

Despite these continuing concerns, the Kelly Bill’s passage represented an important first step in federal willingness to take ownership of aeronautical development. Simultaneously, however, it highlighted the immediate need for legislation establishing federal regulatory oversight. That legislation, ultimately passed as the 1926 Air Commerce Act, formed the second pillar of the federal government’s willingness to engage commercial aviation. As previously stated, Hoover had been lobbying for the creation of such a bill since at least 1921. Little support existed for new legislation, however, while aviation remained on the margins of American commercial development. The Kelly Bill’s passage thrust issues of safety and oversight into sharp relief and created an immediate impetus for Congressional action.

⁹³ For more information, see: Kommons, *Bonfires to Beacons*, 27-28, and Banner, *Who Owns the Sky?*, 102-134.

⁹⁴ In fact, concerns over airmail routes and subsidy payments would result in the Contract Airmail Act being amended in 1926 and 1928, and the subsequent passage of the superseding McNary-Watres (1930) and Black-McKellar (1934) Acts. Not until the passage of the 1938 Civil Aeronautics Act were these questions finally resolved.

Simultaneously, President Calvin Coolidge authorized the creation of an investigatory commission made up of governmental, military, and private interests to determine whether and how the federal government should respond to aviation's new commercial potential.⁹⁵ Coolidge tasked the Morrow Board—named after its Chairman, Dwight W. Morrow—to investigate all aspects of American aviation and return with recommendations for federal action. In December 1925 it did just that, advocating the creation of a bureau of air navigation within the Commerce Department, and advising the government to progressively extend airmail service across the country. The Morrow Board's report, Kommons relates, resulted in "legislators scurry[ing] to get in on the act," prompted by the clear Presidential mandate to pass new legislation.⁹⁶

Presidential support combined with the mandate set forth by the Kelly Bill to hasten the passage of a new law. Not surprisingly, the forthcoming bill bore the unmistakable stamp of Hoover's influence. Though Hoover did not write the bill himself, his influence and that of a key ally—Chicago lawyer William MacCracken—played crucial roles in shaping the forthcoming legislation.⁹⁷ The final bill clearly reflected Hoover's focus on safety, promotion, and infrastructure

⁹⁵ Coolidge's action also represented a response to Brigadier General William "Billy" Mitchell's argument that the government should create a new "Department of the Air," responsible for all civil and military aeronautics. Mitchell was well known as an outspoken proponent of aviation. Following World War I, he was vociferous in his advocacy of air power. In 1921 Mitchell helped organize a bombing demonstration that led to the spectacular destruction of a captured German battleship. Mitchell used the publicity arising from his success to argue for the creation of a separate air service. These actions soon raised the ire of Mitchell's superiors, eventually leading to a demotion and a court martial. Nonetheless, Mitchell remained a popular and well-known public figure until his death in 1936. Coolidge hoped that the new commission would offer less radical recommendations than those put forward by the Army maverick, and provide political cover for the President's lack of willingness to embrace such an extreme policy. See; Kommons, *Bonfires to Beacons*, 65-88. For more information on Mitchell, see: James J. Cooke, *Billy Mitchell* (Boulder: Lynne Rienner, 2002).

⁹⁶ Kommons, *Bonfires to Beacons*, 78-81.

⁹⁷ MacCracken's actions will receive more attention later in this chapter.

development.⁹⁸ It created a Bureau of Air Commerce within the Commerce Department and authorized federal oversight of licensing, safety, airway construction and research.

Together, the Air Commerce Act and the Kelly Bill created the legislative foundations of federal engagement with American aeronautics. Hoover's fingerprints were clearly in evidence in both bills, though he was not personally responsible for either. It remained to be seen, however, exactly how each law would operate in practice—in fact, in many ways each new bill raised more questions than it answered. Significant uncertainties remained regarding the nature of federal airmail subsidies, and the form, extent, and execution of federal oversight. Fundamentally, the new laws represented the beginning, rather than the culmination of the Commerce Secretary's engagement with aviation. They created the framework within which Hoover operated for the duration of his time as Secretary of Commerce, and later as President. In both of those positions Hoover utilized his power and influence to further a powerful vision of aviation's value to America. That vision reflected his earlier desire to see aviation establish a secure commercial footing, but moved beyond those initial aspirations to encompass a much more comprehensive desire to see aviation play a central role in America's continuing development.

Beginning in 1925 Hoover redoubled his efforts to shape aeronautical development. Consistent with his earlier efforts and guided by his associational ideology, Hoover worked closely with airline executives, engine and airframe manufacturers, aviation interest groups,⁹⁹ federal officials, and the

⁹⁸ For more specifics regarding Hoover's actions, see: Kommons, *Bonfires to Beacons*, 80-88.

⁹⁹ Most significantly the Aeronautical Chamber of Commerce. Hoover, in fact, maintained an active correspondence with the Chamber's General Manager, Luther K. Bell, during his time as Secretary of Commerce and as President. See, for example: Luther K. Bell, Letter to Mr. Richard S. Emmet, Secretary to Secretary Hoover, July 15,

military to answer a series of foundational questions. Specifically, Hoover strove to define the federal government's responsibility to the aviation industry in the fields of regulation, infrastructure, oversight and research. In addition, Hoover also attempted to delineate the relationship between civil and military aviation. Finally, and perhaps most significantly, Hoover strove to clarify the role of government "subsidies" in aeronautical development. Hoover's efforts reflected his continuing focus on commercial aviation, but also did much to codify federal aviation policy at a crucial moment in the industry's history. These efforts represent the most successful example of associationalism working in practice, as Hoover's efforts ultimately fostered relationships and policies that led to the maturation of American commercial aviation.

Between 1925 and 1927 Hoover clearly defined his aviation policy in a series of press releases and speeches. That policy highlighted his commitment to associationalism and his focus on establishing close relationships between business—particularly emerging industries—and government. Hoover's efforts focused on the promotion of a central set of ideas. First, Hoover continued to emphasize aviation's need for federal assistance and oversight. Hoover believed that commercial growth had to take place in a structured environment. In his mind, federal oversight of licensing and safety were necessary preconditions for commercial growth. In addition, he argued stridently that the government had an obligation to provide lighted airways, emergency fields, and navigational aids for commercial networks. Second, Hoover worked to craft an aviation policy that provided some level of governmental fiscal support while steering clear of direct subsidies or overt

1921, Box 39, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa. In that letter Bell references an ongoing correspondence with Hoover via mail and phone. See also: Luther K. Bell, Letter to Mr. Lawrence Ritchie, Secretary to the President, March 6, 1931, Box 56, President's Subject File, Herbert Hoover Presidential Library, West Branch, Iowa. Here Bell references a face-to-face meeting with Hoover.

nationalization. Finally, Hoover emphasized the connections between civil and military aviation. For him, the development of commercial aviation represented a positive end in itself, but Hoover also believed that a mature aviation industry would help aid military preparedness. He consistently focused on these points while refining his vision for the future of aviation, attempting to sell it both to Congress and the American people.

In a September 1925 press release, Hoover articulated aviation's pressing need for federal assistance. He began by asserting that the Commerce Department "has been confident for the last two years that the development of the flying art has reached a point . . . near the possibility of self supporting application." That confidence, however, did not allay Hoover's conviction "that we can not have the successful development of commercial aviation until . . . government services are provided." With that in mind Hoover related that he and others in the Commerce Department "have advocated the creation of a Bureau of Civil Aviation that the Government might undertake to give services to commercial aviation."¹⁰⁰ This early call for a separate agency within the Commerce Department to oversee American aviation clearly foreshadowed the subsequent establishment of the Bureau of Air Commerce.

Hoover's reference to "government services" signaled his belief that the time was right for the federal government to take an active role in aviation's development. By the early 1920s there existed several successful aircraft manufacturers, including Curtis, Boeing, Douglas, and Ford. Engine producers such as Wright and Pratt & Whitney also demonstrated the potential for further growth, and nascent airlines showed that they could safely—if not profitably—fly established routes. Hoover believed this emerging industry possessed the potential for tremendous growth, and the ability to

¹⁰⁰ Statement of Secretary Hoover on Commercial Aviation, September 24, 1925, Box 40, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

transform American commerce. Its ability to do so, however, was sharply limited by a lack of regulation, oversight, and infrastructure. In addition, Hoover believed that the American public needed to be educated about commercial aviation. At this time a majority of Americans perceived aviation as both dangerous and expensive—attributes sure to limit a public embrace of mainstream commercial service. First with airmail, and later with passengers, these prevailing ideas would need to change in order for flying to play a widespread commercial role. At this crucial juncture, Hoover believed that the federal government could play a vital role in aiding the development of a nascent industry with great future potential.

Hoover's conclusion reflected the results of an earlier fact-finding effort. Leaning on his background as an engineer, in May of 1925 Hoover authorized a comprehensive study of transportation networks. Citing the lack of federal funds with which to organize such an endeavor, Hoover brought together members of the American Engineering Council, the aviation industry, "other technical bodies" and representatives from the Commerce Department to create a voluntary technical commission tasked to address the question. Hoover hoped that they would consider the state of aviation both in America and abroad in addition to "economics of our own ground transportation." The goal was to ascertain what "the possibilities are for lifting a sufficient amount of the existing traffic into the air to make it self-supporting."¹⁰¹ Both the role and composition of this commission clearly reflected Hoover's economic ideology. He hoped to use the power of the Commerce Department to aid the development of a productive new technology, but shied away from coercive tactics. Instead, he worked to establish close connections between the government, business, and interest groups.

¹⁰¹ Ibid.

The Commission's findings formed the basis for Hoover's September recommendations. In making his case for federal action, Hoover drew heavily on the government's relationship with the shipping industry. Historically, the federal government oversaw maritime safety and navigation, provided buoys, lighthouses and similar infrastructure, and undertook scientific research related to ocean currents, meteorology and other relevant matters. Hoover argued that there existed a "complete analogy" between federal maritime policies and the contemporary state of aviation. In the September press release he argued "before we can expect to develop commercial aviation, we must study the air routes from the point of view of the best channels through the air and in their relation to atmospheric conditions; we must provide for charting the airways; for lighting and marking them; for warnings of weather disturbances . . . we must provide a body of law comparable to our merchant marine law." Without those services, Hoover believed that "aviation can only develop in a primitive way."¹⁰²

Hoover frequently returned to this analogy when promoting his aviation policy. A year later, in a September 1926 speech to the San Francisco Chamber of Commerce, Hoover responded to suggestions that "private enterprise should undertake the establishment of the airways with their own services of lighting and mapping, emergency fields, and inspection of planes," as did railways, without federal support. This line of argument exemplifies much of the criticism levied against Hoover's policies—specifically that they encouraged too much federal expenditure and too much support for a specific industry.¹⁰³ Hoover's response is instructive. He countered by arguing that

¹⁰² Ibid.

¹⁰³ Much of this opposition emerged from Congressional Democrats and Republicans in the mold of Robert LaFollette (R-Wisconsin), who charged that Hoover and his supporters were endeavoring to create a damaging concentration of wealth. Specifically, Congressman John Nelson (R-Wisconsin) charged that a pernicious "aircraft trust" was

aviation had much more in common with shipping than with railroads. For him, federal support for infrastructure was “but a parallel to the service we have performed for navigation for 125 years.” More importantly, however, Hoover argued that railroad infrastructure differed from that of both aviation and shipping in critical ways. In his words “there is a vital difference [between aviation] and the railways, for it cannot be expected that any one private concern will undertake to provide these services [beacons, emergency fields, etc.], because the moment they are provided they would be open to all competitors without payment.”¹⁰⁴ In other words, railways owned their specific transportation routes, and thus directly benefited from any outlay for infrastructure. Air and waterways, in contrast, were open to all, and therefore the government had a responsibility to make passage safe without unduly burdening any specific commercial operator.

Significantly, however, Hoover believed that the government had no responsibility to undertake the construction of airports. Continuing his analogy between shipping and air commerce, Hoover believed “the provision and warehouse for shipping has always been the function of state and local governments. Likewise, the provision for airports must be the responsibility of local governments.”¹⁰⁵ This statement exemplifies Hoover’s commitment to what historian Janet Daly Bednarek terms the “dock” concept.¹⁰⁶ For both shipping and aviation, Hoover believed that the government should be responsible for safety, navigation, communication, and emergency contingencies, but this responsibility ended at the “dock” or airport. Hoover reiterated and further clarified his position in 1927, arguing that airports “should be provided by the principal

behind Hoover’s efforts to support aeronautical development. For more information see: Kommons, *Bonfires to Beacons*, 65-88.

¹⁰⁴ Speech to SF Chamber of Commerce, September, 1926, Box 40, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

¹⁰⁵ Ibid.

¹⁰⁶ See: Janet Daly Bednarek, *America’s Airports: Airfield Development, 1918-1947* (College Station: Texas A&M University Press, 2001), 5.

municipalities of the country in the same way coast cities provide docking facilities for home or foreign ocean trade.”¹⁰⁷ In the case of aviation, however, this policy would lead to trouble in subsequent years when radio communication made air traffic control possible. In fact, decades would pass before federal, state and local governments worked out the proper lines of authority.

Regardless of those looming difficulties, it remained unclear exactly what form federal regulation would take. William MacCracken would ultimately work out the details following the establishment of the Bureau of Air Commerce, but in the interim Hoover marshaled several powerful arguments in support of regulation. First, Hoover claimed that government safety regulation was vital for commercial growth. In his opinion, an examination of “the accidents in the United States” highlighted the “need of government inspection.”¹⁰⁸ In fact, Hoover went so far as to argue that government oversight was a necessary precondition for aeronautical development. Speaking to the San Francisco Chamber of Commerce he related his conviction that “we will not have a development of passenger service . . . unless there be . . . the rigorous inspection of planes and the licensing of pilots, based on competency, by some central authority.” In light of the interstate nature of air commerce, Hoover went on to argue, “that authority must be the Federal Government.”¹⁰⁹

¹⁰⁷ “Hoover Foresees A Greater Air Service,” released for publication in *The New York Times* June 26, 1927, Box 40, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

¹⁰⁸ Statement of Secretary Hoover on Commercial Aviation, September 24, 1925, Box 40, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

¹⁰⁹ Speech to SF Chamber of Commerce, September, 1926, Box 40, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa. Following the passage of the 1926 Air Commerce Act, these responsibilities fell under the rubric of the Bureau of Air Commerce. Under the direction of William MacCracken, the Bureau crafted a set of foundational policies that would regulate licensing for both pilots and aircraft. Initially, the Bureau offered three levels of pilot’s licenses—transport, industrial, and private. To qualify for the first two, applicants had to pass a written and flight test, and demonstrate that they had logged a prescribed number of solo flying hours. Applicants for private licenses had to pass written and practical examinations, but initially needed no solo

Significantly, Hoover's push for federal regulation predated the development of much of the modern regulatory state. In the 1920s the federal government had little authority to police public safety in particular industries, nor willingness to intervene actively in the commercial sphere.¹¹⁰ Though the Progressive Era had created a new appreciation for government's ability to safeguard the lives of its citizens, that realization sparked little in the way of formal legislation. The 1906 Pure Food and Drug Act stands as the most significant regulatory bill of this period, but in many ways represents the exception that proves the rule. As such, Hoover's actions are even more noteworthy, particularly in regard to small and relatively underdeveloped transportation technology.

Hoover buttressed his push for federal regulation with a pair of supporting arguments. First, he argued that "rigorous inspection" was necessary in order to protect human life.¹¹¹ While not an earth-shattering observation, Hoover's commitment to safety reflected a rational desire to protect his fellow countrymen. His second line of argument, however, was much more enlightening. Looking once more to aviation's commercial future, Hoover maintained that clear safety standards were central to "establishing public confidence in aviation as a method of passenger transport."¹¹² Hoover made this same point even more strongly a year later, arguing "public confidence in aerial navigation can only be established by the assurance that there is rigorous inspection of planes and competent

time—though the Bureau later amended this policy to mandate 10 hours of solo flying experience. In addition, all applicants had to meet an age requirement—16 for private pilots, 18 for industrial and commercial—be U.S. citizens, and pass a physical examination. See: Kommons, *Bonfires to Beacons*, 96-99.

¹¹⁰ This lack of oversight extended to other forms of transportation. Although automobiles had begun to travel public roads in the final decade of the 19th century, it was not until 1913 that New Jersey became the first state to require a license to operate a motor vehicle, a mandate that spread slowly to other states throughout the teens and twenties. See: "New York's Auto Imports Increase," *The New York Times*, July 14, 1913.

¹¹¹ Statement of Secretary Hoover on Commercial Aviation, September 24, 1925, Box 40, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

¹¹² *Ibid.*

personnel.”¹¹³ Here Hoover moves beyond a push for safety on its own merits. Instead, his statements reveal an awareness of aviation’s limited contemporary appeal. A strong focus on safety reflected the Commerce Secretary’s efforts to move aviation from the margins of American commerce to the center, the success of which depended in large part on establishing public confidence in commercial flying.

Hoover’s arguments represented a desire to end Americans’ association of aviation with danger and daring, and instead usher it into the commercial mainstream. Even into the 1930s, Americans expressed worry about the safety of air travel. A number of significant accidents—most prominently, famed Notre Dame football coach Knute Rockne’s death in a 1931 crash—continued to highlight the dangers of flying. Media sources reflected these worries. For example, a 1930 article from *The Nation* argued that even more than auto or train travel, Americans continued to associate flying with the potential for a violent death. “There is something so appalling,” the article expressed, “in being burned to death in a crash that the public will not embark on airliners in any great numbers until accidents are practically eliminated.”¹¹⁴

To raise public confidence, Hoover pushed for federal oversight of airways. As previously mentioned, Hoover believed that construction and maintenance of airways, like waterways, should be the province of the federal government. These airways were significant for several reasons. First, their construction reflected Hoover’s focus on safety. Established airways with lighted beacons, intermediate and emergency landing fields, and radio navigational aids would do much to facilitate safe, scheduled air transport service. In 1927 Hoover told *The New York Times* that the government was in the process of “providing the emergency landing fields where needed, surveying and mapping

¹¹³ Speech to SF Chamber of Commerce, September, 1926, Box 40, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

¹¹⁴ *The Nation*, January 29, 1930, 113.

the air routes, licensing pilots . . . supplying air charts to pilots and other air personnel, and producing lighthouses for the air in the same way as it does to safeguard maritime navigation.”¹¹⁵

These improvements would, he believed, provide a solid foundation for commercial development.

Second, lighted airways had the potential to revolutionize air commerce by allowing for night operations. Noting “any study of increased speed in the great distances in our country brings up the question at once of night movement; and necessarily lighted airways,”¹¹⁶ Hoover identified one of the most significant advantages made possible by air transport: speed. Hoover presciently realized that America’s size highlighted the value of air transport’s speed advantage over movement by rail, road, or water. That advantage could only be realized, however, if planes could fly at night as well as during the day. Hoover had already witnessed the organization of a limited network of lighted airways by the Post Office department. The Post Office’s efforts to light their trans-continental route from New York to San Francisco demonstrated the viability of such a system, and also served as an example of its value. Hoover hoped to expand the Post Office’s system into a national network utilized by mail, cargo, and passenger-carrying aircraft alike. Clearly, Hoover believed that only the federal government could successfully create such a network.

Hoover’s support for federal regulation reflected his belief that air transport had the potential to revolutionize American commerce. In his opinion the development of a viable air transport network had numerous economic advantages. Most significantly, Hoover emphasized the benefits of “the

¹¹⁵ “Hoover Foresees A Greater Air Service,” released for publication in *The New York Times* June 26, 1927, Box 40, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa. It should be noted that at the time, radar had yet to be invented, placing great importance on lighting and other physical navigational aids.

¹¹⁶ Statement of Secretary Hoover on Commercial Aviation, September 24, 1925, Box 40, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

development of a new and speedier form of transportation.”¹¹⁷ Simply put, Hoover believed that governmental support for aviation was warranted on the basis of the improved speed and efficiency the new technology offered. Contending that “the economic importance of higher speed . . . is considerable,” Hoover argued that many industries would be willing to pay a premium for the speed aviation offered.¹¹⁸ The existence of a new, speedy transport option would provide revenues for the nascent air transport industry, while at the same time promoting more general economic advantage.

Hoover, in fact, explicitly linked the growth of air transport to national economic development. Arguing in 1926 that “this new undertaking by the government [oversight over aviation] could . . . be well justified solely on the ground of developing a new form of transportation,” Hoover tied aviation’s progress to America’s. He went on to state, “through economics in time and motion” aviation had the potential to “add effectively to national productivity and wealth.”¹¹⁹ In this context, aviation represented much more than a new and exciting technology. With these statements Hoover demonstrated his belief in aviation’s potential to fundamentally alter the American commercial landscape, as well as his commitment to using the power of the federal government to aid aviation’s growth.

It is even more significant that the Commerce Secretary espoused these beliefs as early as 1926. Before Charles Lindbergh’s transatlantic flight, commercial aviation remained in the margins of American consciousness. Though air racing, flying circuses, and record-setting flights continued to enthrall the public, it was not at all clear how those pursuits would translate into commercial success. After 1927, however, Lindbergh’s efforts pushed flying to the center of Americans’ cultural

¹¹⁷ Speech to SF Chamber of Commerce, September, 1926, Box 40, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

¹¹⁸ Ibid.

¹¹⁹ Ibid.

awareness and dramatically increased commercial fortunes. Lindbergh's flight, historian Joseph Corn argues, "represented a high-water mark for aviation enthusiasm and was in itself a major stimulus to air-mindedness."¹²⁰ As such, Lindbergh's actions in many ways provided the impetus for Americans to turn away from aviation's more negative cultural connotations and open themselves to its commercial possibilities.¹²¹

Contemporary reactions to Lindbergh's accomplishment offer compelling evidence of the pilot's profound influence on American aviation. President Calvin Coolidge sent him a personal note of congratulations and dispatched a U.S. Navy cruiser to transport Lindbergh back across the Atlantic. In Washington, D.C., the President awarded him the Distinguished Flying Cross. According to *The New York Times*, "the enthusiasm of fellow aviators . . . knew no bounds" when word of Lindbergh's success reached the United States.¹²² No less a figure than Orville Wright commented, "the flight [was] beyond all expectation . . . we hardly dreamed that some day [such a flight] could be accomplished."¹²³ The American public also gave Lindbergh their rapt attention. Upon his arrival in New York hundreds of thousands of well-wishers let out a "frenzied outburst of whole-hearted affection," and listened with bated breath to his short speech.¹²⁴

The intense public response to Lindbergh's achievement had concrete implications for aviation's commercial growth. First and foremost, Lindbergh's flight dramatically heightened

¹²⁰ Corn, *The Winged Gospel*, 17.

¹²¹ For more information on the significance of Lindbergh's flight, see: A. Scott Berg, *Lindbergh* (New York: G.P. Putnam's Sons, 1998), 120-177; Charles L. Ponce de Leon, "The Man Nobody Knows: Charles A. Lindbergh and the Culture of Celebrity," in Dominick Pisano, ed. *The Airplane in American Culture* (Ann Arbor: University of Michigan Press, 2003), and Dominick Pisano, "The Spirit of St. Louis—Fact and Symbol: Misinterpreting a Historic Cultural Artifact," in Launius and Bednarek, eds. *Reconsidering a Century of Flight*.

¹²² "Aviation Leaders Praise Lindbergh," *The New York Times*, May 22, 1927.

¹²³ "Orville Wright Lauds Lindbergh's Flight," *The New York Times*, May 23, 1927.

¹²⁴ "Mayor Welcomes Flier at City Hall," *The New York Times*, June 14, 1927.

Americans' interest in flying. Naturally, this positively affected commercial aviation. Looking back in March of 1930, a *Time* article acknowledged this transition stating, "when Lindbergh got down in Paris (1927), U.S. aviation stocks [went] up."¹²⁵ Simultaneously, Lindbergh almost immediately began to use his newfound fame to promote commercial flying. He became the public face of Transcontinental Air Transport—the forerunner of TWA—and later worked as a consultant for Pan American Airways. Lindbergh also flew *The Spirit of St. Louis* on goodwill tours through the U.S. and Latin American, in the process promoting aviation's commercial potential.¹²⁶ These actions played a key role in transforming Americans' perceptions vis-à-vis aviation, hastening the public's willingness to embrace flying's commercial future.

In 1926, however, hopes for commercial success largely remained the province of dreamers. While many in the aviation industry foresaw, or hoped to foresee, aviation playing a prominent role in America's future, few lawmakers and policymakers shared this belief in a new and still unproven technology. Before Lindbergh, before the establishment of mainstream passenger service, and before private contractors took over major airmail routes, Hoover clearly articulated aviation's potential to transform American commerce.

Hoover placed great emphasis on government's role in bringing about that commercial future, but argued that federal investment need not be excessive. In fact, he made aviation seem like a bargain. In 1925 Hoover argued that providing aviation with the same level of services—airways, safety regulation, etc.—as the government provided for shipping would "not be an extravagant

¹²⁵ "Losses & Profits," *Time*, March 31, 1930, 51.

¹²⁶ The Daniel Guggenheim Fund for the Promotion of Aviation sponsored both of these tours. See: Berg, *Lindbergh*, 164, 172.

sum.”¹²⁷ In fact, he articulated two interrelated points regarding federal expenditures on aviation. First, he asserted that Federal oversight of regulation and infrastructure development represented “a most constructive drive for immediate economy.”¹²⁸ With this statement Hoover responded to criticisms that the expansion of federal responsibility would result in an unacceptable burden to American taxpayers. In Hoover’s mind, supporting aviation’s growth would be at worst revenue neutral, and would hopefully enrich the government’s coffers. He based this judgment on several related factors. Promoting commercial development would result in significant savings on military expenditures, as private industry would be given new motives for technological development. Additionally, the transfer of airmail from public—Post Office—to private responsibility would result in significant savings. Thus, even with increased federal responsibility for licensing, safety, and infrastructure, in the end Hoover believed his policy would offer a “relief, not an additional burden” to American taxpayers.”¹²⁹ In fact, he went so far as to claim that “the cost of successfully establishing commercial aviation under the proposals I have . . . made should in fact result in actual saving to the Government.”¹³⁰

Second, Hoover argued placing responsibility for aviation oversight under the auspices of the Commerce Department presented possibilities for further savings. Offering his opinion that “the installation of this service to commercial aviation under the direction of the Department of Commerce makes possible this undertaking at much less expense than could have been done under any other department,” Hoover highlighted the department’s history of maritime regulation. He went

¹²⁷ Statement of Secretary Hoover on Commercial Aviation, September 24, 1925, Box 40, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

¹²⁸ Speech to SF Chamber of Commerce, September, 1926, Box 40, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

¹²⁹ Ibid.

¹³⁰ Statement of Secretary Hoover on Commercial Aviation, September 24, 1925, Box 40, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

on to state that savings could be realized “because we are simply extending our already established navigation bureaus further inland, and with comparatively little addition to staff and equipment.”¹³¹

Hoover’s statement prefigured the organization that the new Bureau of Air Commerce would eventually take within the department. In general, MacCracken and his staff would utilize existing Commerce Department Bureaus to fulfill many of their regulatory functions. Hoover’s statements certainly oversimplified the issue, but the Commerce Secretary was fundamentally correct to state that Commerce oversight would involve comparatively little new infrastructure within the department itself.

All of Hoover’s financial arguments, however, must be seen in the larger context of his efforts to promote commercial aviation without resort to either a direct subsidy or nationalization. Hoover’s support for close cooperation between the government and private interests, and federal support for research, infrastructure, and regulation emerged naturally from his progressive economic ideology. He drew the line, however, at explicitly subsidizing industrial growth. Significantly, this policy stood in sharp contrast to European governments that overwhelmingly subsidized the growth of commercial carriers in the decades after the First World War. In fact, Hoover spent significant time and effort attempting to differentiate between American and European aviation.

As early as 1925 Hoover stridently argued that circumstances differed sharply between the U.S. and Europe. His technical commission from May of that year spent much of its time delineating the development of European airlines and attempting to determine the extent of European governmental support for those commercial interests. In his September 1925 press release, Hoover commented on those findings, concluding that none of the European airlines “paid operating expenses.” Continuing, he stated, “in every case they are supported by subsidies of different

¹³¹ Ibid.

governments, the volume of subsidies varying from 50 per cent to 95 per cent of the total cost.” Such significant subsidization, Hoover suggested, resulted from a dual set of goals. First, it appeared “obvious that these governments lay great weight upon the importance of this service from a military point of view.” Secondly, however, it seemed likely that “some portion of the impulse for their subsidies may be credited to a desire to build up a new industry and to stimulate a new form of transportation.”¹³² Regardless of the rationale behind these policies, however, Hoover considered such actions unacceptable in America.

This European context speaks powerfully to the unique path taken by American aviation. In Europe, a number of airlines emerged immediately in the wake of the First World War. As aviation historian R.E.G. Davies suggests, in spite of all the shortages experienced by combatant nations, most European nations possessed a surfeit of aircraft. Davies relates that “either in a conscious attempt to put idle machines to useful work, or by turning to advantage the convenient supply of cheap vehicles, the first airlines were born.”¹³³ As early as January of 1919, the German government authorized civil airline operations, and the first German airline took to the sky the next month. The first French carrier followed in March, and the British in August. By 1920, a majority of European nations had regularly scheduled national and international routes, including a much-utilized cross-channel run.¹³⁴ This growth continued and, in fact, accelerated into the early 1920s as European nations created a comprehensive network of air transport in Britain and on the Continent.¹³⁵

¹³² Ibid.

¹³³ Davies, *A History of the World's Airlines*, 11.

¹³⁴ Ibid, 11-20.

¹³⁵ For more information, see: Ibid, 93-122.

As Hoover suggested, however, this growth was largely underwritten by government subsidies. In the cases of Germany and France, local, state, and national subsidization assisted the growth of airlines virtually from their inception. As Davies argues, both Germany and France realized “that to promote a new transport medium money had to be spent on research, manufacture, development, and operation.” Almost unilaterally, that money came from each country’s government. Britain initially eschewed government subsidies for aviation, but ironically came to form the exception that proved the rule for the European context. British airlines did not receive subsidies for the first few years of their operation, and as a result stagnated during a period of rapid growth for their French and German counterparts. This fact became obvious to the British government when British carriers found themselves unable to compete on the lucrative London to Paris run. The French government, recognizing the prestige of this important route, heavily subsidized national efforts to cross the channel by air. As a result, British carriers quickly found themselves marginalized in cross-channel operations, eventually resulting in the two largest—Handley Page and Instone Air Lines—suspending operations. In the wake of this embarrassment, in March of 1921 the British government authorized government appropriations to support air commerce. In Davies’ words, this reversal of policy “marked . . . the recognition by a government of the United Kingdom that in an environment of cut-throat competition a new industry must be helped if it is to have a reasonable chance of reaching maturity.”¹³⁶ This recognition signaled that even the European nation with the most traditionally liberal economic philosophy saw subsidy as the path to success for aviation.

European subsidization of the airline industry played a key role in spurring aeronautical growth in the years after World War I. Those same policies, moreover, pushed European governments down a path that eventually led to nationalized airlines. Britain began this trend with the consolidation of a

¹³⁶ Ibid, 30-31.

number of smaller carriers into the overseas line Imperial Airways in 1924. Germany established Deutsche Luft Hansa for national and international routes in 1926, the French created Air France in 1933, and the British moved to create British Airways in 1935.¹³⁷ These nationalized carriers received substantial governmental support for research, manufacturing, and infrastructure. More significantly, European governments moved aggressively to subsidize operating costs. Whether this resulted from a desire to use air commerce to bolster national defense, or because of European governments' desire to support an emerging industry, the net result was, by the mid 1920s, the creation of a comprehensive air transport network across the continent with links to many imperial destinations.

It seems likely that these European carriers could not have survived without subsidization. Certainly, without governmental funds they would not have prospered as they did. In fact, the state of American commercial aviation during the early 1920s serves to confirm the difficulties airlines faced without such support. Clearly, commercial carriers struggled in the United States in the years after World War I. It was not until the privatization of government airmail contracts after the passage of the Kelly Bill in 1925 that air transport operators began to realize steady income. In fact, before that time the only successful large-scale American air carrier was the U.S. Post Office—ironically operating an airmail network subsidized by the federal government.

Despite aviation's lack of commercial success in America before 1925, U.S. policymakers considered a direct federal subsidy for the aviation industry to be unacceptable. Hoover represented one of the loudest voices arguing that aviation did not need federal subsidies to achieve success. For him, the idea of a formal subsidy ran counter to the core of his economic philosophy. Additionally, a conservative focus on promoting the free market during the 1920s mitigated against such direct

¹³⁷ Ibid, 23-98.

federal intervention in the economy—direct subsidization was philosophically and politically unacceptable. Speaking to a *New York Times* reporter in 1927, Hoover codified his view, stating unequivocally, “we will have no subsidy in the United States.”¹³⁸ He modified that position somewhat in practice, however, by utilizing “informal” subsidies—derived from airmail receipts rather than taxes—to promote commercial growth. This policy represented a natural outgrowth of Hoover associationalist ideology, but also reflected airlines’ continuing need for financial support.

Publicly, however, Hoover maintained that American commercial aviation did not need subsidization to achieve commercial success. He based that contention on several related arguments. First, he focused on the differences between the U.S. and Europe. Stating, “our geographic, economic and political setting is different from that of Europe,” Hoover argued that America represented a much more promising environment for aeronautical growth. Specifically, he related, “our distances are greater, our country is an economic and political unit . . . with us we have an area 2,000 miles wide and 3,000 miles long undisturbed by national boundaries and of course the flow of trade is far more localized within smaller areas of individual nations.” Hoover also suggested that the United States had “a very much larger activity of transportation of goods, of express, of mails and passengers than any country in Europe.”¹³⁹ Simply, Hoover argued that the U.S. context offered greater commercial possibilities for airlines. America’s size and economic scope meant greater need for more—and more efficient—transportation networks. As such, he believed that there was much more potential for air commerce in the U.S. than in Europe.

¹³⁸ “Hoover Foresees A Greater Air Service” released for publication in *The New York Times* June 26, 1927, Box 40, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

¹³⁹ Statement of Secretary Hoover on Commercial Aviation, September 24, 1925, Box 40, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

Hoover also suggested that the contemporary paucity of American air commerce was misleading. Hoover readily admitted that “outside of the Postal Service, we have had . . . little systematic commercial aviation.” That fact, however, did not mean a lack of future potential. Countering criticisms “that but little progress had been made toward [the] commercial success of aviation,” Hoover suggested that a narrow focus on the Post Office’s efforts obscured that larger context. In his opinion, “our Postal service cannot be altogether representative of commercial possibilities because that service cannot avail itself of the revenue from passengers and express and necessarily could not bring to bear the energetic recruiting of business as would be the case in private enterprise.”¹⁴⁰ With this statement Hoover correctly differentiated the goals of the Post Office’s airmail operations from those of private commercial carriers.

It is curious, however, that he appears to have overlooked private carriers’ inability to achieve commercial success. Significantly, the Post Office’s efforts did not represent an explicit barrier to private enterprise. In other words, while the Post Office’s efforts certainly were not representative of commercial possibilities, the dearth of private airlines in the U.S. at the time actually was. Hoover’s acquiescence to informal subsidization and his focus on promoting airmail represented a tacit admission that airlines could not yet achieve profitability through passenger service alone. It was not until Hoover appointed Walter F. Brown as Postmaster General that the federal government would embrace a specific set of policies designed to promote passenger-carrying operations.¹⁴¹

Nonetheless, Hoover stridently argued that American aviation contained great potential for growth in the immediate future. In 1925 he expressed his confidence that with the creation of mechanisms for federal oversight and regulation and a push for municipalities to construct airports

¹⁴⁰ Ibid.

¹⁴¹ This will be taken up in the next chapter.

“we can secure definite commercial service without any subsidies at all.”¹⁴² A year later Hoover appeared even more confident, expressing his belief that “within another year we shall see privately operated air transportations upon our principal national airways.” Elaborating on his confidence in the success of those future operations, Hoover went on to voice his “high hopes . . . of a very much larger revenue from express and passengers than are enjoyed by the European air lines.”¹⁴³

The private takeover of airmail routes by 1927 largely confirmed Hoover’s first statement. Ironically, however, the success of those private operations would largely be assured through government airmail payments—what amounted to an informal subsidy. Further, the eventual growth of passenger service in the United States arose out of a controversial set of federal policies explicitly utilizing the enticement of airmail subsidies to rationalize the development of the airline industry and promote the growth of carriers focused on passenger operations. Those policies would result in a Senate investigation, widespread accusations of governmental collusion with private industry, and outrage over what many lawmakers perceived to be the utilization of federal monies to subsidize an industry.

The final element of Hoover’s aviation policy associated commercial development with national defense. As Commerce Secretary he argued, “there is a dual objective in our Governmental interest in commercial aviation, that is, national defense . . . and the development of a new and speedier form of transportation.”¹⁴⁴ In his mind these goals were complementary. In fact, Hoover argued that increased preparedness would emerge as a natural byproduct of commercial policy. This

¹⁴² Statement of Secretary Hoover on Commercial Aviation, September 24, 1925, Box 40, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

¹⁴³ Speech to SF Chamber of Commerce, September, 1926, Box 40, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

¹⁴⁴ Ibid.

did not mean “that the actual commercial plane will be much used in actual battle,”¹⁴⁵ however. In 1925, he argued that the promotion of commercial aviation would provide three concrete benefits to American national defense.¹⁴⁶ In his words, “the buildup of the manufacturing industry behind such aviation is of the most vital importance, and we must develop the airways across our own country so that they may be used for purposes of defense. Beyond this of course the commercial growth of the industry will give impulse in the development of the art. All of these factors will contribute to the defense arms of the government.”¹⁴⁷

These three factors represented a natural outgrowth of Hoover’s emerging commercial policy. Hoover’s support for private airlines would, in his mind, naturally result in the manufacture of more aircraft. This would, in turn, provide more capacity that could, in the event of war, be converted to military production. Additionally, the development of commercial airlines would push the private sector to develop larger and more efficient aircraft as airlines competed for passengers and profits; these advances in aeronautical technology would serve as an additional source of research and development for the military. Hoover also saw federal efforts to construct a lighted airway network across the country as performing an important military function. Much as later policymakers saw the Interstate Highway System as promoting both commercial and military goals, Hoover foresaw

¹⁴⁵ Statement of Secretary Hoover on Commercial Aviation, September 24, 1925, Box 40, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

¹⁴⁶ At the time military budgets—particularly for new and relatively untested technologies—languished, offering little potential for military progress. In fact, by the middle of the 1930s civilian airliners like the Douglas DC-3 were in many ways more advanced than military bombers and transport aircraft. This situation was not resolved until the latter half of the 1930s as Franklin Roosevelt began to increase military expenditures in preparation for a possible war in Europe. See: Courtwright, *Sky as Frontier*, 97-105, and Carl Solberg, *Conquest of the Skies: A History of Commercial Aviation in America* (Boston: Little, Brown and Company, 1979), 151-153.

¹⁴⁷ Statement of Secretary Hoover on Commercial Aviation, September 24, 1925, Box 40, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

national airways providing crucial infrastructure in times of war. Finally, increased aircraft production would result in more efficient manufacturing techniques that would benefit both private industry and the government.

By 1927 Hoover foresaw even more overlap between commercial and military development. In that year he argued “that the development of commercial aviation will prove a military asset of the first rank,” because “it will mean the training of a great source of wonderful aviators whose service will be available in the moment of emergency, the assembling of a great reserve in equipment and the fostering of the manufacturing industry as essential in the hour of need.”¹⁴⁸ While this statement echoes many of the themes Hoover articulated in 1925, it also moved beyond them. In addition to trumpeting the benefits of a mature manufacturing industry, here Hoover suggests that airliners could serve as valuable reserve equipment. Presumably he is suggesting that airliners could be converted to military transports during wartime—foreshadowing the activities of the Military Airlift Transport Command (MATC), which did exactly that during the Second World War. Additionally, the Commerce Secretary highlighted the military value a cadre of well-trained airline pilots would embody. The MATC proved the value of this resource during World War II, in many cases drafting airline pilots to fly their same commercial planes on new routes in support of the war effort.¹⁴⁹

Hoover also highlighted the cost savings that could be realized from the confluence of commercial and military goals. In 1925 he stated, “the cost of successfully establishing commercial aviation . . . should in fact result in actual saving to the government.” Hoover based this claim primarily on the fact that his policies would “relieve the government of the indirect expenditure

¹⁴⁸ “Hoover Foresees A Greater Air Service,” released for publication in *The New York Times* June 26, 1927, Box 40, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

¹⁴⁹ See: Walter J. Boyne, *Beyond the Wild Blue: A History of the United States Air Force* (New York: St. Martin’s Press, 1997), 178-179.

necessary to maintain a reserve of manufacturing equipment for defense purposes.”¹⁵⁰ In the next few years Hoover would also argue that the expansion of commercial aviation would absolve the military of expenses associated with constructing emergency landing fields around the country, and provide supplemental infrastructure in the form of municipal airports and lighted airways. While the government would still foot the bill for much of that construction, Hoover remained adamant that savings would ultimately result. By 1927 he confidently concluded that his aviation policy would “save huge sums which otherwise would have to be appropriated for a purely military or naval service.”¹⁵¹

Hoover’s efforts to tie aviation’s commercial development to military preparedness appear to have served him well. This theme appeared prominently in Hoover’s public statements concerning aviation, and his consistent focus on national defense seems to have made his policy palatable to a wider audience. In fact, Hoover demonstrated a remarkable ability to construct a visionary aviation policy while still appealing to moderate and conservative policymakers. His support for military preparedness and focus on establishing American commercial aviation without a direct subsidy widened the appeal of his policies and, in many ways, created the conditions for the possibility of their success. It is not clear to what extent Hoover personally valued commercial aviation’s contributions to national defense, but it is clear that his consistent denial of a need for federal subsidies cohered with his personal economic philosophy.

¹⁵⁰ Statement of Secretary Hoover on Commercial Aviation, September 24, 1925, Box 40, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

¹⁵¹ “Hoover Foresees A Greater Air Service,” released for publication in *The New York Times* June 26, 1927, Box 40, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

It is important to recognize that while Hoover was the guiding force behind American aviation policy in the early 1920s, he was not alone in supporting aeronautical growth. Other individuals in both the Post Office and Commerce Departments lent their voices to the push for a national aviation policy. William MacCracken, the first head of the Aeronautics Branch of the Department of Commerce, Congressman Clyde Kelly, Postmaster General Harry S. New, and Second Assistant Postmaster Generals Paul Henderson and Irving Glover, among others, consistently worked to develop American commercial aviation. That support, however, almost overwhelmingly reflected Hoover's vision, and in many cases these men explicitly tied their policies to Hoover's.

Other than Hoover, William MacCracken ranks as the most influential figure in 1920s aviation policy. A Chicago-based lawyer, MacCracken was the driving force behind the organization and implementation of the 1926 Air Commerce Act. This piece of legislation created the Bureau of Air Commerce within the Commerce Department and authorized federal oversight of licensing, safety, airway construction, and research. The Act represented the culmination of more than five years of pressure for federal action from a select group of lawmakers and industry officials, and in many ways stood as the codification of Hoover's vision. MacCracken, a longtime aviation enthusiast, wrote much of the bill, and after its passage Hoover tapped him to become the first head of the newly created Aeronautics Bureau. His centrality to this history Nick Kommons to contend, "it is difficult to single out any personality . . . that left a greater imprint on Federal civil aviation policy."¹⁵²

MacCracken's vision, though, profoundly reflected Hoover's leadership. According to Kommons, MacCracken, like Hoover, "believed that the Federal Government must regulate all

¹⁵² Kommons, *Bonfires to Beacons*, 48.

phases of aviation.”¹⁵³ For both men this meant federal construction and oversight of lighted airways, safety and licensing, and general promotion of the commercial industry. Also in line with Hoover’s vision, MacCracken’s bill placed responsibility for airport construction in the hands of local authorities. The lawyer strongly opposed subsidies, arguing that they represented a barrier to commercial development. Although it seems that MacCracken’s personal interest in aviation played at least some part in leading him to many of these conclusions, the continuity between his views and those of the Commerce Secretary are remarkable.

After taking the reigns of the newly established Bureau of Air Commerce, MacCracken quickly moved to implement Hoover’s vision. In doing so he also embraced what in many ways stood as the most important responsibility of the Bureau—the promotion of commercial aviation. As Kommons shows, MacCracken believed that his primary responsibility “was to foster the development of the industry.”¹⁵⁴ This meant promoting regulatory oversight and infrastructure development, but also serving as a cheerleader for aeronautics. Both MacCracken and Hoover realized that public acceptance of air transport represented perhaps the most important key to its ultimate success, and in his new role MacCracken worked tirelessly to sell it to the public through speeches, informational sessions, and advertising campaigns.

In support of this effort, MacCracken gave a number of speeches that clarified his views on aviation policy. One of the most revealing was a February 1929 speech entitled “Government Regulation of Commercial Aviation.” In it, MacCracken echoes many of Hoover’s themes from a few years earlier. MacCracken began by drawing a sharp distinction between American and European commercial aviation. Like Hoover, MacCracken went to great lengths to explain that “the

¹⁵³ Ibid, 49.

¹⁵⁴ Ibid, 92.

attitude of this government, or the policy of this government, is decidedly different in this field than of any European nation.” That difference hinged on the issue of subsidies. MacCracken argued that “if commercial aviation is going to develop on a sound basis it has got to earn its own way, that it should perform an economic service that is worth what it costs.”¹⁵⁵

He went on to emphasize the Commerce Department’s work in establishing “lighting devices” on the nations’ airways and “encouraging municipalities in the establishing of airports.” According to MacCracken, though the Commerce Department could not expend federal funds on airport construction, Commerce employees “are permitted to send men around to advise in matters of selection and construction and improvement of the airport.” Additionally, the Department established a rating system for airports, using those rankings as an inducement for airports to improve their facilities and make themselves more attractive for commercial service. “The municipalities,” MacCracken related, “are taking a great deal of interest in this work.” As a result, “in the past three years new airports have been established by something over 500 municipalities.”¹⁵⁶

The Assistant Secretary also commented on his efforts to promote safety, arguing that making air transport safer represented a primary focus of federal regulation. In support of that point he related to the audience that the Bureau’s efforts to license pilots, regulate aircraft production, and establish airworthiness standards had resulted in a significant reduction in insurance premiums for air travel. According to his figures, Bureau of Air Commerce policies had, since regulation went into

¹⁵⁵ “Government Regulation of Commercial Aviation,” Speech by William MacCracken, February 19, 1929, Box 25, MacCracken Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

¹⁵⁶ Ibid.

effect on January 1, 1927, resulted in a 40 percent reduction in “aircraft coverage” while at the same time broadening its scope.¹⁵⁷

MacCracken also highlighted his role in promoting the industry. Telling the audience of “another part of the work we are doing,” MacCracken stated he thought listeners would “be interested in knowing what we are doing in the way of encouraging aviation.”¹⁵⁸ To that end, MacCracken detailed Bureau efforts to educate local governments about aviation, improve airports, and promote awareness of regulation among the American public.

Significantly, the Commerce Department’s efforts to promote flying to the American public received a tremendous boost from public excitement over Lindbergh’s transatlantic flight. Kommons points to the dramatic increase in applications for pilot licenses following Lindbergh’s achievement as concrete evidence of the American public’s growing enthusiasm for flying. According to his research, between the Bureau’s creation in May of 1926 and December of 1928, more than 17,000 Americans applied for licenses. Significantly, Kommons relates that more than 80 percent of those applications occurred in the wake of Lindbergh’s flight.¹⁵⁹

Finally, MacCracken, like Hoover, emphasized how the development of air commerce would benefit military preparedness. He began by differentiating U.S. policy from that of European nations. The latter, MacCracken argued, created regulations and infrastructure “for political and military purposes rather than for commercial purposes. Their plans are made so that their aviation resources may be quickly convertible to military use.” No such plans existed in the U.S., however. Instead, MacCracken suggested that military preparedness would improve as a natural consequence of commercial growth. He related that while the primary goal of Bureau policy was to make aviation

¹⁵⁷ Ibid.

¹⁵⁸ Ibid.

¹⁵⁹ Kommons, *Bonfires to Beacons*, 99-100.

“safe and reliable in peace time,” the development of the industry was also “important in times of war, so we have a mutual [goal] between the military services and the civilian department.”¹⁶⁰ Like Hoover, MacCracken focused on how the development of a coherent commercial industry would provide infrastructure, planes, pilots, and research and development that would serve the nation well in the event of war.

MacCracken’s public stance echoed Hoover’s almost exactly. Certainly, this is to be expected considering Hoover’s authority over MacCracken while serving as Commerce Secretary. Regardless, however, it appears that both men shared a similar vision for aviation’s commercial future. During his tenure as Director, MacCracken continued to work for those goals, in large part realizing Hoover’s vision. In addition, MacCracken demonstrated his willingness to publicly acknowledge Hoover’s pivotal role in creating a coherent aviation policy. In a December 1930 speech, MacCracken lauded Hoover’s efforts, stating “[Commerce Department] policy, inaugurated nearly ten years ago by President Herbert Hoover when he became Secretary of Commerce, has been of inestimable benefit to all concerned.”¹⁶¹ This statement accurately encompasses Hoover’s contributions, and also highlights the continuity between Hoover and MacCracken’s views.

Hoover’s influence was not limited to the Commerce Department. In his study of the Post Office’s role in creating the modern airline industry, Robert van der Linden acknowledges the Commerce Secretary’s central role in establishing a coherent aviation policy. Commenting on Hoover’s efforts to secure Congressional support, van der Linden relates that Hoover took “the lead

¹⁶⁰ Ibid.

¹⁶¹ “Special Problems In Aeronautical Legislation,” Speech by William MacCracken, December 2, 1930, Box 25, MacCracken Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

in the search for appropriate [aviation] legislation.”¹⁶² Additionally, van der Linden articulates Hoover’s tireless efforts to unite members of the aviation industry behind his ideas. In his analysis, “Hoover was able to take the lead and forge a new consensus concerning his vision of the role that aviation might play in the future.”¹⁶³

That consensus extended to the Post Office. Van der Linden’s scholarship demonstrates that Hoover’s views had a pervasive influence on the development of airmail policy in the early 1920s, a fact clearly reflected in the public statements of Post Office officials. In particular, Postmaster General Harry S. New emerged as a vocal proponent of Hoover’s policies. In the mid 1920s, New articulated a hopeful vision for the future of commercial aviation in the United States, grounding that vision in calls for federal regulation, infrastructure development, and the promotion of commercial activity without resort to formal subsidies. Although his perspective was understandably shaped by his position in the Post Office, New’s position on these issues came to echo Hoover’s almost exactly.¹⁶⁴

An examination of New’s 1925 testimony before the Congressional Air Service Board¹⁶⁵ offers a comprehensive summary of his views. Called before the board to explain what the Federal government should do to regulate air navigation and promote the industry, New proceeded to outline

¹⁶² van der Linden, *Airlines and Airmail*, 9.

¹⁶³ *Ibid.*

¹⁶⁴ Hoover’s influence over Post Office policy would continue during his Presidential term with his appointment of Walter F. Brown as Postmaster General. Brown’s policies would ultimately result in a national uproar over airmail payment, a Senate investigation, and an overhaul of Post Office policy. These events will be covered in detail in the next chapter.

¹⁶⁵ The Air Service Board’s purpose was to ascertain how and why the United States aviation industry found itself almost totally unprepared for World War I. The Board hoped to determine the proper course for both military and civil aviation in order to promote a mature and competitive industry that would not place the U.S. in such a position again.

his hopes for aviation's commercial future. He began by stating that, "our first need is for a continuing national program for the promotion of aeronautics." New argued that such a program should take a holistic view of American aviation in order to promote military and civilian goals. Within that program, however, New argued that commercial aviation represented "the cornerstone of the whole structure."¹⁶⁶

In New's view the promotion of commercial aviation would also serve military ends. Expressing his "belief that successful commercial aviation and national security go hand in hand," he echoed Hoover's belief in the informal role commercial aeronautics played in military preparedness. Like Hoover, New did not believe that civil aviation should form an explicit reserve force for the military. Instead, the development of commercial flying would promote increased manufacturing, infrastructure development, pilot training, and technological research that would aid both civil and military flying.

New's fervent support for commercial aviation, however, did not blind him to the challenges American carriers faced in the immediate future. New readily admitted to the Board that he didn't know what the future would hold for commercial flying. However, for him this suggested a greater, rather than a lesser need for a coherent Federal policy. In his words, "the possibilities [for aviation] are so great that it becomes a matter of first national importance to ascertain for ourselves . . . what they are." In order to do so, the Postmaster General believed that Government needed to take a leading role, something it had not done to date. New argued "there are many things" the Federal

¹⁶⁶ Statement of Postmaster General Harry S. New Before the Air Service Inquiry Board, October 13, 1925, Box 41, Hoover Commerce Papers, Herbert Hoover Presidential Library, West Branch, Iowa.

Government could and should do “that are absolute prerequisites to the success of commercial aeronautics, not one of which is receiving a particle of attention at the present time.”¹⁶⁷

The lack of a federal agency responsible for regulation and oversight of aviation was particularly worrying for New. He reported that the Post Office was “deluged with letters from chambers of commerce, boards of trade and city authorities” relating to “the establishment of airways, landing fields, and things of like character.”¹⁶⁸ New expressed consternation that there was no place to send these letters; no authority to whom to appeal. He emphasized that the Post Office’s role in serving airmail routes ill prepared the Department for questions of aviation policy, and pushed for the creation of a separate regulatory organization.

In New’s opinion, the Commerce Department was the “natural” place for such an agency. He commented that Commerce “could and should do all these things,”¹⁶⁹ but enabling legislation would be necessary for the creation of a new office. New’s statement suggests he, like Hoover and MacCracken, believed federal oversight represented a necessary step in the growth of commercial aviation. Further, New’s hopes for Congressional legislation prefigured the passage of the Air Commerce Act by over a year. New’s position undoubtedly reflected Hoover’s growing influence over commercial aviation policy. Further, the Postmaster General’s position also had to take into account the implications of the Kelly Bill’s imminent privatization of airmail contracts. Nonetheless, New’s support for Commerce oversight, and his push for regulatory legislation, suggest significant uniformity in opinion between the Postmaster General and the Commerce Secretary.

That uniformity also extended to the issue of subsidy. Though New had overseen the creation of an airmail network run explicitly by the U.S. government as a service to the nation, he fervently

¹⁶⁷ Ibid.

¹⁶⁸ Ibid.

¹⁶⁹ Ibid.

denied the need for formal subsidization of private commercial carriers. New told the Board that for commercial aviation “to be successful it must pay its own way.” Later he did soften that position somewhat, arguing that the new technology did need some form of government assistance. He did not, however, “favor large Government appropriations for this purpose,”¹⁷⁰ and argued that Federal support should come predominantly in the form of technological research.

Finally, New, like Hoover, hoped that the Government would offer its support in creating aviation infrastructure. Focusing specifically on airways construction, New argued, “the Department of Commerce should be given authority and supplied with the means to provide for lighted airways for the use of companies engaged in aerial transportation. In doing this the Government would be doing no more, nor as much, for this new form of transportation than it has already previously done for the carriers of . . . other character.”¹⁷¹ Although New made a passing reference to railroads shortly after this statement, he drew the sharpest comparison between aviation and shipping. New focused on the government’s role in creating and maintaining shipping channels, and saw a natural correlation with lighted beacons for airways. His oversight of the federal airmail network left him with an appreciation of the benefits of such a system, and he stridently supported governmental appropriations for that purpose.

While this testimony represents only a snapshot of New’s views on aviation, it is nonetheless instructive to note the striking similarities with Hoover and MacCracken. As Postmaster General, New, more than any other federal official, understood the challenges of operating an air commerce network. His focus on Federal oversight, airways construction, the need for a federal bureau, the connections between civil and military aviation, and opposition to a direct subsidy demonstrate a

¹⁷⁰ Ibid.

¹⁷¹ Ibid.

remarkable coherence with the positions both Hoover and MacCracken espoused. Specifically, it suggests that Hoover's continued focus on developing a coherent aviation policy was well founded. Ultimately, New left the Post Office before much of his vision was realized, but his support for aviation's growth did much to foster support for later changes. Specifically, his work laid the foundation that Walter Brown would use to revolutionize the air commerce industry.

Policy statements from William MacCracken and Harry S. New highlight the central role Hoover played in the development of commercial aviation. The Commerce Secretary put forward a coherent set of policies that came to serve as the foundation of the emerging commercial network. In many ways the Kelly Bill and Air Commerce Act profoundly reflected Hoover's insight and leadership. In spite of those gains, Hoover did not lose interest in aeronautics in later years. After winning the Presidency in 1928 Hoover sustained his focus on commercial aviation, furthering his relationships with legislators and private individuals associated with aviation. He also appears to have maintained close contact with the Commerce Department. In August of 1930 the President requested a "report on the progress of the commercial aviation industry in the United States during the last eighteen months" from Assistant Secretary of Commerce Clarence Young. That report offered Hoover a comprehensive overview of U.S. commercial activities, including airmail routes and subsidies, infrastructure, technological development, profitability, and suggestions for future growth.¹⁷² A year later Hoover displayed an even closer connection to the Commerce Department. After reviewing a Departmental report on American aeronautics, the President suggested several

¹⁷² Clarence M. Young, Untitled Report for the President, August 22, 1930, Box 56, President's Subject File, Herbert Hoover Presidential Library, West Branch, Iowa.

changes to the document, instructing his Secretary to forward his suggestions to Young.¹⁷³

Throughout his Presidency Hoover maintained close contact with the Department and displayed a continuing focus on American aeronautical development.

During his term in office Hoover also maintained an active correspondence with the Aeronautical Chamber of Commerce. Hoover had a personal relationship with the Chamber's General Manager, Luther K. Bell, and granted Bell and members of the Chamber's Board of Directors several audiences at the White House. In March of 1931 a delegation from the Chamber called on the President to "discuss matters pertaining to commercial and military aviation in the United States." The delegation presented Hoover with a report on the progress of American commercial aviation that offered an overview of the industry's current state and hopes for the future.¹⁷⁴ In July of that year Hoover acquiesced to a request from the Chamber to supply a note of congratulations to Wiley Post and his navigator, Harold Gatty, after their around-the-world flight, and later received the two flyers at the White House.¹⁷⁵

Hoover's interest also extended to ongoing research efforts. As Commerce Secretary, Hoover established an active relationship with the National Advisory Committee for Aeronautics, a body he

¹⁷³ Theodore G. Joslin, Secretary to the President, Letter to Clarence M. Young, May 5, 1931, Box 56, President's Subject File, Herbert Hoover Presidential Library, West Branch, Iowa.

¹⁷⁴ Untitled Report for the President, March 5, 1931, Box 56, President's Subject File, Herbert Hoover Presidential Library, West Branch, Iowa.

¹⁷⁵ Letter to Theodore G. Joslin, Secretary to the President from Luther K. Bell, General Manager Aeronautical Chamber of Commerce of America, Inc., July 6, 1931, Box 56, President's Subject File, Herbert Hoover Presidential Library, West Branch, Iowa. Post and Gatty completed their flight in just over 8 days between June 23rd and July 1st, 1931. In doing so they broke a record held by the German dirigible, the *Graf Zeppelin*. See: Roger Bilstein, *Flight in America: From the Wrights to the Astronauts* (Baltimore: Johns Hopkins University Press, 2001), 84.

saw as key to the continued technological development of American aircraft.¹⁷⁶ As President, Hoover maintained his relationship with the Advisory Committee. In 1929 Hoover wrote to the Commerce Secretary regarding three vacancies on the NACA Board. Hoover hoped that William MacCracken, Director of the Aeronautics Branch, might “prepare some suggestions for you to lay before me” regarding possible candidates.¹⁷⁷

This continued interest is especially significant considering the burdens Hoover faced while in office. The fact that he maintained a focus on the development of this nascent industry during the Great Depression speaks to his firm commitment to making aviation a viable commercial proposition. In a 1971 oral history interview, Clarence Young remarked that Hoover “never raised a question” about his commitment to aeronautical development even in the worst of economic times.¹⁷⁸ The President’s continued support speaks volumes about how central aviation was to his vision for America’s future, and what stock he placed in its commercial success. Unfortunately, much of this history has been overshadowed by the consequences of another decision made by the President—the appointment of Walter F. Brown as Postmaster General.¹⁷⁹

¹⁷⁶ In the 1920s the NACA played a key role in developing technologies that made flying safer and more efficient. Among their many notable breakthroughs were the development of the so-called “NACA Cowl” to house radial engines, making tremendous advances in speed and efficiency, and the perfection of de-icing equipment that allowed safer operations in winter weather. For more information see: Launius, “The Wright Brothers, Government Support for Aeronautical Research, and the Evolution of Flight,” and Leary, “A Perennial Challenge to Aviation Safety: Battling the Menace of Ice,” in Launius and Bednarek, eds., *Reconsidering a Century of Flight*.

¹⁷⁷ Herbert Hoover, Letter to The Honorable Secretary of Commerce, March 23, 1929, Box 57, President’s Subject File, Herbert Hoover Presidential Library, West Branch Iowa.

¹⁷⁸ Remembrances of Clarence M. Young, as told to Raymond Henle, page 21, Herbert Hoover Presidential Library, West Branch, Iowa.

¹⁷⁹ Brown’s actions and their consequences will be taken up in the next chapter.

In many ways the ultimate success of American commercial aviation stands as one of the most lasting legacy of Hoover's time in public service. During his tenure as Commerce Secretary and as President, Hoover consistently emphasized the need for a coherent, forward-thinking national aviation policy. In the early 1920s he took the lead in creating that policy, sharply distinguishing the U.S. context from that of Europe, emphasizing the need for the federal government to take responsibility for constructing infrastructure, focusing on the necessity of legislation to create a federal regulatory body, and stressing the need for commercial aviation to succeed without resort to direct subsidy. These pillars represent a natural outgrowth of his associationalist economic ideology, and aviation offers perhaps the best example of this philosophy working in practice. Between 1921 and 1932 American commercial aviation matured from a sideshow dominated by a government run airmail network to a maturing commercial industry defined by national airlines carrying mail and passengers to major population centers across the country. While aviation's place in American society was not assured when Hoover left office, his actions created the conditions for the possibility of aviation's success.

Ultimately, Hoover's vision largely came to fruition, though, ironically, after his departure from public life. The broad outlines of his policies were codified in the 1938 Civil Aeronautics Act, which established a paradigm of federal oversight and regulation that lasted until the late 1970s. That legislation represented the culmination of almost two decades' work to make commercial air transport a viable economic proposition—work done for the most part by Hoover and his allies. Hoover did not play a direct role in that Act's passage, but his fingerprints were readily visible in its pages. The Act created a new federal agency devoted to aviation—the Civil Aeronautics Authority—and centralized its regulatory and oversight functions over the industry. In addition, the Act provided for government oversight of air commerce networks to ensure fair competition and promote

continued growth.¹⁸⁰ The CAA served as a confirmation of the federal government's willingness to place its power firmly behind commercial aviation, largely realizing Hoover's hopes of seventeen years before.

Aviation did not, however, experience smooth sailing after Hoover's departure from office. In fact, the period between 1932 and 1939 represents one of the most contentious in aviation's history. Federal aviation policy came in for significant criticism from both Congress and the American people, suffered under the scrutiny of a Senate investigation, and witnessed the cancellation of all national airmail contracts. These events appeared to threaten the foundations of Federal aviation policy, and yet that policy came through the turmoil essentially unchanged. Two men stand at the very center of that controversy: Postmaster General Walter F. Brown and Alabama Senator Hugo Black.

¹⁸⁰ The Civil Aeronautics Act will be covered in more detail later in this work.

Chapter 3—Brown and Black: Shades of Gray

Throughout the 1920s American policymakers, led by Herbert Hoover, sought to define the American government's proper relationship to the emerging air transport industry. Hoover, William MacCracken, Harry New and others saw aviation as key to America's future, and sought to aid its development through indirect subsidization, infrastructure development, regulation, and promotion. These initiatives largely met with success, and by the end of Hoover's term as president Americans could travel the most extensive air transportation network in the world. That success rested upon the actions of two government agencies: the Commerce Department and the Post Office Department. Commerce took the lead in building aviation infrastructure, establishing a regulatory framework, and promoting aviation to the American public. The Post Office's payment of subsidies to airmail carriers and promotion of a national airmail network enabled the growth of nascent airlines and provided vital earnings in an era when carrying passengers alone was simply not profitable.

The unanimity amongst aeronautical proponents during this period, however, obscured growing disagreements about exactly what role the federal government should take with regard to commercial aviation. In particular, Democratic lawmakers increasingly criticized the Post Office's payment of subsidies to airmail carriers. Opposition to Post Office policy also focused on the actions of Hoover's Postmaster General, Walter Folger Brown. Following his appointment as Postmaster in 1929, Brown worked to rationalize the American air transport industry and promote organized growth through the granting of airmail contracts. Brown was the driving force behind the passage of new airmail legislation in 1930 that gave the Postmaster General broader powers to shape the growth

of the industry.¹⁸¹ Brown's actions served to strengthen large airlines at the expense of small operators and also promoted the development of large aviation holding companies. By 1932 these companies dominated the industry and brought airlines, airframe constructors, and engine manufacturers together under large corporate umbrellas.

After Franklin Roosevelt's election in 1932, airlines excluded from Brown's network joined forces with Democratic lawmakers to call for investigations into supposed fraud and collusion in the aviation industry. These calls ultimately resulted in the creation of the Senate Special Committee to Investigate Ocean Mail and Air Mail in September of 1933. This Committee, chaired by Alabama Senator Hugo Black, found extensive fraud and corruption in both the Post Office and the air transport industry. As a result of the investigation, in February of 1934 Roosevelt's Postmaster General, James Farley, cancelled all existing national airmail contracts and directed the Army Air Corps to fly the mail. A lack of adequate equipment and preparation combined with horrible weather to make that effort a disaster. Between February and June Air Corps pilots experienced 66 accidents, resulting in the deaths of 12 pilots. This debacle prompted Roosevelt and Farley to reinstate commercial carriers. They did so under a new airmail legislation, authored in large part by Senator Hugo Black.¹⁸²

Tellingly, despite the uproar and Black's key role in crafting new legislation, that reinstatement took place under policies broadly similar to those in place before the beginning of the 1933 Senate

¹⁸¹ The 1930 Air Mail Act—also known as the McNary-Watres Act.

¹⁸² The Airmail Act of 1934—also known as the Black-McKellar Act. See: R.E.G. Davies, *A History of the World's Airlines* (London: Oxford University Press, 1964), 129-130; Carl Solberg, *Conquest of the Skies: A History of Commercial Aviation in America* (Boston: Little, Brown and Company, 1979), 143-145, and F. Robert van der Linden, *Airlines and Airmail: The Post Office and the Birth of the Commercial Aviation Industry* (Lexington: The University Press of Kentucky, 2002), 273-278.

investigation. The new airmail act broke up aviation holding companies, stripped the Postmaster General of the ability to fix airmail rates—that power moved to the Interstate Commerce Commission (ICC)—and forbade airlines that had held contracts under the old system to bid for routes.¹⁸³ Those stipulations, however, did little to change the federal government’s relationship to commercial aviation. The Commerce Department retained responsibility for safety, licensing, regulation, and infrastructure development. The Post Office continued to expand the national airmail network. Both Commerce and the Post Office retained a commitment to promoting aviation to the American public. Most significantly, the federal government continued to support commercial growth by granting airmail subsidies, now administered through the ICC rather than the Post Office.

The Black Committee Hearings defined the most contentious period for American interwar aviation. Hoover’s defeat in the 1932 Presidential election, the Senate investigation, and new legislation all threatened to alter the foundations of Hoover’s associationalist aviation policy. Ultimately, however, they did not. Instead, under the leadership of Franklin Roosevelt, James Farley, and Hugo Black, this tumultuous period to a great extent served to validate Hoover’s earlier vision. If anything, the uproar suggested the need for a more focused and coherent federal policy—circumstances codified four years later by the passage of the Civil Aeronautics Act of 1938.

Black’s investigation, then, provides the clearest lens through which to examine the content and context of federal policy debates concerning aviation. The Senate investigation focused attention on federal aviation policy for both legislators and the American public, prompting Democrats and Republicans, supporters and opponents, to marshal their most powerful arguments concerning

¹⁸³ This latter mandate had little effect in practice. All of the main airlines operating before the investigation regained airmail routes under the new legislation. They circumvented the prohibition by changing their names—United Airways became United Airlines, Northwest Airways became Northwest Airlines, etc.

American commercial aviation. During the proceedings Black, Farley, and Roosevelt publicly stated their views on aviation policy and sought to gain support with both legislators and the public. The media offered exhaustive coverage of the Committee's investigation and the events associated with the cancellation of commercial contracts. The Committee itself subpoenaed financial records, correspondence, and memoranda from the Post Office and airlines. The investigation also called for major players—including Walter Brown, William MacCracken, and leading airline executives—to testify before the Committee. As such, an investigation of these events serves to clarify the most significant policy debates concerning aviation. It also offers the opportunity to examine the specific arguments marshaled by Brown, Black, and their respective supporters.

Historians have traditionally interpreted Democratic actions as a repudiation of Hoover's aviation policy.¹⁸⁴ They point to Black's strident denunciation of Brown's policies and his supposed antipathy toward Republican promotion of close connections between government and business. A closer examination of these events, however, reveals a different story. Although Black's rhetoric was undoubtedly anti-monopoly and anti-big business, he favored governmental action to support aviation. In fact, Black appears to have shared much of Hoover's vision regarding aviation's central role in America's future and government's responsibility to promote aeronautical growth. These facts necessitate a reevaluation of the lessons to be drawn from the Senate Special Committee's actions. Ultimately, the Black Committee served to confirm the value of Hoover's vision and the effectiveness of federal policies in the years before 1932.

¹⁸⁴ See, for example: Davies, *A History of the World's Airlines*, 129-133; Ellis Hawley, *The New Deal and the Problem of Monopoly: A Study In Economic Ambivalence* 2d ed. (New York: Fordham University Press, 1995), 240-144, and van der Linden, *Airlines and Airmail*, 260-291.

The origins of the uproar culminating in the 1933 Black Committee investigation began four years earlier with Herbert Hoover's appointment of Walter Folger Brown as Postmaster General. Brown took up the reigns laid down by Harry S. New, a strong supporter of Hoover's aviation policy who had consistently used the Post Office's ability to grant airmail contracts—and thus informal subsidies—to aid the growth of commercial carriers and expand the American air transport network. Brown built upon New's actions, in doing so becoming perhaps the most controversial figure in interwar aviation policy.

Brown hailed from Ohio, and had strong connections to the progressive politics that dominated the state as he came of age. He campaigned on behalf of William McKinley during the latter's gubernatorial campaign, helped secure the election of Progressive reformer Samuel Jones as Mayor of Toledo, and broke with the Republican Party to become chairman of the newly created Bull Moose Party in 1912. After Theodore Roosevelt's defeat, Brown worked hard to rejoin the Republican ranks, and by 1920 found himself in the influential position of helping to secure Warren Harding's nomination to the Republican ticket. Brown served as chairman of a special commission charged with reorganizing the executive branch during Harding's tenure in office, though Harding's early death stymied any hopes for real change. Significantly, during his time in Washington Brown met and formed a friendship with Herbert Hoover, then serving as Secretary of Commerce. This relationship led Hoover to bring Brown into Commerce as Assistant Secretary in 1927. Brown served as Hoover's campaign manager in the 1928 presidential election, and found himself rewarded with the position of Postmaster General in 1929.¹⁸⁵

¹⁸⁵ van der Linden, *Airlines and Airmail*, 63-65.

Brown's political education had prepared him well for his new position. His activity in the Ohio Republican Party had made him into a "political animal of great influence,"¹⁸⁶ according to Robert van der Linden, and Brown quickly demonstrated his ability to put those skills to work in Washington. His time in the Commerce Department had acquainted Brown with Hoover's associationalist ideology and the Secretary's strong focus on promoting aviation. After assuming the office of Postmaster General, Brown immediately began to work to rationalize the air transport industry while maintaining a focus on promotion. In addition, Brown found himself saddled with a massive budget shortfall, a situation that would help guide his policy during the next four years.

Violating expectations from many in the air transport industry who believed Brown would merely serve as a custodian of existing policy, Brown almost immediately began working to rationalize the airmail system. He began by pursuing two separate, but related strategies that would remain consistent throughout his tenure in office. First, Brown sought to reorganize the Post Office rate structure and gradually reduce the subsidy payments to airmail carriers. At the same time, he sought to rationalize the airmail map and promote the growth of stable carriers with the potential for carrying passengers. He was, however, limited by the prevailing airmail legislation—the Airmail Act of 1926—that allowed for airmail payments on a poundage basis and mandated individual contracts at separate rates for all airmail carriers. This prevailing situation had created a haphazard system whereby some carriers received large subsidies while others experienced significant losses even with federal payments.¹⁸⁷

¹⁸⁶ Ibid, 63.

¹⁸⁷ The Second Amendment to the Airmail Act, passed on June 3, 1926, created a system whereby carriers were compensated strictly on the basis of the weight of mails transported, without regard to distance. Thus, a carrier contracting a route with high mail volume over a short distance could reap large profits, while a carrier with a low volume,

Shortly after assuming his new office, Brown made public his desire to revise the rate system. In a May 27, 1929 Post Office press release, the Postmaster General argued, “the cost to the government represented by payments to contractors for the transportation of air mail must be reduced and carrying rates readjusted to a sound basis.” Brown based his judgment on the “disparity between the amount earned and expended by the government for air mail and also the wide differences in pay to different contractors.” The solution, he suggested, was a policy whereby “operators would be paid on a mileage or distance basis” rather than the prevailing system based on weight.¹⁸⁸

Simultaneously, Brown initiated a series of meetings between Post Office officials and airline executives designed to facilitate the creation of a rational airmail payment and route system that would support the continued development of American commercial aviation. The first, on May 27, resulted in an agreement that the Post Office should prepare a questionnaire to be sent out to current and possible future contractors. This questionnaire aimed to secure “information on operating costs and other factors entering into the business on which to base revisions of pay rates to the operators.”¹⁸⁹ In September Brown again called airline executives to Washington, D.C. to discuss the results of the surveys and to negotiate the “extensions of . . . contracts for a period of ten years from the date when they began to operate.”¹⁹⁰ This latter aspect of the conference focused on establishing

long distance route could experience losses, even at the same rate. See: van der Linden, *Airlines and Airmail*, 113-114.

¹⁸⁸ Post Office Press Release, May 27, 1929, Box 117, RG 46, NARA.

¹⁸⁹ Ibid.

¹⁹⁰ Post Office Press Release, September 11, 1929, Box 117, RG 46, NARA.

greater stability in the airmail system and rewarding so-called “pioneer operators” with guaranteed contacts that would encourage further development.¹⁹¹

Brown’s actions formed a natural outgrowth of his economic and political philosophy. His background in Progressive politics and close connections to Herbert Hoover helped Brown to embrace a broadly associationalist view with regard to the relationship between government and business. In fact, almost immediately upon taking office, Brown and Hoover moved to establish greater transparency between governmental agencies and commercial interests with the goal of promoting economic growth. In May of 1929 the Post Office proudly announced the creation of the Interdepartmental Committee on Airways. The Committee—created at Hoover’s behest—was tasked to “hear and determine questions relating to the extension of the civil airways system of the United States.” Its membership included prominent members of the Post Office and Commerce Departments, including W. Irving Glover, Second Assistant Postmaster General, E. B. Wadsworth, Superintendent of the Air Mail Service, William MacCracken, Assistant Secretary of Commerce for Aviation, and F. C. Hingsburg, Chief of the Commerce Department Airways Division.¹⁹²

The creation of such an organization, Brown argued, represented a crucial step in rationalizing American air commerce. “The fast growing business of air transport,” he argued, “with its air mail

¹⁹¹ These “pioneer operators” represented early air transport companies that had inaugurated commercial service—mostly by acquiring government airmail contracts—and had gradually grown into stable operators. These airlines diligently worked to create commercial service at a time when the government was just beginning to regulate and promote the industry. Their operations thus undertook myriad trial and error efforts to find suitable aircraft, train pilots, create maintenance schedules, and pioneer routes. Doing so incurred significant costs, and opened the door for later air transport operators to begin service much more quickly, easily and cheaply. Thus, Brown desired to reward these pioneers for their efforts, and make sure they had continuing access to airmail subsidies to protect these companies’ investments and support further growth. For more information see: Davies, *A History of the World’s Airlines*, 123-125.

¹⁹² Post Office Press Release, May 10, 1929, Box 117, RG 46, NARA.

nucleus, and the consequent vast numbers of applications for extensions of existing routes and the establishment of new ones, have made the organization of a committee to handle the relevant problems a necessary expedient.” Brown related that the Committee would hold public meetings “from time to time” in order to “entertain suggestions from representatives of commercial organizations . . . for the establishment, extension, or modification of the airways system.”¹⁹³

Brown’s articulation of the need for the Interdepartmental Committee epitomizes his views regarding the government’s responsibility to commercial aviation. He, like Hoover, pushed for greater coordination amongst government agencies to maximize aid while minimizing cost. At the same time, Brown saw a need for greater communication between governmental agencies and commercial interests. In particular, Brown believed that transparency between the Post Office and airlines would promote rational reorganization of rates and routes, serving the best interests of the government and airlines. Through the Interdepartmental Committee, the series of meetings between airline executives and Post Office officials, and, ultimately though new legislation, Brown consistently sought to use his power to promote aviation’s growth along rational and fiscally responsible lines.

Brown’s philosophy certainly reflected Hoover’s associationalist influence, but at the same time demonstrated the Postmaster General’s firm grasp on the economic and political factors facing commercial aviation in 1929. In the years following the passage of the 1925 Kelly Bill, the ever-expanding U.S. airmail route structure supported the development of numerous commercial air carriers. These carriers relied almost wholly on Post Office subsidies for survival, and competition for new routes and route extensions was fierce. By the end of the decade, this Darwinian process had resulted in the creation of three large aviation holding companies—The Aviation Corporation (of

¹⁹³ Ibid.

Delaware), North American Aviation, and United Aircraft and Transportation Corporation. These three corporations each controlled airlines, airframe manufacturers, engine builders, and financial interests in an effort to secure a maximum of control over the expanding air commerce network. By 1929 these three holding corporations controlled more than ninety percent of airmail revenues.¹⁹⁴

At the same time, however, a growing set of concerns cast doubt on the financial stability of the air commerce industry on the eve of the Great Depression. First, airlines, like other publicly traded industries, had become overvalued in the years preceding the stock market crash. This was particularly worrisome for Brown because airlines were almost totally dependant on federal airmail contracts for solvency. In addition, aviation increasingly suffered from overproduction. During the 1920s, the Post Office offered numerous new airmail routes up for private bids, and airlines and aircraft manufacturing firms had grown quickly to keep up with demand. As the creation of new routes slowed and aircraft became more advanced and expensive, however, supplies—of both aircraft and airlines themselves—quickly grew beyond demand. Finally, the rapid expansion of airmail routes promoted a haphazard system of growth for airlines, resulting in a number of inefficient and unnecessary routes.

This last point bears further examination, as it highlights the specific conditions to which Brown attempted to respond. Following the passage of the Kelly Bill, the Post Office offered airmail routes to private contractors on the basis of a competitive bidding process—that is, the government would award the contract to the lowest responsible bidder. From 1925 until 1930, this policy guided the growth of the airmail network, and thus nascent airlines' development. Such a system, however, did not fully account for the variables and complexities inherent in an emerging industry like

¹⁹⁴ A.G. Patterson, Undated Memorandum for Mr. Harllee Branch, Box 117, RG 46, NARA.

aviation. First, as discussed previously, the Post Office made payments based on a poundage system that could result in large inequalities in payment on different routes. Second, flying was still a dangerous business, requiring skill and experience in order to meet a set schedule safely and reliably.¹⁹⁵ Third, aeronautical technology was advancing rapidly during this period, with new innovations like improved instruments, radio communication, de-icing equipment and newer and faster aircraft constantly raising the bar for performance and safety. Finally, while virtually all airlines depended on airmail contracts to remain solvent, passengers began to form an increasingly important element of air commerce. Flying passengers, however, required different equipment and different skills than did flying mail alone. Most significantly, airlines required larger and more comfortable aircraft, a much more expensive proposition than the small, cheap and relatively crude planes used to carry mail.

These factors resulted in a rapidly growing air commerce industry lacking focus and direction. For the most part, an airmail contract remained a necessary precondition for commercial success, but securing such a contract at the lowest profitable rate often meant eschewing larger, safer aircraft and the possibility of passenger service. Larger so-called “pioneer operators” led the way in promoting new safety equipment, pilot training and the utilization of larger passenger aircraft, but these same carriers suffered from increased overhead as a result, factors that threatened their ability to remain

¹⁹⁵ Brown worried that the system created by the Kelly Bill would stunt aeronautical growth by giving unfair advantage to small and/or unprepared operators not willing or able to invest in the training and safety equipment needed to promote safe operations and hopefully extend their transport system to carrying passengers. In the words of R.E.G. Davies, “any private company with a couple of worn-out aircraft could have put in a low tender, aiming only at making a few quick dollars at the expense of the Post Office and then pulling out.” (Davies, *A History of the World’s Airlines*, 124.) Brown believed that these types of operations had the potential to cause great harm to American aviation, undermining public safety in flying and shutting out the pioneer operators who had worked diligently to promote safe and reliable operations.

competitive for airmail contracts. Overproduction of planes and engines and the overvaluation of airline stock only further complicated this picture, and by the eve of the Great Depression aviation—though it had experienced tremendous success since 1925—appeared vulnerable on several fronts.¹⁹⁶

At the same time, aviation appeared poised to reach a new level of maturity and become a central part of the American transportation system for both cargo and passengers. As early as May of 1929 Brown asserted that “the pioneering in the air mail is nearly over so far as experimentation is concerned.”¹⁹⁷ This statement reflected Brown’s belief that aviation was on the verge of achieving commercial stability. In his mind, the immediate future held great promise for aviation, but also significant risk. For him, coherent federal action had the potential to create a secure commercial future for aviation, but existing policies were not adequate for that task. As such, Brown consistently worked to create a policy framework that would promote the rational growth of aviation, as well as lay the foundation for its financial stability.

Central to that framework was a desire to steadily decrease the amount of subsidy paid out to airmail carriers. Brown argued that “there is not, in air mail, the fundamental reason for subsidy that exists in shipping where foreign competition in ship construction and cost of operation are essential factors.” That context, however, did not remove the necessity of government assistance. Brown emphasized, “we [in the government] want you [the airlines] to prosper and the service to grow. I want to give air mail every encouragement consistent with sound business.” As a result, the Postmaster was not “disposed to drive a hard bargain” with those “who have put their money and

¹⁹⁶ In fact, following the stock market crash in October of 1929, the majority of major airlines found their stock dangerously devalued. For instance, the stock of North American Aviation fell from a high of 19¾ to a low of 4, and United Aircraft stock fell from 109½ to less than 45. Further, after the economic downturn virtually all of the major carriers quickly began to hemorrhage their cash reserves. See: van der Linden *Airlines and Airmail*, 106.

¹⁹⁷ Post Office Press Release, May 27, 1929, Box 117, RG 46, NARA.

skill into the flying game.” Throughout his term as Postmaster, Brown consistently worked to lower airmail subsidies, but did so in close cooperation with airlines in order to maintain their financial health.¹⁹⁸

In support of that effort, Brown highlighted the government’s ongoing responsibility to promote the development of aviation infrastructure. In a January 1930 speech to the Cleveland Chamber of Commerce, he argued that the government should “by every reasonable and practical method . . . encourage the development of better airplanes, landing fields, weather reporting services and aids to aerial navigation.” Reminding the audience that the “United States Government has performed a consistently leading part” in the aviation’s development, Brown related how “in pioneering operations with the air mail the Post Office Department was actuated by a major purpose to encourage the art of flying and the aviation industry.”¹⁹⁹

For Brown, the goal of that federal support was twofold. On the one hand he believed that aeronautical development would benefit the country through increased commercial efficiency, technological innovation, and the promotion of safer and more effective communication. On the other he, like others in the Hoover administration, tied the development of commercial aviation to national defense. Brown believed that the creation of a stable air transport industry would result in Americans having “no anxiety about being able to defend ourselves in the air if the occasion should ever arise.”²⁰⁰

¹⁹⁸ Brown’s policy was predicated on the assumption that as airlines grew and began to carry more passengers, they would need fewer and fewer subsidies to maintain solvency. Post Office Press Release, May 27, 1929, Box 117, RG 46, NARA.

¹⁹⁹ Commercial Aviation and the Air Mail, Address by Postmaster General Walter F. Brown Before the Cleveland Chamber of Commerce, January 14, 1930, Pan American Airways Papers, Accession II, Box 742, Folder 2.

²⁰⁰ Ibid.

Brown also emphasized the need to rationalize the airmail network. In his mind this meant changes to both the rate structure and airmail map. Most pressing, Brown desired to abolish the poundage-based system that perpetuated an unequal payment scale. Brown hoped that a move to a space-based system would alleviate these inequalities and promote even more growth while simultaneously allowing the Post Office to support the development of passenger service. He suggested that a move to such a system “would enable the Post Office Department to give immediate assistance to air passenger carriers on such routes as were deemed essential, by paying for carrying the mails a substantial sum.” Further clarifying his ideas, Brown continued: “various factors, of course, should determine the amount of weigh-space to be taken . . . the character and frequency of the service, the volume of mail flowing, and the financial necessities of the carrier.”²⁰¹ In short, Brown wanted to transition to a space-based system in order to use Post Office contracts to guide the growth of airlines in specific ways.

Brown hoped to use several strategies in pursuance of that goal. First, he worked to support the continued growth of so-called “pioneer operators.” Brown argued that “with the passenger lines, as with the exclusively mail lines, preference . . . should be given to pioneers in the air transport industry of good character and financial responsibility.”²⁰² The final part of this statement is of particular interest, for it clearly demonstrates Brown’s associationalist thinking. In his opinion, the competitive bidding process had the potential to undermine the position of established carriers that had worked long and hard to establish reliable service. These pioneers, by and large, had expended significant sums in order to train their pilots, purchase the most current instruments and safety

²⁰¹ Specifically, by giving preference to airlines utilizing larger aircraft—i.e. those with the potential to carry passengers. Commercial Aviation and the Air Mail, Address by Postmaster General Walter F. Brown Before the Cleveland Chamber of Commerce, January 14, 1930, Pan American Airways Papers, Accession II, Box 742, Folder 2.

²⁰² Ibid.

equipment, and secure new airframes and engines. Trial and error during early years of operation had resulted in airlines learning the hard way what skills and equipment were necessary to establish and maintain reliable service. These attributes gave pioneer carriers great potential for further growth—particularly into passenger service—but they also raised overhead. Brown hoped to avoid new, untested carriers with little experience and limited potential for stable growth underbidding these pioneers and stunting the overall growth of the American air transport system.

To that end, Brown hoped to gain the power to extend original four-year airmail route certificates an additional six years. Asserting, “the Postmaster should . . . be authorized by negotiation with present air mail contractors to extend air mail contracts to a maximum period of ten years from the date of the original award,” Brown hoped to be able to reward successful and stable pioneer operators. This policy would allow the Postmaster to guide the growth of the industry—at least in the short term—by granting contract extensions without competitive bidding to those operators he felt had demonstrated the ability to promote American air commerce.²⁰³ This policy would significantly reduce open competition, competition Brown believed had the potential to create chaos and threaten the future of American air commerce.

Ultimately, Brown’s efforts resulted in the passage of H.R. 9500, the third amendment to the 1925 Airmail Act—the so-called Watres Bill. This legislation, largely authored by Brown himself, changed the Post Office’s payment system to one based on space available, rather than poundage, authorized the Postmaster General to exchange airlines’ original four-year contracts for ten-year

²⁰³ This policy would also generally promote the development of well-financed carriers, resulting in airlines operating under the umbrella of the three large holding companies gaining preference. It should be noted, however, that these same airlines were almost without exception those that had been in service the longest, possessing the most experience, the best equipment, and the willingness to work closely with the Post Office and Commerce Departments.

route certificates, and enabled the Postmaster General to approve route extensions and consolidations in the public interest. Brown initially hoped that the law would allow him to grant new contracts without any competitive bidding, but Congressional opposition forced a compromise. As a result, the bill restricted bidding on airmail contracts to operators with six months of operating experience on routes of four hundred miles or longer, and allowed Brown the freedom to extend and consolidate routes at his discretion. The result was a system that embraced many of Brown's ideas—granting preference to established operators, giving the Postmaster the freedom to rationalize airmail routes through extensions and consolidations, promoting the establishment of passenger service, and promoting technological development—while at the same time leaving the door open to new, independent operators.²⁰⁴

Brown specifically crafted the bill to promote passenger service through the use of larger, more technologically advanced aircraft. Airmail carriers would receive bonuses—added as an increase in payment-per-mile to the base rate—for carrying radios, flying in the fog or after dark, and utilizing multi-engine aircraft. More significantly, Brown explicitly promoted passenger service by offering a sliding scale of increased payment for passenger-carrying aircraft. At minimum, planes carrying between two and five passengers received an additional 1.5 cents per mile, while, at the other end of the spectrum, planes carrying more than 30 passengers received an additional 7.5 cents.²⁰⁵ These provisions created a system that embraced Brown's core philosophy—an effort to create a rational,

²⁰⁴ The bill authorized the Post Office to pay a fixed amount per cubic foot of available space not to exceed \$1.25 per mile; the bill also authorized the Postmaster General to revise rates for operators receiving a ten-year certificate, a power Brown utilized to steadily reduce the subsidy paid out to airmail carriers. See: Post Office Press Release, February 16, 1931, Box 117, RG 46, NARA; van der Linden, *Airlines and Airmail*, 106-136.

²⁰⁵ van der Linden, *Airlines and Airmail*, 152.

stable air transport network that promoted the public good through the carriage of cargo and passengers.

Almost immediately after President Hoover signed the Watres Act into law, Brown moved to take advantage of his new powers. True to his associationalist foundations, he began by calling representatives from all of the major airlines to Washington, D.C. in order for them “to acquaint themselves with the provisions of the Watres Bill.”²⁰⁶ In fact, this meeting would be the first of the so-called “spoils conferences” wherein Brown facilitated the assignment of airmail routes to major airlines without competitive bidding. Independent air transport operators—those without federal airmail contracts—and Congressional Democrats would later use these conferences as evidence that Brown colluded with airlines and engaged in fraud and corruption at taxpayers’ expense. In fact, the uproar over these conferences formed the immediate rationale for the creation of Senator Black’s Special Committee.

It is instructive, however, to examine Brown’s rationale for calling these meetings, and the response from airlines in attendance. In a May 15, 1930 Post Office memorandum, Irving Glover explained the motivations for these meetings. Glover began by expressing Brown’s desire to meet with “substantial representatives” from major airlines. Brown, Glover related, hoped to “have a talk with them along the lines of just the best way for them to approach the question of giving aid to passenger lines.” More specifically, Glover wrote that Brown desired the Post Office and the airlines “to come to some understanding so that it will not all be thrown into the pot and the passenger line operators left entirely outside due to the fact that the air mail operators would have the inside and

²⁰⁶ Post Office Press Release, May 19, 1930, Box 117, RG 46, NARA.

have the territory covered.”²⁰⁷ In other words, Brown was worried that competitive bidding would allow new and untried operators with low overhead and no potential for carrying passengers to undercut the established airlines and take control of the majority of federal airmail subsidies. This would have the effect of stunting the growth of passenger service, a situation Brown hoped to avoid at all costs.

Brown’s solution was to facilitate a meeting whereby the major passenger-carrying airlines would voluntarily split up the airmail map in order to evenly distribute subsidies. This was the ultimate purpose of the May 19 meeting, a meeting Brown hoped would establish a firm foundation for the future of American air transport. The Postmaster invited only well-established carriers with a history of passenger service, a fact that resulted in a number of small, independent operators being unable to even bid on airmail routes.²⁰⁸ This situation would later give rise to charges of collusion, as Brown’s actions—at least in spirit—violated the terms of the Watres Bill.²⁰⁹

Brown, however, believed that his actions represented the best and most logical way to assure the future of American passenger airlines. In a memorandum summarizing the May 19 meeting, Earl

²⁰⁷ W. Irving Glover, Memorandum for Earl Wadsworth, May 15, 1930, Box 117, RG 46, NARA.

²⁰⁸ Most prominently established carriers such as United, American, and Transcontinental Air Transport. See: Earl B. Wadsworth, Post Office Department Memorandum, May 20, 1930, Box 117, RG 46, NARA; Statement of C. E. Woolman to Post Office Investigators C. Fleming and V. V. Sugg, Monroe, Louisiana, February 21, 1934, Box 117, RG 46, NARA.

²⁰⁹ Unfortunately, it seems that much of the documentary record associated with the operators’ conferences has been lost. Perhaps because of the controversy that subsequently surrounded these events, little correspondence survives. Existing records come from notes taken at the meeting by Post Office Superintendent Earl Wadsworth and later interviews undertaken as part of Hugo Black’s Senate Special Committee investigation. See: Earl B. Wadsworth, Post Office Department Memorandum, May 20, 1930, Box 117, RG 46, NARA; Hainer Hinshaw to Walter Brown in Earl Wadsworth, Personal Notes at “Spoils Conference,” June 4, 1930, Box 130, RG 46, NARA, and Statement of C. E. Woolman to Post Office Investigators C. Fleming and V. V. Sugg, Monroe, Louisiana, February 21, 1934, Box 117, RG 46, NARA.

Wadsworth related that the meeting was organized “for the purpose of discussing the provisions of the Watres’ [sic] Bill insofar as it offered aid to the passenger lines.” According to him, it was common knowledge that “none of the so-called strictly passenger lines are breaking even and it is apparent that they will need some assistance if they are going to continue.” To address that circumstance, “the PMG expressed the desire to know whether it is going to be possible for the so-called pioneer operators to agree among themselves as to the territory in which they shall have paramount interest.”²¹⁰ Here Brown clearly relates his plan for securing the health of passenger carriers, a plan centered on voluntary cooperation between the government and commercial interests, and between the commercial interests themselves.

Significantly, the airline executives at the meeting expressed approval of Brown’s plan. Jack Maddux, representing Maddux Airlines and Transcontinental Air Transport, argued that if passenger carriers did “not receive an air mail contract then they could not live.” He also related his hope that “the [Watres] Bill would take care of this.” At the same time Maddux and others echoed Brown’s desire that the assembled carriers could come to some agreement without recourse to competitive bidding. Harris Hanshue, representative from Western Air Express, most clearly articulated the group’s thinking on the subject, stating “we are willing to do anything within reason to work out the plan rather than go into competitive bidding.” After asking if there were any objections to the plan—there were none—Brown allowed the assembled airline executives to use the room “for the purpose of organizing themselves into such groups as may be decided upon and to report back to the PMG when they had reached a conclusion in regard to the suggested plan.”²¹¹

²¹⁰ Earl B. Wadsworth, Post Office Department Memorandum, May 20, 1930, Box 117, RG 46, NARA.

²¹¹ Ibid.

Brown hoped that this and subsequent meetings would result in the major airlines splitting up air transport routes in a logical manner. Specifically, the Postmaster General desired that a single carrier operate each of the three main transcontinental “trunk” lines stretching from the East to the West Coast.²¹² In his mind, this organization would support the continued development of a number of mature airlines, and would encourage technological advances and passenger service by creating long-distance routes between major passenger destinations—New York, Philadelphia, Atlanta, Dallas, Chicago, Denver, San Francisco, and Los Angeles, for example.

Brown was not reticent in making his views known to the assembled representatives. According to C. E. Woolman of Delta Airlines,²¹³ “the Postmaster General had definitely stated that he intended that each of the three transcontinental routes would be operated by a single company.” Further, Brown visited these meetings “from time to time,” and “expressed some irritation over the fact that the conflicting interests in dividing the air mail routes under consideration could not settle their differences.”²¹⁴ Ultimately, these meetings failed to produce unanimity and Brown stepped in to act as a referee, splitting up airmail routes according to what he believed to be the best interests of both the carriers themselves and the country. According to Wadsworth, the absence of agreement forced the assembled airline representatives to “submit these controversies to [Brown] as arbiter, and agree to be bound by [his] decision.”²¹⁵

²¹² At the time only two of these trunk lines existed. Throughout the conferences Brown worked to use extensions and consolidations to create a third, southern trunk line.

²¹³ Woolman had not received an invitation to the May 19 meeting, but after consulting with William MacCracken and demonstrating that Delta had the necessary requirements to qualify for the conferences, gained admittance to subsequent meetings beginning in June. See: Statement of C. E. Woolman to Post Office Investigators C. Fleming and V. V. Sugg, Monroe, Louisiana, February 21, 1934, Box 117, RG 46, NARA.

²¹⁴ Ibid.

²¹⁵ Hainer Hinshaw to Walter Brown in Earl Wadsworth, Personal Notes at “Spoils Conference,” June 4, 1930, Box 130, RG 46, NARA.

Unfortunately for Brown, his actions attracted unwanted scrutiny. The U.S. Comptroller General, J.R. McCarl, “ruled against and declared unlawful the granting of these routes by extensions as presented to him by the Postmaster General,” forcing Brown to pursue another tack to achieve his goals.²¹⁶ According to Woolman, Brown responded to McCarl’s actions by announcing “that the Central and Southern Transcontinental routes would be let by bids but announced specifications which virtually eliminated from bidding any other than” Brown’s chosen airlines.²¹⁷ Specifically, Brown mandated that prospective bidders post a \$250,000 bond to ensure financial stability and establish good faith. Bond posting was not a new requirement, but the amount was many times greater than that required for previous contracts—generally under \$15,000. Further, at the urging of William MacCracken, Brown imposed a night-flying requirement, which the former believed would separate the experienced operators from new upstarts.²¹⁸ Neither of these new requirements were unreasonable in and of themselves, but they had the effect of radically limiting the number of airlines “qualified” to bid on airmail contracts. As a result, Brown was largely able to achieve his goals, though in a more convoluted manner than he had initially planned.

These maneuverings ultimately allowed Brown to remake the airmail map in his own image. The new contract requirements disallowed bids from the vast majority of new and unproven airlines,

²¹⁶ Brown initially pursued a policy of altering the airmail routes by granting extensions—sometimes many times longer than the original route—and consolidating existing routes. These actions were technically legal according to the dictates of the Watres Bill, but certainly violated the spirit of the law, which maintained requirements for competitive bidding. McCarl’s ruling limited route extension to distances no more than half as long as the originally contracted route, sharply limiting Brown’s efforts to reshape the airmail map. See: Statement of C. E. Woolman to Post Office Investigators C. Fleming and V. V. Sugg, Monroe, Louisiana, February 21, 1934, Box 117, RG 46, NARA; van der Linden, *Airlines and Airmail*, 106-187.

²¹⁷ Statement of C. E. Woolman to Post Office Investigators C. Fleming and V. V. Sugg, Monroe, Louisiana, February 21, 1934, Box 117, RG 46, NARA.

²¹⁸ van der Linden, *Airlines and Airmail*, 167-168.

and Brown used his powers to extend and consolidate existing lines to fit his logical plan. By the summer of 1930 Brown had created a map defined by major airlines flying three foundational transcontinental lines, with “feeder” lines serving the majority of population centers in the U.S. Further, he worked to eliminate small routes with minimal mail volume and little potential for growth into passenger service. Brown’s efforts also resulted in a steady reduction in Post Office mail subsidies. Brown lowered airmail rates several times during his tenure in response to improved efficiencies and the continuing growth of passenger-carrying operations.

These actions attracted increasingly scathing criticism from airlines cut out of Brown’s vision and Congressional Democrats chafing under twelve years of leadership from Republican presidents. This antipathy eventually resulted in Brown’s removal from office and widespread attempts to discredit both his person and his actions. The Postmaster General, however, maintained that he had always acted in the best interest of the country. In 1934, Hugo Black called Brown before his Special Committee to answer for his supposed crimes—an opportunity that Brown utilized to defend his policies.

These statements offer perhaps the clearest articulation of Brown’s views on aviation’s significance to the United States, and the government’s proper role in promoting its growth. Brown began his testimony by explaining the rationale that guided his crafting of the Watres Bill. “The major purpose of the legislation,” he stated, “was not to transport the mails at the lowest possible cost to the government, but to foster the . . . aeronautical industr[y].” The bill itself, he explained, “states its purpose to be ‘Further to encourage commercial aviation.’”²¹⁹

²¹⁹ Statement of Walter F. Brown to the Senate Special Committee, February 1934, Box 123, RG 46, NARA, 1.

Brown next turned to a summary of his views on federal aviation policy. In his opinion “the ultimate goal of the commercial aviation policy is to create an economically independent aeronautical industry.” To achieve that overarching goal, Post Office airmail subsidies were specifically designed to enable “air transport operators to recoup in the form of mail pay their out-of-pocket losses while they are building up adequate passenger and express revenues from the public and are developing transport airplanes capable under competitive conditions of earning their costs of operation.”²²⁰ Brown explicitly saw aviation as a nascent industry in need of public aid. Airmail revenue, in this context, served as a kind of grant, enabling air transport operators to remain solvent while encouraging maturation that would eventually wean them off federal payments.

Bearing that fact in mind, Brown argued that he undertook all of his actions under the Watres Act to serve the public interest. “Every such action,” he argued, “resulted in improved public service and ultimately in lower flying costs which were passed on to the Government in the form of reduced mail pay.”²²¹

The former Postmaster General also emphasized how his actions served to specifically promote passenger-carrying operations. He articulated how he used the new powers granted him by the Watres Bill to exert “pressure on the air mail carriers, who with minor exceptions had theretofore been confining their operations exclusively to carrying the mail, to transport passengers and express in order to build up revenues from the public and thus lighten the load on the Post Office Department.” At the same time Brown explained how his actions served to rationalize the air transport map by using “every proper influence to consolidate the short, detached and failing lines into well financed and well managed systems,” and “providing three independent intercontinental

²²⁰ Ibid, 1.

²²¹ Ibid, 4.

operations with appropriate north and south intersecting services.” He hoped that these actions would in time “attract public patronage, reduce operating costs and develop, if possible, a transport airplane capable . . . of earning enough to pay its own way without subsidy.”²²²

Brown also tied aviation’s health to the wellbeing of the nation. In pursuing the above policies, Brown stated that he “took it for granted that the uninterrupted development of the air transport industry, necessary to keep the aeronautical art in our country abreast of that art throughout the world, was vital to our national security and that the air mail itself was performing an essential service for the business of the country.”²²³ This statement provides a succinct articulation of Brown’s larger goals. Aviation, in his view, was central to the economic health of the nation. Further, aviation’s continued development also affected America’s security, and maintaining a technological edge was vital to protecting American interests at home and abroad.

As such, Brown saw his role as Postmaster General extending far beyond the carriage of the mail. He used the power granted him by the Watres Bill to take almost single-handed control of commercial aviation with the goal of shaping it into a fiscally solvent, technologically advanced industry predicated on carrying passengers over a rational network of airways. In that effort he worked closely with members of the industry to promote the growth of airlines he felt had the best potential to realize these goals. In that context, his actions emerged as a natural outgrowth of Hoover’s policies and represented Brown’s effort to apply associative principles to the air transport industry.

Tellingly, Brown’s actions provide the clearest example of Hoover’s associative ideology operating in practice. Though at times Brown’s actions demonstrated a heavy-handed approach that

²²² Ibid, 4-5.

²²³ Ibid, 5.

suggests the limitations of Hoover's associationalist thought, the Postmaster General's efforts were, for the most part, effective in fostering the growth of nascent airlines, promoting safe operations and beginning to increase the carriage of passengers. Brown's specific decisions emerged from a logical analysis of the emerging industry, and reflected a genuine desire to benefit both aviation and the United States. In Brown's mind, those decisions did not represent collusion or fraud. Rather, they offered the best way for the government to help promote the rational growth of an embryonic industry while avoiding counter-productive competition.

After the 1932 elections, Brown's view came under attack from several sources. First, the airlines excluded from his airmail network increasingly lobbied the Post Office and Congress for airmail routes. Second, Congressional Democrats—particularly anti-monopoly forces led by Alabama Senator Hugo Black—vocalized their opposition to Brown's efforts to shape the industry through associationalist policies.²²⁴ In a February 1934 radio address over the Columbia Broadcasting Service network, Black concisely articulated his antipathy to Brown's actions. Black argued that aviation had been “greedily grabbed away from the control of those interested in aviation progress.” As a result of its consolidation into holding corporations and the mergers Brown helped push through, it was now “utilized by profiteers as a means of private gain through stock jobbing, speculation, and monopoly.”²²⁵ Black used even stronger language in an address to Congress two

²²⁴ See: van der Linden, *Airlines and Airmail*, 247-259.

²²⁵ Senator Hugo Black Discusses “Aviation and Air Mail Contracts” Over CBS, February 16, 1934, Box 477, Hugo Black Papers, Manuscript Division, Library of Congress.

months later when he stated his intention to investigate “what I consider to be a network of intrigue, chicanery, manipulation, and fraud.”²²⁶

Black’s rhetoric, and his creation of a Senate Special Committee to investigate supposed fraud, corruption, and collusion in the aviation industry represented the culmination of a rising tide of discontent with Brown’s policies. At the same time, however, they also reflected Black’s own views. Black hailed from rural Alabama, and during his Senate career remained passionately opposed to concentrations of power and wealth. Robert van der Linden describes Black as a man “raised in a Populist household,” a “Southern Progressive Democrat . . . vehemently opposed to all monopolies” and a man who “sought to expose their purported evil to the light of public scrutiny.”²²⁷ Black, therefore, was a perfect candidate to lead the charge against Walter Brown’s policies, and did so with notable vigor.²²⁸

Beginning in February of 1933, Black began calling for a formal investigation of Post Office policies. By March, the Senate agreed to create a special committee charged to “investigate and make a full, complete, and detailed inquiry into all existing contracts entered into by the Postmaster General for the carriage of air mail.”²²⁹ The resolution empowering the Special Committee laid out four specific tasks: first, to determine “all the circumstances surrounding the execution and continuation of, and the necessity, if any, of maintaining and altering, or canceling such contracts;” second, to investigate “the organization and financial conditions of associations, partnerships, or

²²⁶ The Truth About Air Mail Contracts, Address by Senator Hugo Black to Congress, April 25 and 26, 1934, Box 118, RG 46, NARA, 1.

²²⁷ van der Linden, *Airlines and Airmail*, 260.

²²⁸ For more information on Hugo Black, see: Howard Ball, *Hugo L. Black: Cold Steel Warrior* (New York: Oxford University Press, 1996).

²²⁹ The Committee was actually tasked to investigate supposed fraud in both ocean mail and airmail contracts, but with Black’s ardent support it quickly came to focus primarily on airmail.

corporations with which such contracts have been entered into;” third, to conclude “the extent of any activities . . . with which such contracts have been entered into, in any effort to obtain, through legislation or otherwise, cash subsidies from the United States;” and, finally, to determine “any other facts relating to legislation or appropriations affecting air mail” contracts.²³⁰ In short, the Senate tasked the newly created Special Committee with determining why the Post Office granted airmail contracts to the carriers it did, under what auspices those contracts were granted, the financial status of the companies receiving contracts, and the status of federal cash subsidies paid out to airmail carriers.

In assuming this mandate, Black made a concerted effort to highlight the historical precedent for such an investigation.²³¹ In an April 25, 1934 speech to Congress summarizing the Committee’s findings, Black explicitly tied his actions to a long history of Congressional examinations of fraud vis-à-vis Post Office mail contracts. Informing his peers of four relevant historical examples, Black suggested that in each case, “the machinations, the methods, the means used have been identical.” Citing “extensions, combinations to bid,” and the “granting [of] extra allowances” for mail routes during the Lincoln, Garfield, Theodore Roosevelt, and Hoover administrations, Black argued that in each case Congressional investigators were “hampered and handicapped by those who said it was a partisan investigation.”²³²

²³⁰ Senate Resolution 349, 72nd Congress, 2nd Session, approved February 25, 1933, Box 117, RG 46, NARA.

²³¹ For more information regarding Congressional investigations see: James Hamilton, *The Power to Probe: A Study of Congressional Investigations* (New York: Random House, 1976).

²³² Black’s mention of fraud in the Hoover administration here referred to bid for an airmail route between Pueblo and Cheyenne Wyoming tendered by Harry New in 1925—a bid unrelated to Brown actions five years later. See: *The Truth About Air Mail Contracts*, Address by Senator Hugo Black to Congress, April 25 and 26, 1934, Box 118, RG 46, NARA, 3-4; *Ibid*, 2.

Specifically, Black suggested that in at least four previous instances, the Post Office had granted private mail contracts either without competitive bidding or under strictures that undermined the spirit of competition. In each case investigators had been charged with acting out of a partisan desire to undermine the political opposition, rather than any genuine desire to oppose corruption. Those charges, Black contended, had been groundless, as they were in the current case. In all four historical examples, Black highlighted the prompt cancellation of the fraudulent contracts, and suggested that a failure to do so for airmail contracts awarded by Walter Brown would be “un-American.”²³³ As such, Black publicly identified himself with a long history of anti-corruption forces while simultaneously focusing attention on past Post Office scandals.

Black’s Special Committee began its investigation in the summer and early fall of 1933, though it did not formally convene until September 28. Black chose A. G. Patterson to be his chief investigator. Patterson, a member of the Interstate Commerce Commission, immediately created an investigations staff and proceeded into the field to interview airline executives and collect financial statements from airlines and their holding companies. Under Black’s guidance, Patterson also created a questionnaire that the investigative team sent to all significant airlines operating in the U.S. That questionnaire presented a detailed list of inquiries, requesting information on airmail routes served, any extensions or consolidations thereto, financial statements, the capital structure of the company, lists of officers and directors, names and addresses of all stockholders, information regarding directors and/or stockholders owning stock in other aviation companies, specifics regarding the amount of mail carried, rates, any changes thereto, and any connections between employees, directors or stockholders and the government.²³⁴

²³³ Ibid, 2.

²³⁴ Questionnaire for Airmail Contract Carriers, undated, Box 117, RG 46, NARA.

With the investigation Black hoped to expose several fraudulent practices emerging from Hoover administration policies. First, he believed that Brown's actions at the "spoils conferences" had awarded airmail contracts without competitive bidding, violating the terms of the Watres Act. In doing so, moreover, Brown and the major airlines had illegally shut small, independent operators out of the proceedings and prohibited them from bidding on routes. Second, Black hoped to show that the three large aviation holding corporations possessed interconnecting directorates with connections to governmental officials. Black believed that these holding corporations represented illegal monopolies that encouraged collusion to the detriment of fair competition. Finally, the Senator hoped to demonstrate that the Postmaster himself owned stock in one or more aviation companies and thus benefited illegally from his ability to grant airmail contracts.²³⁵

These points of emphasis represented legitimate concerns with federal airmail policy, but they largely ignored the contextual factors shaping Hoover and Brown's policies. Specifically, Black, Patterson, and the rest of the investigators remained seemingly unaware of the technological and organizational difficulties associated with operating a regularly scheduled airline route. For the Democrats, the issue was simply one of concentrated power and wealth, with little appreciation for the complicated context affecting aeronautical growth.

This lack of familiarity with aviation clearly comes through in a memorandum describing one of Patterson's interviews. The memo's author, Hainer Hinshaw—at the time employed by United—had been a leading airline executive from the mid 1920s on, was familiar with the creation and expansion of airlines, and had attended Brown's conferences. Hinshaw wrote that the investigator

²³⁵ See: Senator Hugo Black Discusses "Aviation and Air Mail Contracts" Over CBS, February 16, 1934, Box 477, Hugo Black Papers, Manuscript Division, Library of Congress; The Truth About Air Mail Contracts, Address by Senator Hugo Black to Congress, April 25 and 26, 1934, Box 118, RG 46, NARA, 4-48, and van der Linden, *Airlines and Airmail*, 247-262.

appeared uninformed about legal issues relating to airmail contracts, and that “[Patterson’s] memory had to be refreshed as to the wording . . . of the Watres Act” and “the numerous mass meetings held by the then Postmaster General.” According to Hinshaw, Brown had extended airmail routes “on the theory that a few able companies would perform more satisfactorily than many smaller ones,” resulting in reduced rates for the government. Further, the United executive stated that the pressure to extend many of these routes “came from the affected localities” desiring airmail service, not from the Postmaster General himself.²³⁶

Patterson also appeared to lack knowledge of the qualifications airlines had to meet in order to bid on airmail contracts. During the same interview, Hinshaw wrote that he had to explain to Patterson that the “Watres Act required certain qualifications before a prospective bidder could be qualified to bid.” Specifically, Hinshaw highlighted “certain requirements in the matter of speed, equipment, and seats to be furnished.” Emphasizing that there were only five companies who could even qualify as bidders, the airline executive stressed that “those lines protesting against the present day air mail structure were not in existence at the time of the advertisements . . . their protests came long after the awards were made.”²³⁷ Patterson remained focused on attempting to prove that the Post Office had illegally granted contracts to operators that did not enter the lowest bid. Hinshaw’s testimony, however, indicates a distinct lack of awareness of the legal and technological issues at hand. Robert van der Linden argues that Black and Patterson saw little value in airmail, and “no correlation between the carriage of the mail and the carriage of passengers.” For him this myopia was “a recurring theme among the Democratic opposition.”²³⁸ As such, in many ways Black’s

²³⁶ Hainer Hinshaw, Memorandum to P. G. Johnson, June 1, 1933, Box 153, RG 46, NARA.

²³⁷ Ibid.

²³⁸ van der Linden, *Airlines and Airmail*, 263.

investigation did not really address the specifics of airmail policy, but rather emerged from political concerns tangential to the industry in question.

Nevertheless, Black went to great lengths to expose what he considered to be widespread fraud and corruption in the airline industry. Beginning in January of 1934, Black and his Committee called witness after witness to testify against the supposedly illegal practices instigated by Brown. Van der Linden describes the hearings as a “comic opera” that brought forth a “succession of witnesses . . . who outlined Walter F. Brown’s complicated machinations during the Hoover years.” Investigators and several representatives from small airlines presented key testimony about “supposedly clandestine meetings between Brown . . . and the representatives of the key holding companies.” Those “clandestine meetings,” however, were the large operators’ conferences called by Brown and MacCracken in May and June of 1930. Black also focused attention on the holding corporations, exposing legal—but perhaps ill-advised—stock machinations that netted airline executives, including Charles Lindbergh, large profits.²³⁹ Patterson’s investigation brought forward several witnesses who claimed to implicate Walter Brown in illegal stock dealings—though Brown was later

²³⁹ See: Statement of C. E. Woolman to Post Office Investigators C. Fleming and V. V. Sugg, Monroe, Louisiana, February 21, 1934, Box 117, RG 46, NARA. Black’s investigation revealed that when Lindbergh agreed to become a “technical advisor” to Transcontinental Air Transport, he received generous stock options—eventually valued at more than \$250,000. Unsurprisingly, Lindbergh’s association with TAT dramatically increased the stock’s value, and the airline’s President, Clement Keys, advised the pilot to sell the new shares quickly and turn a substantial profit. Keys, apparently, also suggested that Lindbergh keep the stock deal quiet. This profit-taking was technically legal, but certainly appeared unseemly in light of the prevailing economic downturn. See: van der Linden *Airlines and Airmail*, 270, and A. Scott Berg, *Lindbergh* (New York: G. P. Putnam’s Sons, 1998), 190.

exonerated. Finally, Black attempted to prove that the Post Office had granted contracts to airlines because of political connections between private interests and public officials.²⁴⁰

Black summarized his Committee's findings in a speech delivered to Congress on April 25 and 26, 1934. The Senator declared that "there has been a deliberate effort on the part of certain groups in America to mislead the public" about the nature of federal airmail policy. After explaining the legal definition of fraud, and historical precedents for investigating fraud relating to federal contracts, Black proceeded to articulate his interpretation of Brown's machinations. According to the Senator, "beginning before the [Watres] act was passed, the plan was, the scheme was, to let the [airmail] contracts without competitive bidding." Black outlined how in 1929 the Postmaster had authored a bill that would allow him to award contracts without bidding and taken it to Clyde Kelly in the hopes that Kelly would introduce the bill to Congress. According to Black, Kelly rejected the bill because "it made the Postmaster General practically a czar."²⁴¹ Kelly then introduced a bill of his own that provided for competitive bidding. After Kelly's rejection of his legislation, Brown took his bill to Lawrence Watres, who eventually introduced it to Congress. Following significant debate, Congress agreed on a compromise version of the Watres Bill that provided for competitive bidding.²⁴²

Black also implicated the airlines themselves for attempting to influence the legislative process. Stating that after Watres introduced the airmail bill, "the air-mail operators got busy," Black proceeded to outline what he felt was a concerted effort by big businesses to help pass the Watres

²⁴⁰ See: The Truth About Air Mail Contracts, Address by Senator Hugo Black to Congress, April 25 and 26, 1934, Box 118, RG 46, NARA 16-17, 35-38; van der Linden, *Airlines and Airmail*, 268-271.

²⁴¹ The Truth About Air Mail Contracts, Address by Senator Hugo Black to Congress, April 25 and 26, 1934, Box 118, RG 46, NARA, 1, 4-5.

²⁴² See: Ibid, 5, and van der Linden, *Airlines and Airmail*, 118-119.

Bill in order to secure financial benefit. The Senator related, “the record is filled with telegrams and letters telling [the airlines] to bring people here and to continue their activities in connection with the bill.” Moreover, the airlines “were not satisfied with their regular lobbyists in Washington.” They brought in new, more influential lobbyists, and, according to Black, this work was “not the work of no \$50 a month lobbyist.” Black presented evidence that airlines brought in highly paid lobbyists to push for the Watres Bill’s approval, believing that the legislation offered them the possibility of tremendous profits.²⁴³ The Senator presented evidence from the airlines themselves that suggested the companies saw material benefit in the proposed legislation that would definitively raise their airmail revenues.²⁴⁴

The Senator then turned to Brown’s conferences in May and June of 1930. For Black, these meeting exemplified the core of Brown’s collusive agenda. He argued that the Postmaster purportedly called the airlines to Washington, D.C. “to convince them that he had played fair in the passage of the Watres Act.” Brown real aim, however, was “not to take care of them, but to get them in a meeting where they would disagree [about splitting up the airmail routes] and he could throw the whole thing out.” For Black, this was the preeminent example of Brown’s deceitfulness. The Postmaster “called [the airlines] by deception . . . believing, as he said, that they could not agree,” with the specific goal of subverting the bidding process. Black argued that from the beginning,

²⁴³ Here Black failed to make a distinction between the airlines themselves and their holding corporations. The airlines were barely solvent, relying on their parent corporations for capital. The holding corporations, however, had significant cash reserves, larger revenues, and could in fact sponsor significant lobbying efforts in Washington. See: The Truth About Air Mail Contracts, Address by Senator Hugo Black to Congress, April 25 and 26, 1934, Box 118, RG 46, NARA, 6.

²⁴⁴ Ibid, 6, 10-25.

Brown's "plan was to do away with competitive bidding and to give more to him who had something and take away from him who had not."²⁴⁵

For Black the whole process, from Brown's authoring of a new airmail bill to the granting of contracts in the summer of 1930, represented a fraudulent, collusive effort to undermine open and fair competition. Following the previous statements, Black went on to present evidence from airlines' records and from the Post Office documenting Brown's specific actions at the conferences. He argued that the airlines colluded with one another to split up routes without resort to bidding and that certain airlines received preferential treatment from the Post Office in light of their political connections. Additionally, Black argued that the Postmaster General had overstepped his authority by granting long route extensions, forcing consolidations in the industry, and scheming to confer routes without competitive bidding. Black also turned to evidence from Comptroller General McCarl prohibiting Brown's route extensions and forcing Brown to put several routes up for bid—doing so, however, under restrictions that assured the Postmaster's chosen companies would receive the contract.²⁴⁶

Black's revelations, however, were not revelations at all for anyone familiar with the contemporary development of American commercial aviation. Further, his reasoning does not stand up to close scrutiny. First, as previously mentioned, Brown readily admitted that he called the conferences with the express desire of splitting up the airmail map without recourse to what he considered destructive competitive bidding. He did so, moreover, with the consent and, indeed the support, of the major airlines. Both sides saw a need for focused federal support to promote the growth of passenger service, and both sides worked toward this end. These actions, while anathema

²⁴⁵ Ibid, 10-12.

²⁴⁶ Ibid, 12-38.

to Black's populist antimonopoly stance, represented a perfectly rational *modus operandi* for Brown and his associative ideology—collusion yes, but collusion for the greater good of the industry. As such, the Senator and the Postmaster did not disagree materially about the events themselves, only their implications.

Additionally, Black's testimony to Congress implied that the airlines were simultaneously perpetrators and victims in the legislative process. The Senator pilloried airlines for their efforts to lobby for the Watres Bill, but then suggested that Brown used that very bill to avoid competitive bidding at the airlines' expense. Much of this apparent inconsistency resulted from Black's lack of appreciation for the distinction between the larger, more established airlines lobbying for the Watres Bill and attending the conference, and small independent operators cut out of Brown's vision. Brown's actions did benefit some airlines at the expense of others, but those cut out of the airmail map—and those arguing most stridently for the investigation—were for the most part simply unprepared to undertake regularly scheduled mail service, and certainly not able to carry passengers. Again, Black's actions focused on narrow legal and economic issues without taking the larger context into account.²⁴⁷

Regardless of these issues, however, Black's investigation caught the attention of the American media and led to widespread coverage of the proceedings. As early as February 1933 *Time* reported that "Postmaster General Brown drew the wrath of the House Post Office Committee and some operators by juggling airmail routes." The magazine stated that Brown had done so "in precisely the manner which the law provides but which his critics will call 'arbitrary.'"²⁴⁸ A year later the

²⁴⁷ Ibid, 10-38; Davies, *A History of the World's Airlines*, 123-133; van der Linden, *Airlines and Airmail*, 106-291.

²⁴⁸ "Subsidy Suspended," *Time*, February 13, 1933, 47.

magazine reported that Democratic actions had “swept away the last remaining glory of the 1920s [the rise of American aviation] and consigned it to the nation’s junk heap of lost illusions.”²⁴⁹

The Nation published even harsher criticism of Republican actions, writing in February 1934 that “our worst fears about the air . . . mail contracts awarded under the Hoover administration are being confirmed daily by the Black Committee.” The article continued by decrying “all the waste, favoritism, and graft that have been exposed,” and calling for an end to profiteering and collusion.²⁵⁰ Only two weeks later the periodical again focused on the Senate Committee’s action with even harsher rhetoric for Hoover and Brown. An article entitled “So They Found The Body” related, “the favoritism, graft, and corruption of the Hoover Administration are, it seems, beginning to attract public interest, and I venture to say that before the Congressional investigations are concluded the name of the Harding Administration will be a symbol of purity to the American people.”²⁵¹

The impetus for at least a significant part of this coverage appears to have emerged from the actions of Fulton Lewis, Jr., a reporter with the conservative Universal News Service. According to Robert van der Linden, Lewis “despised [Walter] Brown on personal grounds,” and worked behind the scenes to initiate Black’s investigation and promote media coverage of the hearings. Van der Linden argues that Lewis “gave Black a copy of his lengthy report detailing the alleged misdeeds of the department and the airlines,” a document that “carefully pleaded the independent [airlines’] position, exposing the alleged misappropriation of federal funds, waste, and fraud while ignoring the machinations of the independents’ own deceptions.”²⁵²

²⁴⁹ “The Mail,” *Time*, February 19, 1934, 30.

²⁵⁰ *The Nation*, February 7, 1934, 154.

²⁵¹ Paul Y. Anderson, “So They Found The Body,” *The Nation*, February 21, 1934, 219.

²⁵² van der Linden, *Airlines and Airmail*, 260.

Lewis, in fact, submitted a statement to the Black Committee, a document that laid out much of his evidence against Brown and the Hoover administration. Summarizing his findings to the Committee, Lewis testified that as a result of his investigation, “three salient factors appear evident without question.” First, he argued “that the Postmaster General originally planned to enlarge the air mail system of the United States by negotiation without competitive bidding.” Second, “that Congress definitely and overtly refused to give him this authority, on the grounds that it was contrary to American traditions and principles of government.” Finally, “that, with this insistence on competitive bidding, the Congress intended that Section 7 of H.R. 11, 704 [the section of the Watres Bill addressing route extensions] would be used only for exigencies of practical necessity” in order to “avoid the submission of short and insignificant fragments of routes to bidding when such a course would be manifestly impractical, futile, and wasteful.”²⁵³ Lewis concluded that Brown had deliberately set out to subvert the legislation. After failing to get the bill passed with a provision to allow the Postmaster General to award routes without bidding, he had unlawfully used the Watres Bill’s provisions to sidestep the issue, in express opposition to Congressional wishes.

Lewis also presented evidence of collusion between airline executives and federal officials. He related that “Hainer Hinshaw refers to Postmaster General Brown as ‘cousin Walter’ and to President Hoover as ‘cousin Herbert.’” Further, Hinshaw’s brother Davis “played an active and prominent role in Mr. Hoover’s 1928 campaign” and “Hainer also assisted.” Lewis was forced to admit, however, that he could not find direct evidence that these relationships materially influenced Brown’s granting of airmail routes. His implications, however, fed into Black’s pre-existing concerns about collusive practices in the industry. Lewis’s prominent place in the media, moreover,

²⁵³ Statement of Mr. Fulton Lewis, Jr. Regarding Post Office Department Administration of the Foreign and Domestic Air Mail Subsidies, undated, Box 119, RG 46, NARA, 30.

assured him a ready platform from which to publicize his views, which served to further the case against the Hoover administration.²⁵⁴

Black's investigation, and the furor it created, ultimately pushed the Roosevelt Administration to take drastic action. After a meeting between Black and President Roosevelt at which the Senator urged the President to take immediate steps to end the existing system, Roosevelt met with Postmaster General James Farley on February 8, 1934. Following negotiations between the President, Postmaster General, Post Office Solicitor, and the Attorney General the next day, Roosevelt issued Executive Order 6591, canceling all federal airmail contracts granted prior to June of 1933 and directing the army to fly the mail until Congress could pass new legislation.²⁵⁵

Farley, former head of the Democratic National Convention and a man with close personal ties to Roosevelt, took the lead in implementing the order. Following its issuance, he explained the rationale for canceling the contracts in an open letter to Senator Black. The Postmaster General began by stating that he did "not believe that the air mail appropriations should be expended for the benefit of a few favored corporations." Following Black's logic, Farley continued by arguing that these "favored corporations" "could use the funds as a basis of wild stock promotions resulting in profits of tens of millions of dollars to promoters who invested little or no capital." Farley also suggested that airmail subsidies were never "intended to be used by great corporations as a club to force competitors out of business and into bankruptcy. Nor," he continued, "should appropriations and contracts be given out to a few favored corporations by convenience and agreement."²⁵⁶

²⁵⁴ Ibid, 50.

²⁵⁵ Executive Order 6591, February 9, 1934, Presidents Official File 19, Franklin Roosevelt Presidential Library, Hyde Park, New York; van der Linden, *Airlines and Airmail*, 273.

²⁵⁶ James Farley, Letter to Hon. Hugo L. Black, February 14, 1934, Box 17, RG 46, NARA.

Farley's rationale echoed Senator Black's concerns almost verbatim. This agreement also extended into Farley's treatment of his predecessor's actions and the events of the "spoils conferences." Farley contended that "Postmaster General Brown proceeded to build up, by so-called 'extensions' of routes," the airmail lines of major carriers such as United, American, and TWA. Farley was "convinced," moreover, "that before any of the air mail contracts were awarded, those interested held meetings for the purpose of dividing territory and contracts among themselves." Farley pointed to the meetings in May and June of 1930 as proof of this collusive behavior, arguing that "these meetings resulted in . . . the practical elimination of competitive bidding."²⁵⁷ For Farley, Brown's actions were patently unacceptable and threatened to corrupt a key aspect of Post Office policy. The Black Committee's "revelations" also represented an opportunity to further discredit Republicans and strengthen the Democratic administration during a time of great turmoil.

Unfortunately for Farley and Roosevelt, the army's attempts to fly the mail ended in disaster. Between February and June of 1934 at least 65 Army pilots crashed on airmail routes, resulting in the death of 12 pilots. The Army demonstrated an inability to meet the rigorous requirements associated with flying regularly scheduled routes at night and in bad weather. To compound their problems, the winter of 1934 was one of the worst on record, forcing army flyers to deal with terrible snowstorms, low visibility, and chilling temperatures. These events resulted in a public-relations debacle and harsh criticism from the media, airlines, Army, and Congress. Roosevelt found himself having to defend his actions against the attacks of men like Charles Lindbergh and his efforts to do so represent one of the defining aspects of his aviation policy.

²⁵⁷ Ibid.

Black's actions ultimately had the desired effect, largely discrediting Walter Brown's actions as Postmaster General and casting a shadow over the entire Hoover administration. The actions of the Senate Special Committee in large part led to Roosevelt's cancellation of the airmail contracts and forced a reorganization of the industry. Black successfully put forward his view of a fraudulent, collusive, monopolistic industry antithetical to American ideals of free competition. His speeches and press releases clearly capture the zeal with which he went about his task and encapsulate his apparent hatred for concentrated wealth.

Traditionally, scholars have interpreted Black's actions and the Senate Special Committee proceedings as a referendum on federal aviation policy. Robert van der Linden writes that Black was a "dangerous opponent" of Brown's and refers to the Senator as being "passionately predisposed against all concentrations of economic or political power."²⁵⁸ In a similar vein, R.E.G. Davies calls attention to the "nationwide scandal" that emerged from the Committee proceedings and relates that "Brown left office in disgrace."²⁵⁹ Clearly, Hugo Black was no fan of Walter Brown, and the Senator's actions demonstrate the lengths to which he was willing to go to expose perceived wrongs relating to the commercial aviation industry.²⁶⁰

These interpretations, however, largely ignore two key points relating to Black's actions. First, they assume that Black had little interest in aviation beyond his focus on destroying "harmful" concentrations of wealth and power. In fact, the Senator appears to have had significant connections to aviation independent of his relationship to the Special Committee. In his correspondence and public pronouncements, moreover, Black appears to have shared at least a portion of Hoover and

²⁵⁸ van der Linden, *Airlines and Airmail*, 260.

²⁵⁹ Davies, *A History of the World's Airlines*, 129.

²⁶⁰ See also: Nick Kommons, *Bonfires to Beacons: Federal Civil Aviation Policy Under the Air Commerce Act* (Washington, D.C.: Smithsonian Institution Press, 1989), 251-269.

Brown's vision regarding aviation's place in America's future. Second, the previous assumption has led to the general conclusion that either his antimonopoly focus and/or political concerns formed the basis for Black's actions vis-à-vis the Special Committee. A close examination of the evidence, however, suggests that Black may have acted at least in part from a genuine desire to save the aviation industry from itself. In other words, Black's interest in aviation may have pushed him to undertake the special investigation as a constructive, rather than a purely destructive process.

These facts necessitate a reevaluation of the events of 1933 and 1934. Rather than viewing Black's rhetoric, the creation of the Senate Special Committee, and the subsequent cancellation of airmail contracts as rejection—at least temporarily—of Hoover's vision for aviation's future, the events should instead be viewed as part of the ongoing debate regarding aviation's proper place in America's future. In this interpretation, Black's actions vis-à-vis the Special Committee were not destructive, but instead strove to remove corrupt elements that the Senator viewed as antithetical to aviation's ultimate success. As such, Black, commonly depicted as aviation's biggest opponent, instead emerges as yet another party interested in promoting aviation's place in America's future. Granted, his vision was markedly different than Walter Brown's, but that vision nonetheless identified similar potential for American aviation.

Black outlined his perspective in a February 1934 radio address over the Columbia Broadcasting System network. In a piece entitled "Aviation and Air Mail Contracts" Black attempted to educate the public about why Roosevelt and Farley had cancelled commercial airmail contracts the week before. Black began his remarks, however, with a strident articulation of aviation's value to America. "Let me begin," he said, "by stating my own belief that aviation is destined to have a most important place in our National progress in peace time." Black then went on to suggest that aeronautics also had military significance. "It is also true," he argued, "that our

people, who love peace, and who abhor war, realize that if war should ever be forced upon us, we could not today defend ourselves, without a modern, well equipped, efficiently manned, aviation system.”²⁶¹

With these remarks, Black echoed Hoover’s goals for aviation stretching back to the beginning of the previous decade. Clearly the Senator understood aviation to play a central role in American commerce, a role with the potential to grow in the near future. In addition, his identification of the national security value of a mature commercial aviation network and a mature aeronautics industry mirror almost exactly statements put forward by Hoover, MacCracken and Harry New.

Black also drew similar conclusions from that analysis. In his words, the knowledge of aviation’s dual value “imperatively demands that this Nation take whatever steps are necessary to foster, encourage, and maintain this great peacetime servant of progress; this indispensable war necessity.” He thus stridently argued that the government had an obligation to continue to support the development of commercial aviation. His objections, then, concerned the means of achieving that goal, not the goal itself. Black echoed these sentiments in his April address to Congress, arguing that “aviation is destined to become a great and integral part of the commerce of this nation . . . just as the railroads supplanted the stagecoach, so aviation is marching forward.”²⁶²

In order to secure aviation’s ultimate success, Black argued that the industry needed to be cleansed of its corrupt, collusive, and fraudulent aspects. This, then, represented the central rationale for his investigation and his support for the cancellation of airmail contracts. For him, those actions embodied a necessary step on aviation’s path to success. The cancellation of those contracts, he

²⁶¹ Senator Black Discusses “Aviation and Air Mail Contracts” Over CBS, February 16, 1934, Box 477, Hugo Black Papers, Manuscript Division, Library of Congress.

²⁶² The Truth About Air Mail Contracts, Address by Senator Hugo Black to Congress, April 25 and 26, 1934, Box 118, RG 46, NARA, 16.

stated to the radio audience, “will not retard aviations [sic] orderly progress. It will accelerate it . . . a reorganized industry, with honest stock capitalization; fair profits, contracts that are just; and controlled by operators instead of speculators is the way to succeed in aviation.”²⁶³

These statements demonstrate that Black’s fundamental purpose was to encourage the healthy development of American aviation. Political expediency and his longstanding focus on opposing concentrated wealth and power undoubtedly shaped the way Black went about his investigation, but it seems clear that his goal was strikingly similar to Hoover’s and Brown’s. Moreover, Black’s identification of aviation’s value to America in both peacetime and wartime signal his familiarity with the relevant context. As such, Black’s actions, and the circumstances emerging out of his Special Committee investigation suggest the need for a thorough reevaluation. In this view, Black does not represent an opponent of aviation, but rather an advocate; his disagreements with Brown and Hoover center on the means through which the government should encourage aviation’s growth, not the ultimate ends of that policy.

Tellingly, Black maintained an interest in aviation-related matters long after the end of his Special Investigation. At the urging of Franklin Roosevelt, Black took the lead in authoring legislation to supplant the Watres Bill. Writing to Black in June of 1935, Roosevelt stated his “hope we can get some legislation” passed. He suggested that Black “run down and talk with me about it” in order to expedite the process.²⁶⁴ The so-called Black-McKellar Bill forced the breakup of the large aviation holding corporations, mandated competitive bidding for federal airmail routes, and forbade companies and executives who had participated in the “spoils conferences” from applying for

²⁶³ Senator Black Discusses “Aviation and Air Mail Contracts” Over CBS, February 16, 1934, Box 477, Hugo Black Papers, Manuscript Division, Library of Congress.

²⁶⁴ Franklin Roosevelt, Letter to Senator Hugo Black, June 19, 1935, Box 83, Hugo Black Papers, Manuscript Division, Library of Congress.

contracts.²⁶⁵ While many scholars have viewed this bill as an attempt to punish the airlines for collusive practices under the Hoover administration, Black's focus on aviation's future suggests a different conclusion. His continued interest in aeronautical development supports the analysis that Black's efforts to craft the bill represented an attempt to put aviation on a sound financial and political footing in order to assure its success.

Additionally, Black maintained active correspondence with numerous parties associated with American aviation. In 1935 Paul Brattain, Assistant General Manager of Eastern Airlines, wrote Black in the hopes that the Senator would use his influence to secure additional aviation infrastructure at airports in Montgomery and Mobile, Alabama. Brattain wrote, "I know . . . you still have an active interest in aviation," and went on to request that Black look into installing additional lighting and a new radio beacon in Montgomery.²⁶⁶

Black was most active, however, in aviation-related labor issues. The Senator played a crucial role in securing the passage of S. 2486, a pilots' amendment to the Railway Labor Act in 1935, which secured additional rights regarding hours and pay for commercial flyers.²⁶⁷ Black also maintained an ongoing correspondence with David L. Behncke, President of the Air Line Pilot's Association. Behncke wrote Black on a variety of topics including pilots' pay and hours, legislation, hiring and firing practices, and the organization of the commercial industry. Illustrative of their relationship is an ongoing correspondence between February and May of 1935 concerning the

²⁶⁵ As previously mentioned, in reality the new law changed little. The same airlines—under new names and with new executive leadership—bid for the same routes they had held before. In fact, they were the only responsible carriers with the infrastructure and experience to successfully fly the mail. Ironically, this in many ways proved the efficacy of Brown's system, though Black would certainly not have seen it that way.

²⁶⁶ Paul H. Brattain, Letter To Senator Hugo Black, October 29, 1935, Box 83, Hugo Black Papers, Manuscript Division, Library of Congress.

²⁶⁷ David L. Behncke, Letter to Senator Hugo Black, July 6, 1935, Box 83, Hugo Black Papers, Manuscript Division, Library of Congress.

allegedly improper firing of seven Northwest Airlines pilots. According to a February 7, 1935 letter from Behncke, Northwest had acquired a smaller carrier, Hanford Airlines, and promptly fired seven of the former carriers' pilots. According to the ALPA President, "we strongly suspect that it was a tacit understanding between Northwest and Hanford . . . that Northwest Airlines was not to reemploy any of the Hanford pilots because they were strong union men."²⁶⁸ Two days later Black wrote to F. W. Wittemore, Northwest's Vice President in charge of operations to request an explanation for the terminations.²⁶⁹ This began more than two months of ongoing correspondence during which Black worked diligently to secure the reemployment of the seven pilots in question. Eventually his efforts were rewarded, and Northwest agreed to hire back the men in question.

Later that year Black wrote the National Labor Relations Board on behalf of the ALPA and contacted Eastern Airlines directly regarding an additional labor dispute.²⁷⁰ This ongoing relationship remained focused on labor issues, reflecting Black's interest in fair competition and opposition to concentrated power. Nonetheless, his actions demonstrate an ongoing interest in American aviation, and a willingness to take action in support of his vision for aviation's future.

Black also maintained an interest in aviation's military significance. In March of 1936 Paul Thomas, General Director of the Air Defense League, wrote Black in order to request the Senator's support for their organization. The ADL purported to be a non-partisan group focused on raising awareness of America's pressing need to continue aeronautical development to bolster national

²⁶⁸ David L. Behncke, Letter to Senator Hugo Black, February 7, 1935, Box 83, Hugo Black Papers, Manuscript Division, Library of Congress.

²⁶⁹ Senator Hugo Black, Letter to F. W. Wittemore, February 9, 1935, Box 83, Hugo Black Papers, Manuscript Division, Library of Congress.

²⁷⁰ Hugo Black, Letter to David L. Behncke, April 20, 1935, Box 83, Hugo Black Papers, Manuscript Division, Library of Congress; Hugo Black, Letter to Francis Biddle, April 20, 1935, Box 83 Hugo Black Papers, Manuscript Division, Library of Congress.

defense.²⁷¹ The same month, Black received a note from Judge Lee Smith—like Black a native of Alabama—expressing concern over “our air strength in the United States as compared to other nations.” Black responded to the query encouragingly, writing, “I appreciate your views on the subject very much and will state that I favor sufficient Congressional appropriation to see to it that we have an air force adequate for our protection.”²⁷²

Collectively, these actions demonstrate Black’s focus on assuring the continued growth of American aviation. Far from appearing as a vitriolic opponent of commercial airlines, Black instead seems to have worked hard to secure pilots’ rights, promote stable commercial growth, and assure aeronautical development as an aid to national defense. Certainly Black differed with Hoover and Brown in his perspective on the proper means through which American aviation should grow. That disagreement, however, should not overshadow the Senator’s ongoing commitment to aeronautics.

Ultimately, Black’s investigation and his Special Committee hearings served to validate Hoover’s vision for American aviation. Traditionally, scholars have interpreted Black’s strident rhetoric denouncing Brown and the alleged fraud and collusion in the airline industry as a repudiation of the preceding administrations’ policy. In that view the Black-McKellar Bill remains something of an aberration—an attempt to punish the worst offenders, but legislation that in the end changed little. A closer examination of the hearings and of Black himself, however, suggests the need for a different perspective. Black clearly differed with Hoover and Brown over the means through which the government should act to support commercial aviation. His opposition to

²⁷¹ Paul Thomas, Letter to Hugo Black, March 7, 1936, Box 83, Hugo Black Paper, Manuscript Division, Library of Congress.

²⁷² J. Lee Smith, Letter to Hugo Black, March 5, 1936, Box 83, Hugo Black Papers, Manuscript Division, Library of Congress; Hugo Black, Letter to J. Lee Smith, March 9, 1936, Box 83, Hugo Black Papers, Manuscript Division, Library of Congress.

monopoly and concentrated wealth and power resulted in his efforts to discredit Brown and expose fraudulent practices within the industry. Those efforts, however, did not reflect a fundamental disagreement about the ends federal policy should serve. Black, in fact, echoed many of Hoover's ideas concerning the role aviation should play in America's future. In both his public pronouncements and private correspondence the Senator maintained an interest in promoting aeronautical growth. That growth, in his view, was crucial for American commerce and for national defense.

These facts suggest a remarkable unanimity amongst American policymakers regarding aviation. Moving forward, Franklin Roosevelt increasingly came to dominate federal policy as his New Deal programs took an ever more active role in promoting aeronautical development. Roosevelt's actions, however, largely stayed true to the foundations set down by Hoover and confirmed by Black. Although Roosevelt's relationship to aviation was defined by the exigencies of the Depression, the President's policies would ultimately come to confirm the prevailing view of aviation's centrality to America's future.

Chapter 4—A New Deal for Aviation?: Franklin Roosevelt and American Aviation Policy

Long before he assumed the presidency, Franklin Roosevelt demonstrated a keen interest in aviation. Only twelve years after the Wright Brothers' first flight, Roosevelt penned an article for *Flying* magazine emphasizing aviation's military value. Writing for the September issue, Roosevelt argued, "for military reasons it is absolutely essential that the aeronautics arms of the Army and Navy be increased, not by doubling, but a hundred fold." In the same article he emphasized the leading role Americans had played in aviation's development, commenting, "everybody knows that this country did the pioneer work in aviation, that hundreds of Americans have devoted their time and thought to the development and actual use of the aircraft." For Roosevelt, that history assured America's readiness to "build up this branch of essential national defense."²⁷³

Roosevelt sustained this early interest in aviation throughout his political life, for both personal and policy-related reasons. In 1915 he authored another article entitled "Scouts and Aircraft" in which he argued that fast ships and spotter aircraft would play crucial roles in future naval engagements.²⁷⁴ In 1918 while serving as the Assistant Secretary of the Navy he attended the inauguration of U.S. airmail service, joining President Woodrow Wilson in seeing off the first mail flight from Washington, D. C. to New York. Roosevelt famously flew to Chicago to accept the 1932 Democratic presidential nomination in person—this in spite of the discomfort that flying caused the

²⁷³ Article for September Number of *Flying*, September, 1915, Box 40, Franklin D. Roosevelt Family, Business and Personal Papers, Franklin Roosevelt Presidential Library, Hyde Park, New York.

²⁷⁴ War at Sea and its Weapons: A Description of the Purpose of a Navy and the Use of Its Different Ships—Article I, General Introduction—Scouts and Aircraft, September 27, 1915, Box 40, Franklin D Roosevelt Family, Business and Personal Papers, Franklin Roosevelt Presidential Library, Hyde Park, New York.

polio-disabled governor. He was also the first president to fly while in office, traveling on a Pan Am Clipper across the Atlantic in 1943 to meet with fellow allied leaders.²⁷⁵

While anecdotal, these examples suggest that Roosevelt maintained a keen interest in American aeronautics for the duration of his political career. That interest, moreover, translated into an ongoing focus on federal policy. In fact, during his tenure as President, Roosevelt consistently worked to foster aeronautical development for both military and commercial ends. Significantly, those efforts encompassed policies broadly similar to those of his predecessor, Herbert Hoover. Although Roosevelt's actions demonstrated superficial differences with Hoover's, there appears to have existed remarkable unanimity in the foundational aspects of each President's desire to support the nascent aviation industry. Roosevelt, like Hoover, embraced policies highlighting his commitment to promoting commercial growth and displayed a keen insight into aviation's future potential.

Historians of both American aviation and Roosevelt himself, however, have consistently overlooked FDR's actions. Scholars cite the President's supposed error in canceling commercial airmail contracts in 1934, and point to the lack of a focused and consistent policy in the vein of Herbert Hoover as evidence that Roosevelt lacked a coherent policy focus. Epitomizing this view, in his book *Airlines and Airmail*, Robert van der Linden argues that "Roosevelt never had a coherent national aviation policy."²⁷⁶

²⁷⁵ See: F. Robert van der Linden, *Airlines and Airmail, The Post Office and the Birth of the Commercial Aviation Industry* (Lexington: The University Press of Kentucky, 2002), 1; William E. Leuchtenburg, *Franklin Roosevelt and the New Deal: 1932-1940* (New York: Harper, 1963), 8, and Roger Bilstein, *Flight in America: From the Wrights to the Astronauts* (Baltimore: Johns Hopkins University Press, 2001), 173.

²⁷⁶ van der Linden, *Airlines and Airmail*, 263.

This focus on the coherence—or lack thereof—of Roosevelt’s aviation policy conceals the significant contributions FDR brought to American aeronautics between 1932 and 1939. Roosevelt lacked the consistent, activist vision that defined Hoover’s commitment to promoting aviation’s progress, but this should in no way obscure the gains he worked to foster. During his first two terms in office, Roosevelt actively engaged aviation-related policy matters. Beginning in 1934, he found himself embroiled in the controversy over the cancellation of commercial airmail contracts. Though this resulted in widespread criticism of the President, Roosevelt nonetheless labored to re-establish commercial service on a sound basis. To that end he worked closely with Senator Hugo Black (D-Alabama) to help secure the passage of new legislation to return the mail to commercial carriers and assure the continued growth of the industry.

In 1935 Roosevelt created the Federal Aviation Commission. The President tasked the Commission to examine all aspects of American aviation—from commercial to military to infrastructure—in order to develop a focused, forward-looking national policy to guide continued aeronautical progress. In the wake of the Commission’s activities, Roosevelt worked closely with members of Congress to shape new legislation that would ultimately take the form of the Civil Aeronautics Act of 1938. This pivotal bill created the legislative foundation that would direct American aviation until deregulation more than 40 years later. As part of that process, the President also promoted the creation of the Civilian Pilot Training Program, which introduced thousands of Americans to flying and helped create a pool of licensed pilots who would play a crucial role for both the military and commercial carriers.

Finally, under the auspices of numerous New Deal agencies including the Civil Works Agency, Public Works Agency, and Works Progress Administration, Roosevelt utilized federal public works projects to promote the development of aviation-related infrastructure across the country. These

actions resulted in tens of millions of federal dollars being spent to build airports around the country, literally creating the foundations of the postwar air transport boom.

These efforts suggest a need to reevaluate Franklin Roosevelt's contributions to the development of American aeronautics. His constant engagement with aviation policy highlights his ongoing interest in the progress of the commercial industry. FDR also focused on aviation's military value, highlighting the need for more and better-trained pilots, continued research and development, and a mature manufacturing sector.²⁷⁷ These foci belie the image of a President uninterested in aviation, whose most significant actions vis-à-vis aeronautical policy resulted in a public-relations disaster following the deaths of twelve Army pilots.

Scholars' lack of appreciation for Roosevelt's actions appears to flow more from his style than from substance. As President, FDR often worked behind the scenes, organizing fact-finding groups, speaking with myriad advisors, and subtly working to shape the legislative process.²⁷⁸ In sharp contrast to Hoover, Roosevelt did not come into office with a ready-made plan for American aviation. In the late 1920s Hoover had already constructed a coherent aviation policy, and his economic philosophy of the associational state provided a ready-made framework with which to guide federal policy. Roosevelt, on the other hand, approached aeronautics in a reactive, rather than a proactive manner. Though personally interested in aviation, his involvement with flying before assuming the Presidency was limited to efforts to secure more military aircraft while serving as Assistant Secretary of the Navy. Further complicating the issue, Roosevelt took office in the midst of

²⁷⁷ For more information on Roosevelt's commitment to military aviation see: Bilstein, *Flight in America*, 128-131 and Michael Sherry, *The Rise of American Airpower: The Creation of Armageddon* (New Haven: Yale University Press, 1987), 49.

²⁷⁸ For more information on Roosevelt's style see: Paul K. Conkin, *The New Deal* 3d ed. (Wheeling: Harlan Davidson, Inc., 1992), 1-20, and Leuchtenburg, *Franklin D. Roosevelt and the New Deal*, 12-13, 328-329.

the Great Depression and, as a result, he spent his first months in office focused on the banking crisis, rising unemployment, and the implosion of the world's economy.

Roosevelt's lack of transparency and his ongoing efforts to combat the worst effects of the Depression, however, should not obscure his commitment to American aeronautical progress. His lack of a "coherent" policy says more about Hoover's activism and Roosevelt's style than the latter's actual contributions to American aviation. In fact, in many ways Roosevelt's actions represented a natural outgrowth of the foundations set down during the preceding Republican administrations. FDR maintained a federal focus on Post Office subsidies to passenger carriers, continued to promote close cooperation between the government and the industry, organized numerous forums through which he attempted to determine the proper path for future growth, and worked to pass legislation that would place American aviation on a firm commercial footing. Ultimately, Roosevelt's relationship to aviation must be viewed in a different light than that of his predecessor: the coherence of his policy derives from the results of his actions, rather than their philosophical bases. Those actions, moreover, resulted in the greatest gains American aviation had yet experienced and in large part created the foundations of our modern air transport network.

As President, Roosevelt first addressed aviation policy in a sustained way as a result of the Black committee hearings of 1934 and 1935. Unlike Herbert Hoover, before assuming the Presidency Roosevelt lacked a preconceived plan for dealing with aeronautics. Though he had taken the unprecedented step of flying to Chicago to accept the Democratic nomination for President in 1932, he made no significant policy statements related to aviation during his candidacy or in the first months after taking office. In large part this reflected the prevailing conditions the country faced at the time—the banking crisis, worsening unemployment, and the collapse of the European credit

structure. Though many Democrats viewed their victory in the 1932 election as an opportunity to challenge Republican airmail policies introduced by Walter F. Brown, it appears that, at least initially, Roosevelt did not involve himself in these machinations.

By 1934, however, Roosevelt began to take a more active role in the emerging airmail scandal. The creation of Hugo Black's Senate Special Committee initiated a rising tide of discontent with prevailing policy and ultimately led Roosevelt and his Postmaster General, James Farley, to take drastic action. On February 8 of that year Roosevelt met with Farley, the Post Office Solicitor, and the Attorney General.²⁷⁹ At that meeting the policymakers concluded that they should annul all airmail contracts made prior to June 16, 1933.²⁸⁰ The next day Roosevelt issued Executive Order 6591, confirming the cancellation of all domestic airmail contracts and directing the Secretary of War to make arrangements for the Army to fly the mail. Per Roosevelt's instruction, the Secretary was ordered to "place at the disposal of the Postmaster General such airplanes, landing fields, pilots, and other employees and equipment of the Army . . . needed or required for the transportation of mail, during the present emergency."²⁸¹

Almost immediately, Roosevelt's actions proved contentious. Two days after the issuance of the order, Charles Lindbergh sent a telegram to Roosevelt sharply critical of his action. Arguing, "your action of yesterday affects fundamentally the industry to which I have devoted the last twelve years of my life," Lindbergh proceeded to attack the ethical foundations of the executive order.

²⁷⁹ Executive Order 6591, February 9, 1934, President's Official File 19, Franklin Roosevelt Presidential Library, Hyde Park, New York. See also: van der Linden, *Airlines and Airmail*, 273, and Carl Solberg, *Conquest of the Skies: A History of Commercial Aviation in America* (Boston: Little, Brown and Company, 1979), 143-144.

²⁸⁰ In other words, all contracts created under the legal dictates of the 1930 Watres Act. "Executive Order," undated, Box 117, RG 46, NARA.

²⁸¹ Executive Order 6591, February 9, 1934, President's Official File 19, Franklin Roosevelt Presidential Library, Hyde Park, New York.

According to his telegram, “your order of cancellation of all air mail contracts condemns the largest portion of our commercial aviation without just trial . . . your present actions does [sic] not discriminate between innocence and guilt and places no premium on honest business.” Continuing, Lindbergh warned that the President’s actions had the potential to cause great harm to “the finest air lines in the world.” In his words, “unless the facts leave no alternative the condemnation of commercial aviation by cancellation of all mail contracts and the use of the army on commercial air lines will unnecessarily and greatly damage all of American aviation.”²⁸²

Much to the displeasure of the White House, Lindbergh, through his attorney and legal advisor Colonel Henry Breckinridge, simultaneously released the telegram to the press. The famous aviator’s public stance against the administration attracted significant media attention and aroused controversy over the proper course of action with regard to the continuing aviation scandal. On February 12, *The New York Times* published Lindbergh’s letter in its entirety, reporting on the “strong protest” that the famous aviator had voiced against the President’s actions. The same article revealed, “it is known that [Lindbergh] agrees with veteran mail pilots that the lives of inexperienced men . . . may be risked” if Roosevelt’s plan was put into action.²⁸³ Two days later, the *Times* reported on an uproar in Congress when a Republican representative attempted to have Lindbergh’s protest formally entered into the record.²⁸⁴

²⁸² Charles Lindbergh, Telegram to Franklin Roosevelt, February 11, 1934, President’s Official File 19, Franklin Roosevelt Presidential Library, Hyde Park, New York.

²⁸³ “Action on Airmail Unfair, Lindbergh Tells President,” *The New York Times*, February 12, 1934.

²⁸⁴ “House in Uproar Over Lindbergh,” *The New York Times*, February 14, 1934. The representative, Hamilton Fish III (R-New York), drew the ire of the Democratic floor leader, Joseph Byrns (D-Tennessee), who eventually forestalled Fish’s efforts. In the Senate, Lindbergh’s protest was formally entered into the record.

Roosevelt, however, was not content to ignore the challenge. In a February 12 memo released to the press, Stephen Early, Secretary to the President, clearly articulated the White House's stance on Lindbergh's actions. Early wrote, "the common practice is to allow the President, when he is addressed . . . the courtesy of receiving and reading . . . communications before they are read by others than the person addressed." The Secretary then suggested that Lindbergh's actions "would indicate the message obviously was sent for publicity purposes."²⁸⁵ Such an immediate and forceful response highlights the influence Lindbergh had with the American public. As a February 19 *Time* article reported, "a front-page criticism from Col. Lindbergh the White House could not safely ignore."²⁸⁶

Regardless of the White House's annoyance, Lindbergh's public criticism clearly aroused strong feelings in many Americans. In the days and weeks after the publication of Lindbergh's telegram and the official White House response, letters began to pour into Washington, D.C. in response to the scandal. According to a report prepared for Harllee Branch²⁸⁷ in April of 1934, as of the twelfth of that month Americans had written a total of 2,049 letters and telegrams to either the

²⁸⁵ Stephen Early, Secretary to the President, Untitled Memo, February 12, 1934, President's Official File 19, Franklin Roosevelt Presidential Library, Hyde Park, New York.

²⁸⁶ "The Mail," *Time*, February 19, 1934, 30-31. This clash between Lindbergh and Roosevelt seems to have presaged—at least to some degree—the fierce division between the two men that developed in 1940 regarding America's intervention in World War II. Though the controversy over the airmail scandal focused specifically on aeronautical issues, several Lindbergh biographers suggest that the publicized battle in the press between Lindbergh and Stephen Early set the stage for later animosity. In his biography Scott Berg writes of the events, "neither Roosevelt nor Lindbergh would ever forget the other's behavior . . . nor would either ever forgive." In a similar vein, Leonard Mosley suggests that the airmail scandal "would initiate a lifelong enmity between" the two men. See: A. Scott Berg, *Lindbergh* (New York: G.P. Putnam and Sons, 1998), 296, and Leonard Mosley, *Lindbergh: A Biography* (New York: Doubleday and Company, 1976), 173.

²⁸⁷ The Second Assistant Postmaster General.

President or the Post Office following Farley and Roosevelt's cancellation of airmail contracts. Of these, around 100 focused specifically on either the so-called "Lindbergh letter" or Early's response—though many more made mention of the controversy.²⁸⁸

Letters addressed to the White House exhibited a fairly even split between support for the President and Lindbergh, but virtually all expressed strong feelings. On February 13 telegrams addressed to the President expressed displeasure at "the slurring comment of your Secretary Stephen Early with respect to Lindbergh's telegram"²⁸⁹ and referred to Early's actions as "a very gratuitous and unwarranted insult."²⁹⁰ A letter from the following day expressed even stronger feelings. Writing directly to the President, Emma Dillon referred to Roosevelt's "cowardly personal attack" on Lindbergh, according to her an action that "convinced many that you cannot meet the issue squarely."²⁹¹

Opinion ran just as strongly in support of Roosevelt. Myles Lasker penned a letter thanking Early for the "opportunity to congratulate you on the bravest stand I have ever known a man to make . . . it takes real nerve to 'buck' a fellow like Lindbergh and I personally think you handled him to a sweet fare-thee-well. It was magnificent."²⁹² Another letter sent that same day expressed similar support, relating, "good work on the way you 'called' the aviator who has never cared much about

²⁸⁸ Report for Harlee Branch, Second Assistant Postmaster General, April 12, 1943, Box 177, RG 46, NARA.

²⁸⁹ Thomas Mann Randolph Meikleham, Telegram to President Franklin D. Roosevelt, February 13, 1934, President's Official File 19, Franklin Roosevelt Presidential Library, Hyde Park, New York.

²⁹⁰ Maurice Goodman, Telegram to Stephen T. Early, February 13, 1934, President's Official File 19, Franklin Roosevelt Presidential Library, Hyde Park, New York.

²⁹¹ Emma E. Dillon, Letter to Franklin Roosevelt, February 14, 1934, President's Official File 19, Franklin Roosevelt Presidential Library, Hyde Park, New York.

²⁹² Myles F. Lasker, Letter to Stephen Early, February 13, 1934, President's Official File 19, Franklin Roosevelt Presidential Library, Hyde Park, New York.

the press until he wanted to use it.”²⁹³ Perhaps the strongest commentary came from Sallie Stockard, who wrote, “Permit me please, to help handle Lindy. This is the first time I have noticed him showing the Ass’s Ears” and later referred to Lindbergh’s “overweening pride.”²⁹⁴ The tensions between Roosevelt and Lindbergh continued for months, with a *Newsweek* article from March calling their feud a “dramatic shadow-boxing exhibition between [the nation’s] two particular heroes.”²⁹⁵

American concerns, however, extended beyond the specific dictates of Roosevelt’s ongoing feud with Lindbergh. In fact, it appears that Roosevelt and Farley’s decision to cancel airmail contracts aroused even more ire. Like the letters referring explicitly to the Roosevelt/Lindbergh controversy, those dealing more generally with the airmail scandal exhibited a rough parity between support for and opposition to Roosevelt’s actions. According to a Post Office report, by April the White House and Post Office had received 548 letters and telegrams directly condemning the cancellation, and 668 expressing support for that action.²⁹⁶

Significantly, that correspondence included letters from both lawmakers and members of the aviation industry. On February 10, Representative Harry Musselwhite (D-Michigan) wrote the President to express approval for his actions. A member of the House Committee on Post Office and Post Roads, Musselwhite wrote of his “desire to express my approval of your pronouncement of the

²⁹³ Russell Edwards, Letter to Stephen Early, February 13, 1934, President’s Official File 19, Franklin Roosevelt Presidential Library, Hyde Park, New York.

²⁹⁴ Sallie Stockard, Letter to Stephen Early, February 13, 1934, President’s Official File 19, Franklin Roosevelt Presidential Library, Hyde Park, New York.

²⁹⁵ “Air Mail: Flyer-Heroes In Washington Present Their Side of the Case as Eleventh Army Pilot Dies,” *Newsweek*, March 24, 1934, 10.

²⁹⁶ Report for Harllee Branch, Second Assistant Postmaster General, April 12, 1934, Box 177, RG 46, NARA.

cancellation of air mail contracts with private companies.”²⁹⁷ While Musselwhite’s political affiliation and position on an interested Committee would suggest the predetermination of his support, the message is nonetheless representative of a number of lawmakers’ positive responses to Roosevelt’s action.

Airline executives also penned quick responses to the cancellations. Croll Hunter, the General Manager of Northwest Airways, wrote the President on February 15 to express his opinion that “unless there is some modification of the existing order of the Postmaster General, this great airways system faces certain destruction.” Hunter’s worries were well founded as his airline, like every other that had formerly flown the mail, struggled to make ends meet flying passengers without the aid of airmail revenue. Nonetheless, Hunter’s letter voiced approval for Roosevelt’s policy. He wrote, “we, as good citizens, find no fault with your great effort to clean up the airways situation, and to provide for the people of this country an efficient, comprehensive, and honest system of airway development.”²⁹⁸

Public scrutiny of White House airmail policy grew much more intense as the army began its first airmail flights. Though it appears that the American public initially supported Roosevelt’s actions by a slim margin, this began to change as military pilots experienced difficulties flying the mail. From the first, the army appeared ill prepared to undertake airmail operations. On February 16, three army pilots crashed and were killed while on familiarization flights. Six days later, two more

²⁹⁷ Harry W. Musselwhite, Letter to Franklin Roosevelt, February 10, 1934, President’s Official File 19, Franklin Roosevelt Presidential Library, Hyde Park, New York.

²⁹⁸ Croll Hunter, Letter to Franklin Roosevelt (copy to James Farley), February 15, 1934, President’s Official File 19, Franklin Roosevelt Presidential Library, Hyde Park, New York.

flyers perished, with another following suit February 23. By the second week in March, four more pilots had died in airmail-related crashes.²⁹⁹

These fatalities resulted from a series of unfortunate factors. First, army pilots lacked sufficient experience flying at night and in bad weather to take on regularly scheduled airmail flights. Military aircraft generally lacked adequate navigational aids, and many planes were unsuitable for mail service. In addition, Roosevelt's quick and unprecedented actions placed the army in the unenviable position of having to hastily cobble together an airmail service using existing material and pilots with minimal time for training. To add to the army's troubles, the winter of 1933-34 was one of the worst on record, and military pilots began their flights in the midst of a series of blizzards. As a result, the army's attempt to fly the mail resulted in an abject disaster and a public-relations nightmare for the army and the White House alike.³⁰⁰

The American public reacted quickly to the mounting death toll. Letters began to pour into the White House decrying the President's actions. On March 19, E. F. Gillespie wrote a harshly critical letter to Roosevelt stating, "ten dead and fourteen injured suggests an almost irretrievable error of judgment." Gillespie later suggested that the President "send Jim Farley on a few night air mail flights."³⁰¹ Americans also worried what the army's lack of preparedness to fly the mail heralded for national security. Frank Patrick wrote the President on March 11, asking, "if the army can not carry the mail, how can it win a war?" Patrick, a veteran of the Spanish American War and World War I,

²⁹⁹ van der Linden, *Airlines and Airmail*, 277; Solberg, *Conquest of the Skies*, 146.

³⁰⁰ For more information see: R.E.G. Davies, *A History of the World's Airlines*, (London: Oxford University Press, 1964), 129-130, and Bilstein, *Flight in America*, 127-128.

³⁰¹ E. F. Gillespie, Letter to Franklin Roosevelt, President's Official File 19, Franklin Roosevelt Presidential Library, Hyde Park, New York.

stated that the army had “miserably failed” in its mission and decried the military’s lack of ability to perform a given duty.³⁰²

The army’s failure also attracted attention from well-known figures in aviation. No less an authority than Brigadier General William “Billy” Mitchell weighed in on the controversy in a letter to Hugo Black. Mitchell expressed support for Roosevelt’s actions, writing “the President and the government should be justly proud in the position they have taken with respect to our aeronautics. The people of the United States had the right to expect that the Army Air Corps could fly the mail with ease.” The general suggested that the debacle had in fact been a blessing in disguise, for without such a wakeup call, the nation would have been unprepared in the event of a war.³⁰³

Mitchell, however, was in the minority.³⁰⁴ Their attention fed by increasing press coverage of crashes and fatalities, most Americans focused on the President’s role in ordering army airmail

³⁰² Frank E. Patrick, Letter to Mr. Chester H. Rowell, Editor, *San Francisco Chronicle* (copy to President Roosevelt), President’s Official File 19, Franklin Roosevelt Presidential Library, Hyde Park, New York.

³⁰³ Brigadier General William Mitchell, Letter to Hugo Black, March 11, 1934, President’s Official File 19, Franklin Roosevelt Presidential Library, Hyde Park, New York.

³⁰⁴ Mitchell’s comments reflected the former general’s overriding interest in promoting aeronautical progress and establishing an independent “Department of the Air.” Mitchell trumpeted these ideas widely during the 1930s, using any pretense to argue for greater government support for flying. Of more interest, however, are Mitchell’s political ties to both the Democratic Party and Franklin Roosevelt. By the early 1930s Mitchell—who was court martialed under a Republican administration—had become a fervent Democratic supporter. He assisted Roosevelt’s presidential campaign in 1932, going so far as to serve as a delegate at the 1932 Democratic National Convention in Chicago and campaigning for Roosevelt in Virginia and Maryland after the latter had secured the party’s nomination. Mitchell’s actions may have been motivated by a desire to secure a post in the new administration, and he maintained ties with Roosevelt through the first several years of his presidency. Regardless, after his election, Roosevelt endeavored to distance himself from the former general, whose rabid focus on promoting American airpower made him a problematic political ally. Taking these facts into account, it seems that Mitchell’s engagement with the airmail scandal may also have been a reflection of his efforts to stay in Roosevelt’s good graces. For more information see: James J. Cooke, *Billy Mitchell* (Boulder: Lynne Reinner, 2002), 261-271.

flights. A *Time* article from March 5 reported that while commercial operators had “warned Washington and the country that the Army . . . was not equipped or trained to step into the breach [flying the mail] . . . their words were swept aside as sour grapes.” More worrying for Roosevelt, the article also reported that, as a result of army fatalities, “citizens began to wonder if . . . President Roosevelt was not wrong on his airmail policy,” and highlighted the fact that “the White House was accused of ‘legalized murder.’”³⁰⁵

Roosevelt reacted to the criticism by scaling back army operations and pushing for increased training and reduced schedules that would not force unprepared pilots to fly in bad weather. Following four fatal crashes in the second week of March, *Time* reported, “through the sky Death continued to dog the Army Air Corps carrying the mail.” In response, Roosevelt commanded the Secretary of War to “issue immediate orders to the Army Air Corps stopping all carrying of airmail except on such routes, under such weather conditions and under such equipment and personal conditions as will insure . . . against constant recurrence of fatal accidents.”³⁰⁶ The President’s actions did have the desired effect of lessening the number of fatalities, but did so at the expense of reducing airmail poundage to such an extent that the army’s efforts held only marginal utility.³⁰⁷ Ultimately, *Newsweek* referred to Roosevelt’s decision to have the army fly the mail as “the worst

³⁰⁵ “Army’s First Week,” *Time*, March 5, 1934, 46-47. Eddie Rickenbacker first made that accusation against Roosevelt, largely defining the issue for the press and public. See: Solberg, *Conquest of the Skies*, 146.

³⁰⁶ “Turnback,” *Time*, March 19, 1934, 53.

³⁰⁷ Roosevelt suspended Air Corps airmail flights March 10 for a period of nine days. On the 19th the army resumed carrying the mail, but on radically truncated routes with far less poundage.

political blunder of the administration,” hardly the legacy Roosevelt had hoped for regarding his first significant involvement with aviation.³⁰⁸

FDR, however, had never considered the army to be a permanent solution. In the immediate wake of cancelling commercial contracts, Roosevelt began to work toward the creation of new legislation that would return the airmail to private contractors. On March 7 the President wrote Senator Hugo Black in reference to airmail contracts, simultaneously contacting Senator Kenneth McKellar (D-Tennessee) and Representative James Mead (D-New York) on the same subject.³⁰⁹ In his letter to Black, Roosevelt expressed hope that contracts could be returned to commercial airlines “as soon as possible.” The President argued that new legislation would allow the government to “avoid the evils of the past, and at the same time encourage the sound development of the aviation industry.” He ended the letter with the hope that “enactment of legislation along the lines suggested will establish a sound, stable, and permanent air-mail policy.”³¹⁰

Roosevelt’s push for legislation included concrete outlines for a new contract structure. He articulated a plan grounded in the idea that “new airmail contracts be let for a period not exceeding three years on full, open, and competitive bidding, with a limitation of the rate of compensation above which no contract will be awarded.” Within this framework, FDR moved to create a specific set of regulatory qualifications. First, he argued that “only speed, useful load capacity and safety factors and devices should be considered” in equipment specifications. He suggested successful bidders be granted six months to qualify for performance of the contract and the Interstate

³⁰⁸ “Air Mail: Climax of Cancellation Drama Reached as New Bids From Commercial Carriers are Opened,” *Newsweek*, April 28, 1934, 26.

³⁰⁹ Cross reference, President’s Personal File 607, Franklin Roosevelt Presidential Library, Hyde Park, New York.

³¹⁰ Franklin Roosevelt, Letter to Hugo Black, March 7, 1934, Box 477, Hugo Black Papers, Manuscript Division, Library of Congress.

Commerce Commission fix future rates no later than six months before the end of any three year contract.³¹¹

A further series of dictates spoke directly to the perceived collusion sanctioned by Walter F. Brown. The President expressed his desire to see “the proposed law prohibit the award of an air-mail contract to any company affiliated with any other company having connections with subsidiaries, affiliates, associates, or holding companies” in the aviation business and forbade the merger of mail contractors or the subletting of any contract. FDR also mandated that the government refuse to grant contracts to any company whose officers were party to the “spoils conferences” of 1930.³¹²

Finally, Roosevelt pushed aggressively for changes to labor policies and pay scales in the industry. He emphasized the need for safeguards to prevent “the evil practices of excessive salaries, unearned bonuses and illegitimate personal expense accounts detrimental to the interests of legitimate stockholders and the public.” Addressing the wellbeing of pilots, mechanics, and line-workers, Roosevelt pushed each airmail contractor to establish “maximum flying hours; minimum pay and a pension system.”³¹³

Roosevelt’s focus on new legislation apparently had the desired effect. Two days after the President wrote Black, McKellar, and Mead, Black and McKellar jointly introduced what *Time* referred to as “the administration bill.” That bill, which later became the Air Mail Act of 1934,³¹⁴ “made all of the President’s points,” and embraced the framework Roosevelt articulated in his letter.³¹⁵ On June 12, 1934 Roosevelt signed the bill into law, formally ending the airmail scandal

³¹¹ Ibid.

³¹² Ibid.

³¹³ Ibid.

³¹⁴ Also known as the Black-McKellar Bill.

³¹⁵ “Turnback,” *Time*, March 19, 1934, 53-54.

and providing the legislative foundation for commercial airmail contracts that would hold sway until the passage of the Civil Aeronautics Act of 1938.

Historians have given Roosevelt little credit for his role in facilitating a productive end to the airmail scandal. Scholars point to the supposedly partisan origins of the Black Special Committee as evidence that Roosevelt and the Democrats remained focused on political issues rather than acting out of a genuine desire to shape aviation. Roosevelt's lack of a coherent, publicly-stated aviation policy has led to charges that his actions sprang from political expediency. The widespread unpopularity of his decision to cancel private contracts and have the army fly the mail have only furthered perceptions that the President lacked awareness of the complexities of military and civilian aviation. Finally, his push for new legislation included provisions explicitly countering many of Walter F. Brown's associative policies, leading to the conclusion that Roosevelt failed to appreciate the value of the preceding administration's aviation strategy. In sum, existing scholarship paints Roosevelt as acting for selfish political reasons, reacting to a scandal through which the President sought to score political points rather than from any genuine desire to promote aviation.³¹⁶

This interpretation, however, largely ignores the remarkable continuity between Roosevelt's actions and those undertaken during the preceding administration. Throughout the turmoil of the airmail scandal Roosevelt acted from a genuine desire to promote the continued growth and expansion of American commercial aviation. Though he, like Black, disagreed with Walter Brown about the implications of economic concentration in the aviation industry—seeing holding

³¹⁶ For the most recent and most prominent example of this interpretation, see: van der Linden, *Airlines and Airmail*, 235-291. Also reflecting this analysis are: Davies, *A History of the World's Airlines*, 128-130, and Nick Kommons, *Bonfires to Beacons: Federal Civil Aviation Policy Under the Air Commerce Act, 1926-1938* (Washington, D.C.: Smithsonian Institution Press, 1989), 254-269.

companies as dangerous and harmful to aviation's commercial foundations³¹⁷—Roosevelt never sought to undermine the core aspects of Hoover and Brown's aviation policy.³¹⁸ His efforts, in fact, played a crucial role in preserving and ultimately expanding the government's central role in supporting airline development.

Ultimately, the President's actions returned airmail contacts to private hands in the interest of promoting commercial growth. The airmail scandal also motivated Roosevelt to take a more active

³¹⁷ Historian Ellis Hawley has played a key role in contextualizing New Dealers' aviation policy. In *The New Deal and the Problem of Monopoly*, Hawley argues that Roosevelt and other New Dealers addressed aviation as a "public utility"—an inherently monopolistic industry providing essential public service, desiring governmental regulation to protect its special status. In the depressed economic atmosphere of the 1930s, he suggests, aviation executives looked to the government to protect them from the harshest aspects of the economic climate, citing the fragile status of the emerging industry and aviation's value to national defense as evidence of their need for federal assistance. Within this context, Hawley contends, Roosevelt initially worked to promote competition and demolish the "cartels" created by aviation holding corporations. In this view, the Airmail Act of 1934 represented a short-lived effort to promote competition, an effort ultimately undone by the passage of the Civil Aeronautics Act in 1938. Hawley's analysis, however, overlooks the complexities inherent in contemporary aviation policy. He largely ignores Roosevelt's role in crafting both the 1934 legislation and the Civil Aeronautics Act of 1938, and fails to identify any continuity in the President's actions. Further, his analysis largely disregards both Hoover's key role in crafting and promoting a coherent aviation policy, and the reality of aviation's difference from other transportation models. Hawley fails to account for aviation's truly nascent status in the early 1930s, equating aviation executives with railroad tycoons and power monopolies. Ultimately, this analysis presents an overly simplistic and in many ways misleading interpretation of Roosevelt's engagement with aviation policy, and obscures the significance of the President's actions vis-à-vis the Airmail Act of 1934 and subsequent policy developments. See: Ellis Hawley, *The New Deal and the Problem of Monopoly: A Study in Economic Ambivalence* 2d ed. (New York: Fordham University Press, 1995), 226-227, 240-244.

³¹⁸ Roosevelt's focus on the dangers embodied by aviation holding companies appears at least in some ways to echo other aspects of his broader economic policy—particularly his efforts to subvert utility and banking monopolies. That fact, however, should not overshadow aviation's markedly different context, and Roosevelt's willingness to embrace federal policies furthering structured commercial growth. The President consistently demonstrated a willingness to limit the harmful aspects of competition to support commercial development, a policy focus reflected in the structure of the Civil Aeronautics Act.

role in creating a national aviation policy, first through the creation of investigative bodies like the Federal Aviation Commission, and later through his efforts to shape the Civil Aeronautics Act. These efforts eventually resulted in the creation of legislation that codified the majority of Hoover's vision and established a paradigm for American commercial aviation that lasted until the late 1970s.

The essential continuity between Hoover and Roosevelt's aviation policies, however, should not obscure several specific points of differentiation. First, Roosevelt's outline for new legislation embraced several features at odds with Brown's efforts to shape the provisions of the Watres Act. The President's focus on three-year contracts ran counter to Brown's hope for longer, ten-year route certificates. Brown pushed for the longer duration in large part to reward pioneer operators. The Postmaster hoped that the security of a decade-long hold on airlines' route structures would promote continued technological development and encourage carriers to spend money on larger, more passenger-friendly aircraft. Roosevelt, in contrast, pushed for shorter contracts to maintain a focus on competition and allow the ICC to revise rates at shorter intervals.

Roosevelt also maintained a clear emphasis on promoting open and competitive bidding. Unlike Brown, the President appears to have believed that bidding would serve both public and commercial interests. He made it clear that proper equipment, speed, load capacity, and safety should be the only specifications considered when weighing airmail bids—a change from Brown's policy of emphasizing night flying requirements and other qualifications specifically designed to benefit pioneer operators. The President emphasized that limiting bidding requirements in this way would ensure “that the bidding shall be really competitive,”³¹⁹ not merely a method through which to exclude unwanted proposals.

³¹⁹ Franklin Roosevelt, Letter to Hugo Black, March 7, 1934, Box 477, Hugo Black Papers, Manuscript Division, Library of Congress.

Roosevelt's most contentious point of divergence with the Hoover administration emerged from his efforts to change the industry's organization. He argued that holding corporations and other industrial conglomerations were "clearly contrary to good faith and public policy," and pushed to exclude any such organization from bidding on airmail contracts.³²⁰ Where Brown had seen holding corporations as positive organizations with the potential to streamline research and development, promote technological progress, and maximize efficiency in production and airline operation, the President saw them as barriers to competitive bidding and a danger to the public interest. Roosevelt's desire to exclude any airline represented at the "spoils conferences" from bidding highlighted his desire to break with past policies.

Perhaps because of Roosevelt's divergence with a number of Hoover administration policies, many leading members of the aviation industry sharply disagreed with the President's legislative plans. Ernest R. Breech, President of North American Aviation, in a statement to the House Post Office and Post Roads Committee, argued that "the President's . . . recommendations . . . would result in the greatest possible confusion within the industry."³²¹ TWA President Richard Robbins expressed a similar sentiment, stating, "President Roosevelt has been cruelly misinformed as to the facts of the airmail situation."³²²

³²⁰ Ibid. It should be noted that Roosevelt's focus on breaking up aviation holding companies broadly parallels his focus on efforts to stem the influence of electrical power trusts. See: Hawley, *The New Deal and the Problem of Monopoly*, 325-343.

³²¹ Statement by Ernest R. Breech, President, North American Aviation, Inc. commenting on President Roosevelt's letter dated March 7, 1934 to Chairman Mead of the House Post Office and Post Roads Committee and Senators McKellar and Black, undated, President's Official File 19, Franklin Roosevelt Presidential Library, Hyde Park, New York.

³²² Statement by Richard W. Robbins, President, Transcontinental and Western Air, Inc., commenting on President Roosevelt's letter dated March 7, 1934, to Chairman Mead of the House Post Office and Post Roads Committee and Senators McKellar and Black,

This opposition appears to have been motivated primarily by the President's desire to level the playing field for bidding on airmail contracts. Breech argued that "the strong, well-managed and adequately financed companies now face the prospect of having their investments wiped out by the opening of these routes to competitive bidding." According to the NAA President, this "would throw the industry back to the conditions existing in the early stages of development, thereby sacrificing not only the results of pioneering efforts to date, but in effect confiscating the properties and investments of the air mail carriers prior to the cancellation order."³²³ Breech's argument echoed the core values that had guided Walter Brown's aviation policy. Fundamentally, the aviation executive's opposition to the new policy reflected his belief that pioneer operators should be rewarded for their efforts to establish commercial air service.

Eddie Rickenbacker, North American's Vice President, expanded on this line of thinking in testimony given before the Senate Committee on Post Office and Post Roads, March 17, 1934. While outlining his criticisms of the proposed legislation, the World War I fighter ace stated, "I feel it will be a serious mistake if the equalities of the present operators of the air transport lines of this country are not recognized and given preemptive rights on the routes which they have pioneered at great expense to their stockholders."³²⁴ Like Breech, Rickenbacker believed that the proposed legislation

March 9, 1934, President's Official File 19, Franklin Roosevelt Presidential Library, Hyde Park, New York.

³²³ Statement by Ernest R. Breech, President, North American Aviation, Inc. commenting on President Roosevelt's letter dated March 7, 1934, to Chairman Mead of the House Post Office and Post Roads Committee and Senators McKellar and Black, undated, President's Official File 19, Franklin Roosevelt Presidential Library, Hyde Park, New York.

³²⁴ Statement of Captain Eddie Rickenbacker, Vice President of North American Aviation, Inc. before the Senate Committee on Post Office and Post Roads on Senate Bill S. 3012 to Revise Air-Mail Laws, March 17, 1934, President's Official File 19, Franklin Roosevelt Presidential Library, Hyde Park, New York.

would unfairly penalize pioneer operators by opening bidding to new airlines that had not spent the time and money developing infrastructure and promoting commercial development.

While scholars have interpreted these facts as evidence that Roosevelt did not necessarily have the best interests of the industry at heart, that analysis does not fully account for Roosevelt's motivations. A closer look demonstrates that the President embraced these policies out of a genuine desire to promote the sound development of American aviation. Clearly, Roosevelt did not adhere to the same associationalist beliefs his predecessor had utilized so effectively with regard to aviation. Instead, he strove to create transparency in the industry and promote what he believed to be healthy competition. In his mind, the airmail controversy called for clear and direct action to clear away the supposed evils of the past and return commercial flying to its developmental path. In this sense, FDR's actions represent a natural outgrowth of his broader New Deal philosophy—using the power of the federal government to promote economic growth while attempting to combat the worst excesses of trusts and industrial conglomerations.

Distinctions between Hoover's associationalist focus and FDR's New Deal, however, should not obscure the overarching similarities in the Presidents' aviation policies. Debates over the proper qualifications for airlines bidding on airmail routes assumed the inherent value of government airmail subsidies, confirming the essential continuity of federal policy. Concluding his letter to Hugo Black, Roosevelt summed up his goal for the new legislation, writing, "real competition . . . will stimulate inventive genius, and should give to our people safer and better equipment both for commercial and military purposes."³²⁵ Though the specifics of this policy ran counter to the wishes of aviation executives—who, it should be pointed out, had legitimate concerns regarding their

³²⁵ Franklin Roosevelt, Letter to Hugo Black, March 7, 1934, Box 477, Hugo Black Papers, Manuscript Division, Library of Congress.

pioneering status—they nonetheless reinforced the President’s desire to follow Hoover’s developmental path.

While confirming the basic continuity between Hoover and FDR’s policies, Roosevelt’s legislative proposal encompassed several specific points of divergence. First, he pushed for new labor provisions that would protect pilots, maintenance men, and line workers from unfair employment practices. A commitment to creating guidelines for maximum hours, minimum pay standards, and pension systems for airline workers signaled Roosevelt’s focus on promoting stable growth.³²⁶ Second, his desire to end the practice of interlocking directorates within the aeronautics industry received broad support from executives. Breech publicly argued for the desirability of prohibiting overlapping management structures,³²⁷ and Rickenbacker voiced his support for a provision “that there shall be no interlocking directors or stock ownership in competitive air transport companies.”³²⁸

Roosevelt must also get credit for successfully returning airmail contracts to private operators. While in retrospect doing so appears inevitable, contemporary conditions mitigated against an easy

³²⁶ It should be noted that Roosevelt’s focus on labor standards exemplifies the more general New Deal effort to empower workers around the country. That fact notwithstanding, Roosevelt’s focus on fair practices for aviation workers remains a significant example of his desire to promote stable and healthy commercial growth. For more information on labor and the New Deal see: Hawley, *The New Deal and the Problem of Monopoly*, 194-197, and Leuchtenburg, *FDR and the New Deal*, 261-263, 347.

³²⁷ Statement by Ernest R. Breech, President, North American Aviation, Inc. commenting on President Roosevelt’s letter dated March 7, 1934, to Chairman Mead of the House Post Office and Post Roads Committee and Senators McKellar and Black, undated, President’s Official File 19, Franklin Roosevelt Presidential Library, Hyde Park, New York.

³²⁸ Statement of Captain Eddie Rickenbacker, Vice President of North American Aviation, Inc. before the Senate Committee on Post Office and Post Roads on Senate Bill S. 3012 to Revise Air-Mail Laws, March 17, 1934, President’s Official File 19, Franklin Roosevelt Presidential Library, Hyde Park, New York.

return to commercial airmail. Black's Senate investigation had thrown the industry into chaos and drawn negative attention to the airlines and federal airmail contracts. The army debacle further exacerbated the problem and placed Roosevelt in a difficult situation. He faced the pressure of returning airmail contracts to private carriers as quickly as possible while addressing the concerns raised by Black's investigation and the subsequent media uproar.

Admittedly, Roosevelt's legislation included punitive measures directed against the airlines present at the spoils conferences and their executives.³²⁹ In addition, critics warned that his commitment to three-year route contracts and open competitive bidding would unfairly penalize pioneer operators. FDR's opponents cautioned that both of these facts undermined the Hoover administration's focus on using the power of the federal government to intentionally shape aeronautical growth. Those criticisms, however, assume the objective value of Hoover and Brown's policies. While it appears that the Republican administration's focus on associational policies did successfully support commercial growth, they also contained the potential to stifle the creation of new companies and privileged a few large airlines. Though Hoover and Brown deserve much credit for their efforts to develop American aviation, the specific manifestations of their economic philosophy should not be assumed to encompass the only "correct" path for American airlines. More significantly, Roosevelt's actions in fact preserved the heart of Hoover's vision. Though the new legislation differed from the Watres Act in many particulars, it nonetheless maintained the federal focus on utilizing informal airmail subsidies to support the development of commercial aviation—a fact that should not be taken for granted in the wake of the vitriolic rhetoric of the Black Committee investigation. That fact, moreover, highlights the general unanimity of opinion amongst

³²⁹ The new legislation prohibited airlines who had had been granted contracts under Brown's system from doing so under the new law, and mandated that new contract bidders could not employ chief executives who had taken part in the spoils conferences.

policymakers regarding aviation's significance, and the federal government's role in promoting aeronautical growth.

Scholars have generally depicted this result as something of an accident. According to Robert van der Linden, in the end, Farley, Roosevelt, and the Democrats "unwittingly . . . validated Walter Brown's program."³³⁰ In van der Linden's opinion, this resulted from the prevailing momentum that Hoover and Brown had created. In his words, after federal contracts were again put up for private bids, "the awards were given essentially to the same airlines that had flown the routes before. These airlines had the equipment, personnel, money, and infrastructure already in place along these routes . . . Realistically, no independent airline stood a chance of flying the mail more efficiently or safely."³³¹ In other words, Roosevelt's actions appear to have achieved success in spite of his policies, not because of them.

A broader view of these issues, however, serves to clarify the President's productive role in bringing the airmail scandal to a close. Ultimately, Roosevelt's actions demonstrated a coherent focus on promoting the development of American commercial aviation. His support for canceling private contracts may have been unwise, but in the wake of the army debacle he worked consistently to return federal airmail contracts to private operators on a sound commercial basis. Though his economic philosophy differed in some important details from that of his predecessor, his motives were similar. Moreover, he recognized the inherent value in utilizing federal airmail subsidies to promote aeronautical development and pushed for legislation that preserved the core of Hoover's vision for American aviation. Roosevelt never considered a fundamentally different course of action,

³³⁰ van der Linden, *Airlines and Airmail*, 286.

³³¹ *Ibid*, 284.

eschewing any thoughts of nationalization or doing away with governmental subsidies.³³² Faced with a difficult political situation, Roosevelt worked diligently to create a compromise addressing the harshest criticisms of the Watres Act while preserving its central policies. In so doing, he validated the central aspects of Hoover's aviation policy and confirmed his commitment to fostering aeronautical growth along essentially similar lines.

Roosevelt's engagement with the airmail scandal and his efforts to help shape the Black-McKellar Bill of 1934 pushed him to take a more active role in molding federal aviation policy. Specifically, the President came to believe that policymakers needed more information about all aspects of aviation—including, but not limited to commercial, military, private, manufacturing, lighter-than-air craft, and education—in order to make informed decisions regarding the federal government's proper role in promoting aeronautical development. In part, that belief emerged from Roosevelt's expressed worry "that the United States has no broad aviation policy." To address that concern the President suggested in a White House memorandum that "Congress might well authorize the appointment of a commission to make immediate study and recommend . . . a broad policy covering all phases of aviation and the relationship of the government thereto."³³³

To that end, in the spring of 1934 Roosevelt pushed for the creation of the Federal Aviation Commission.³³⁴ Roosevelt encouraged the Commission to cast their nets broadly and request

³³² A significant point of divergence with New Deal policy vis-à-vis utilities, where FDR did embrace nationalization in the form of the Tennessee Valley Authority. See: Hawley, *The New Deal and the Problem of Monopoly*, 325-343

³³³ White House Memo, undated, President's Personal File 39, Franklin Roosevelt Presidential Library, Hyde Park, New York.

³³⁴ The FAC emerged from a provision Roosevelt pushed to have inserted into the 1934 Air Mail Act authorizing him to designate the members of an investigative board tasked to report on the state of U.S. aviation and make recommendations regarding future policy.

testimony from pilots, designers, manufacturers, airline executives, labor leaders, academics, and policymakers. His hope was that the investigation would provide a comprehensive overview of American aviation. At the same time, the President anticipated that the Committee's efforts would result in concrete suggestions for future federal policy.

Through the summer and fall of 1934, a parade of the most significant figures in American aviation testified before the Commission. Charles Lindbergh, General William Mitchell, Juan Trippe, William MacCracken, Eddie Rickenbacker, W. A. Patterson and others offered their perspective on myriad aspects of American aeronautics and made suggestions regarding the proper course for federal policy. The depth and breadth of this testimony provides a singular opportunity to determine prevailing opinions about the contemporary state of American aviation. In addition, the Commission serves as a concrete example of Roosevelt's desire to work behind the scenes to promote fact-finding efforts and facilitate improvements in federal aviation policy.

The Commission's findings reveal a remarkable unanimity of opinion regarding the most significant aspects of federal policy. The vast majority of witnesses urged the government to remove federal oversight for aviation from the Commerce Department and create an independent agency tasked to oversee all aspects of American aeronautics. Testimony also focused on the continued importance of federal airmail subsidies. Finally, witnesses almost unilaterally pushed for more federal engagement with both regulation and promotion. The Commission's report reflected these findings and presented a comprehensive set of recommendations for changes to federal policy. These suggestions appear to have played a major role in the creation of the Civil Aeronautics Act of 1938.

See: Kommons, *Bonfires to Beacons*, 348-351, and Solberg, *Conquest of the Skies*, 198-199.

As such, the Commission must be seen as a vital aspect of Roosevelt's efforts to craft federal policy in the years after 1935.

From the outset Roosevelt immersed himself in the Commission's activities. He began by taking an active role in determining who would serve on the Commission itself. In a June 1934 White House memo he articulated his opinion regarding the groups' proper make-up. The President presented an outline establishing a five-member board. Members would not require congressional confirmation, no more than three could represent the same political party, and the members would be allowed to choose their own chairman. Perhaps to entice potentially reluctant commissioners, Roosevelt also suggested that they receive compensation equivalent to "a Senator or Representative in Congress."³³⁵

By July, Roosevelt's plans had come to fruition. Clark Howell chaired the five-man Commission, which included several noted aviation-related figures. Howell, a former editor of the *Atlanta Constitution*, had served the federal government before. In 1922 Warren Harding named him to a special mining commission, and Herbert Hoover had tapped Howell to be a part of a national transportation commission. This background, plus his Democratic affiliation and political connections, made Howell an excellent candidate for the position. Along with Howell, the Commission included Edward P. Warner, Albert J. Berres, Jerome C. Hunsaker, and Franklin K. Lane, Jr. Both Warren and Hunsaker had longstanding connections to the aviation industry. Warner, a pioneer aviator in his own right, had served as chief physicist for the National Advisory Committee for Aeronautics in the years following World War I, and from 1926-29 served as the Assistant

³³⁵ White House Memo: Aviation Commission, President's Official File 249b, Franklin Roosevelt Presidential Library, Hyde Park, New York.

Secretary of the Navy (AIR). Hunsaker taught aeronautics at the Massachusetts Institute of Technology, and designed a number of significant aircraft for the U.S. Army Air Corps.

In the wake of their respective appointments, the members of the Commission worked closely with Roosevelt to coordinate their agenda. On July 25, Howell wrote the President to request a meeting. Reminding Roosevelt that the Commission's hearings began on September 17, Howell related, "it is . . . advisable before we proceed with these hearings to have a conference with you." Howell suggested that the members of the Commission meet with Roosevelt at Hyde Park on September 14.³³⁶ Roosevelt granted Howell's request, a fact that strongly indicates the significance with which he viewed the Commission's activities.

Before and after that meeting, Howell and the rest of the Commission worked diligently to fulfill the President's wishes. Specifically, they requested testimony from virtually every significant player in American aviation. Organizing the Commission's schedule by topic—air transportation, civil aviation, airports, national defense, procurement of military material, coast guard, lighter-than-air craft, relations of government and industry, research and education, and aeronautical law—they brought scores of witnesses to Washington, D. C. to provide insights into their respective areas of expertise. Exemplifying their thoroughness, the Commission sent out questionnaires and requests for testimony to 22 airlines alone.³³⁷

That testimony demonstrated a remarkable unanimity of opinion. Most significantly, almost every witness pushed for continued federal airmail subsidies. Representatives from the Post Office, the Commerce Department, private interest groups, and the airlines all depicted airmail revenue as a

³³⁶ Clark Howell, Letter to Franklin Roosevelt, July 25, 1934, President's Official File 249b, Franklin Roosevelt Presidential Library, Hyde Park, New York.

³³⁷ List of Witnesses to Whom Air Transport Questionnaire Was Sent, Box 6, RG 197, NARA.

necessary precondition for continued commercial growth. In addition, witnesses pushed for increased coordination between the government agencies involved with aviation. Some witnesses argued for the more radical step of creating an independent regulatory agency responsible for all aspects of aviation oversight. The push for increased federal engagement with flying was also manifested in a general desire for the government to aggressively promote aeronautics. Specifically, many witnesses argued for an increased governmental focus on research and education. Finally, testimony before the Commission overwhelmingly saw federal involvement with aeronautics as vital for both the commercial and military success of the United States.

Airmail subsidies naturally formed a focal point for the Commission in the immediate wake of the airmail scandal and the new Black-McKellar legislation. While that law had returned postal contracts to private carriers, tensions remained high concerning the future of these lucrative routes. Almost without exception, witnesses testifying before the Commission expressed firm support for the continued need for subsidies. On September 25, the Commission heard testimony from Rex Martin, Assistant Director of the Bureau of Air Commerce. Appearing in the place of his boss—Eugene Vidal—Martin began by focusing on the value airmail subsidies brought to the industry. In his prepared statement Martin argued, “adequate mail pay or subsidy for mail-passenger service is vital to the development of air transport and its safe operation . . . this method provides an incentive for the development of passenger and express business and a more rapid development of the art.” Martin’s perspective echoed the vision first put forward by Herbert Hoover, and cohered with Walter Brown’s strategy to a large degree. Like Brown, Martin hoped that “surpluses accruing as a result of a subsidy should be employed for expansion and new equipment.”³³⁸ In this view, airmail revenue

³³⁸ Rex Martin, Testimony Before The Federal Aviation Commission, September 25, 1934, Box 14, RG 197, NARA.

would not only provide for the solvency of American airlines, but would also promote the growth of passenger service and the development of new aircraft.

Echoing Martin's sentiment, representatives from the Post Office seconded the support for continued subsidies. Second Assistant Postmaster General Harlee Branch clearly expressed his agency's position on the subject, stating, "there can be no doubt that the support which the government has given air transport through air mail pay has been largely responsible for this remarkable development of the aviation industry itself." Relating that, in his opinion, the Post Office, more than any other government agency, carried the primary responsibility "to foster the development of the commercial air transport system," Branch suggested that Post Office policy affected both airlines and manufacturers. In his words "by enabling the commercial companies to carry on, the commercial companies have been able to buy modern equipment from the manufacturers . . . the manufacturing companies have not only kept abreast . . . of the aviation development in the country, but, in our opinion, outstrips the manufacturing industry . . . of any other country." As such, postal subsidies represented the centerpiece of government policy. They supported the growth of airlines and manufacturing firms, and maintained America's preeminence in aviation. Reflecting on their significance to commercial carriers, Branch concluded his testimony by expressing doubt whether "there is any [airline] now operating which could continue to operate . . . without this help which the government gives them."³³⁹

Understandably, airline executives also argued for the continued necessity of airmail payments. Eddie Rickenbacker, Vice President of North American Aviation, stridently expressed the opinion that Post Office subsidies offered the best and most fiscally responsible way to promote the

³³⁹ Harlee Branch, Testimony Before The Federal Aviation Commission, September 25, 1934, Box 14, RG 197, NARA.

continued development of commercial aviation. In line with Brown's interpretation of the Watres Act, Rickenbacker suggested that "there should be in addition to a regular payment for the carriage of mail to all lines, a subsidy for a period of years, graduating down dependant entirely on the proved revenues from passengers and express to those lines that must have it to exist." He grounded that policy by arguing that airlines "are rendering a genuine service to the traveling public, to the Post Office, and to the industrial life of this country." In fact, the former ace went so far as to argue that not only did such a policy represent the most cost-effective way to provide such service, but that "the air transport industry . . . has subsidized the government [and] people as a whole."³⁴⁰

While Rickenbacker presented the most strident rhetoric in support of a continued government airmail subsidy, many other members of the industry echoed his general argument. Ernest Breech, the President of North American Aviation stated, "I agree fully with the principle of subsidy,"³⁴¹ and W. A. Patterson, President of United Airlines, argued that government subsidies had "rebounded to the definite advantage of air transportation."³⁴² All of these men viewed federal support as foundational to the continued growth of American air commerce. While many argued that the development of air transport would eventually remove the need for such payments, in 1934 the general opinion strongly supported continued subsidization.

³⁴⁰ Eddie Rickenbacker, Testimony Before The Federal Aviation Commission, October 3, 1934, Box 14, RG 197, NARA. Rickenbacker's statement suggests a certain level of hubris concerning aviation's significance, but his reasoning remains significant. The former ace passionately believed that the social, economic, and technological development aviation embodied genuinely benefitted the country as a whole. In this sense his opinion represents a concrete example of what historian Joseph Corn has labeled "the winged gospel."

³⁴¹ Ernest Breech, Testimony Before The Federal Aviation Commission, October 4, 1934, Box 15, RG 197, NARA.

³⁴² W. A. Patterson, Testimony Before The Federal Aviation Commission, October 8, 1934, Box 15, RG 197, NARA.

That support also extended to aviation interest groups. Most significantly, the Commission heard testimony from the National Aeronautic Association. The NAA represented the most significant private aviation-related organization in the country, with influence over federal policy, labor, and engineering. NAA President Hiram Bingham was a former U.S. Senator from Connecticut, and maintained close ties to lawmakers. In his testimony, Bingham suggested that overturning the Watres Act had been a mistake. Bingham claimed that the bill had “led to a great deal of criticism, and [had] been somewhat misunderstood.” Nonetheless, he argued that the Commission should recommend to Congress “the granting of bonuses or direct subsidy for improved air transport in the carrying of mail, passengers, express, and so forth.” Such a policy “would be advisable for the promotion of American aviation.”³⁴³

Though subsidies represented the single greatest point of consensus among witnesses, several other themes stand out prominently in the Commission’s testimony. Witnesses expressed broad agreement that the federal government should continue and, in fact, increase its regulation of American aviation. Specifically, members of the government and industry argued for greater coordination among government agencies with ties to aviation and a stronger link between military and civil aviation policy. Many witnesses went so far as to argue for the creation of an independent Commission tasked only with overseeing aeronautics—an opinion that presaged the creation of the Civil Aeronautics Authority four years later.

Secretary of Commerce Daniel Roper took the lead in pushing for improved coordination among federal agencies. Arguing that aviation represented “an industry of the greatest importance to our future national defense and for serving America and the world,” Roper stated that “an effort

³⁴³ Hiram Bingham, Testimony Before The Federal Aviation Commission, October 1, 1934, Box 14, RG 197, NARA.

should be made more definitely to initiate a cooperative consultation among [government] agencies” in order to “bring about the necessary and logical Federal aviation policy and procedure.” To that end, Roper suggested “that the interests of aviation from every standpoint could be best served by the creation of an aviation commission entirely divorced from all departments of the government and to give continuing and comprehensive study to all phases and factors of our national aeronautical picture.”³⁴⁴

Representatives from the industry seconded Roper’s hopes. Lester Seymour, President of American Airlines, laid out his ideas in no uncertain terms, stating, “it is my opinion all of our affairs should be controlled and regulated by one Government department. I think that department should have complete control over our affairs in the way of regulation, assistance . . . the setting of rates, the provision in reference to ground aids to navigation . . . one Government body that gives its complete attention to the activities of the air transport companies.”³⁴⁵ W. A. Patterson shared similar sentiments, testifying that commercial aviation would be best served by the government granting “broad powers to a permanent, independent federal aviation commission.” In Patterson’s opinion that commission should be “charged with the responsibility of the economic growth and supervision of civil aeronautics.”³⁴⁶

On October 16, no less a figure than Charles Lindbergh expressed his support for an independent regulatory agency. Called to testify by the Committee “as being exceptionally well informed and widely experienced” in aviation-related matters, Lindbergh laid out a concrete plan for

³⁴⁴ Daniel Roper, Testimony Before The Federal Aviation Commission, September 24, 1934, Box 14, RG 197, NARA.

³⁴⁵ Lester Seymour, Testimony Before The Federal Aviation Commission, October 4, 1934, Box 15, RG 197, NARA.

³⁴⁶ W.A. Patterson, Testimony Before The Federal Aviation Commission, October 8, 1934, Box 15, RG 197, NARA.

the establishment of such an agency. Beginning with the assertion that “regulation is essential in the interests of safety,” he went on to argue, “I believe there should be a permanent aviation commission or some body to carry out the essential regulation of air transport. I feel that that body should be completely independent of any other form of transportation.” Lindbergh also expressed support for the general legislative outline established by Walter F. Brown. In Lindbergh’s mind, government oversight of airmail routes with a focus on limiting bidding to “responsible operators” represented the most effective way to continue aeronautical development.³⁴⁷

These witnesses argued that aviation’s growing significance to the economic and military health of the nation necessitated a new, independent regulatory agency devoted solely to aeronautics. Such a commission would enable the government to centralize oversight of safety, licensing, infrastructure, navigation, rates, and routes under one roof. Doing so would take regulatory responsibilities from the Post Office, Interstate Commerce Commission, and the Bureau of Air Commerce in the Commerce Department and combine them in a single new agency in a drive for consistency and efficiency. Witnesses hoped that doing so would streamline government engagement with aviation and establish more stable and coherent policies.

The broad-based support for creating such an agency highlights the unanimity of opinion regarding the government’s responsibility to aeronautics. Witnesses’ testimony reveals arguments strikingly similar to those utilized by Hoover, MacCracken, and New when pushing for the initial wave of aviation legislation in 1925 and 1926. Further, the desire to increase federal powers and unify governmental responsibility in a new, independent agency points to aviation’s growing significance. As commercial aviation continued to develop and airlines demonstrated that they could

³⁴⁷ Charles Lindbergh, Testimony Before The Federal Aviation Commission, October 16, 1934, Box 15, RG 197, NARA.

successfully carry both passengers and cargo on regularly scheduled routes, airline executives and policymakers alike looked to the ever-brighter future that the new technology held for the nation. For these witnesses that growth necessitated increased federal engagement, and conclusively proved that aviation was worthy of federal support.

Consistent with the desire for the government to support continued aeronautical development, many witnesses also pushed for a greater federal focus on promoting aviation. Daniel Roper argued that “federal policy to guide in the development of our aviation industry should encourage and prompt business initiative in airplane development and production.” The Secretary of Commerce also emphasized the need for further education. Developing his own lexicon, Roper suggested “we need to ‘aerize’ our nation . . . [government] policy should stimulate proper school and educational endeavors among the youth of the land and cultivate air-mindedness among the people generally.”³⁴⁸ Charles Lindbergh commented that government encouragement of continued research was “the proper thing to do,” and expressed his support for more general promotion.³⁴⁹

In a later phase of the hearings, the Commission heard testimony from Dr. Karl Compton, President of the Massachusetts Institute of Technology. Compton had a long history of engagement with aviation, serving as an aeronautical engineer in the Army Signal Corps during World War I and helping promote M.I.T.’s aeronautical engineering department—the first in the country, established in 1913. Speaking in his capacity as an expert on engineering and as a member of President Roosevelt’s Science Advisory Board, Compton expressed firm support for increased federal promotion of aviation. Addressing “the general question of encouragement of aviation by the

³⁴⁸ Daniel Roper, Testimony Before The Federal Aviation Commission, September 24, 1934, Box 14, RG 197, NARA.

³⁴⁹ Charles Lindbergh, Testimony Before The Federal Aviation Commission, October 16, 1934, Box 15, RG 197, NARA.

Government,” Compton stated, “the public interest requires that the Government take whatever steps it can to encourage and stimulate any new developments” in aeronautics. Later, he suggested that aviation “has not come anywhere near realizing what its ultimate possibilities are for public service,” a situation that mandated continued governmental promotion.³⁵⁰

A final thread flowing through the Commission’s public hearings concerned aviation’s value to America. Virtually every witness expressed the sentiment that aviation was central to the continued development of the American way of life—a fact that necessitated a clear and sound federal policy. Eddie Rickenbacker hoped that the Commission realized aviation’s “importance as a social, political, and commercial asset to this country.”³⁵¹ Daniel Roper emphasized aviation’s status as “an industry of the greatest importance to our future national defense and for serving America . . . commercially and socially.”³⁵² These statements suggest that, for most contemporary Americans, federal aviation policy had effects far beyond airmail rates and routes. In fact, aviation’s central importance to America meant that governmental engagement with aeronautics had implications for national security, social, political, and commercial progress, and, indeed, had the potential to affect virtually all aspects of America’s future. Even more significantly, it appears as if all interested parties shared this vision. In fact, the FAC revealed no countervailing opinion worthy of mention.³⁵³ Although the FAC was certainly predisposed to request testimony from those interested in aviation’s continued progress, the striking agreement regarding aviation’s growing influence remains noteworthy.

³⁵⁰ Dr. Karl Compton, Testimony Before The Federal Aviation Commission, October 22, 1934, Box 16, RG 197, NARA.

³⁵¹ Eddie Rickenbacker, Testimony Before The Federal Aviation Commission, October 3, 1934, Box 14, RG 197, NARA.

³⁵² Daniel Roper, Testimony Before The Federal Aviation Commission, September 24, 1934, Box 14, RG 197, NARA.

³⁵³ It should be noted that the Commission did not hear testimony from parties associated with the railroads or other interests who might have opposed aviation’s continued growth—the commission only focused on the larger aeronautical community.

Agreement over aviation's value, moreover, extended beyond the FAC hearings.

Contemporary periodical coverage demonstrates that, although concerns over safety remained significant, by the mid 1930s many Americans had embraced aviation's commercial potential. In 1936 *Newsweek* published an article entitled "Airlines: U.S. Report Shows All Types of Air Traffic Soaring." Commenting on increases in business the previous year, the article happily related, "all through 1935 airline officials, totting up payload manifests, beamed with satisfaction. Month after month their summaries showed passenger, mail and express traffic soaring to new records."³⁵⁴ Two years later, *Life* was confident enough in the industry's commercial stability to run the headline "Aviation Comes of Age." Highlighting airlines' rapid commercial development, the article related that "in its short life, air transport has advanced infinitely faster and more wisely than the railroads did in their early life."³⁵⁵ These articles suggest that by the midpoint of the decade, a majority of Americans had eschewed cultural tropes linking aviation with danger and entertainment, and increasingly looked at flying as an emerging mainstream transportation technology.³⁵⁶

By the end of 1934 the Commission had concluded its hearings and began to formulate its official report. Given the broad agreement among the Commission's witnesses, that report broke little new ground. Opening with a statement confirming aviation's significance to the nation, the report argued, "it should be the policy of the United States to maintain a position of world leadership in air transport, and to lend such aid as may be necessary to insure that the most modern and efficient equipment and methods shall be applied on American domestic and foreign airlines." The

³⁵⁴ "Airlines: U.S. Report Shows All Types of Air Traffic Soaring," *Newsweek*, March 28, 1936, 43.

³⁵⁵ "Aviation Comes of Age." *Life*, August 22, 1938, 44.

³⁵⁶ Interestingly, this triumphal view differs sharply from Americans' current perceptions of aviation, dominated as they are by security concerns, environmental damage, and flight delays. Aviation's centrality to contemporary America, it seems, has served to highlight our frustrations and worries about flying, rather than its benefits.

Commission supported continued subsidies, to that end suggesting, “whatever additional sums [above and beyond Postal Revenues] are for the time being necessary to maintain and develop adequate transport services should be allocated specifically to that purpose by the government.”³⁵⁷

Howell and his fellow members pushed for commercial carriers to be issued certificates of convenience and necessity, for continued federal support for lighting and navigation facilities, and for the preservation of competition between airlines “while avoiding uneconomic paralleling of routes or duplication of facilities.” The Commission’s report also extended their recommendations to overseas routes. It argued that “promotion of American-flag carriers connecting the United States with our territories overseas” represented a central tenet of “the national policy of stimulating air transport.”³⁵⁸

Reflecting the general consensus among its witnesses, the Commission also called for the creation of an independent aviation commission. Such an “air commerce commission” should have “its members appointed by the President and with the consent of the Senate for long terms.” It should have “broad supervisory and regulatory powers over civil aeronautics, and particularly over domestic and foreign air transport.” Commission members, however, were quite vague regarding the specific nature of those powers. While their report did suggest that the proposed commission “should have all powers necessary to the attainment of its general supervisory and regulatory purposes, including the power to hold hearings and conduct investigations,”³⁵⁹ it is not clear to what extent such a commission would supersede the activities of the Post Office or the Commerce Department. In fact, Howell and his peers believed that the ICC should still control airmail rates, a detail that

³⁵⁷ *Report of the Federal Aviation Commission* (Washington D.C.: United States Government Printing Office, January 1935), Box 19, RG 197, NARA, 9.

³⁵⁸ *Ibid*, 10-13.

³⁵⁹ *Ibid*, 39.

would seem to undermine the regulatory powers of the proposed commission. Nonetheless, it remains significant that the FAC believed that the creation of a new, independent commission was central to aviation's success in America.

Finally, the Commission's report included numerous recommendations concerning civil and military aviation, education, and promotion. The report argued in favor of federal support for the development of more economical and easier to fly private aircraft that would allow more Americans to take to the air. With regard to the military, it emphasized the continued need for cooperation between civilian and military policymakers, the value of high quality military aircraft, and the promotion of integrated manufacturing organizations.³⁶⁰ The Commission highlighted the value that the NACA brought to American aeronautics in terms of both research and education, and recommended that the NACA work more closely with universities to foster aeronautical education and coordinate technological development.³⁶¹

Ultimately, the Federal Aviation Commission's actions served to codify the widespread consensus regarding American aviation. Though its report did take a step forward in recommending that aviation fall under its own regulatory agency, both witnesses' testimony and the Commission

³⁶⁰ Ironically, by the mid 1930s commercial aircraft were in many ways more advanced than their military counterparts. The introduction of new airliners like the Douglas DC-3 highlighted airlines' utilization of cutting edge aeronautical technology, confirming their commitment to efficiency and commercial growth. The DC-3 represented the culmination of airline technological development in the pre-war period. Building on the progress made by aircraft such as the Boeing 247 and the Douglas DC-2, the DC-3 incorporated technologies like a retractable undercarriage, engine cowls, and sound deadening material to make air travel faster and more pleasant. As a result, the FAC's recommendation for military aviation reflected a desire to see the military catch up with its civilian counterparts. See: *Report of the Federal Aviation Commission* (Washington, D.C.: United States Government Printing Office, January 1935), Box 19, RG 197, NARA, 3-4, 119-122; Courtwright, *Sky as Frontier*, 97-105, and Solberg, *Conquest of the Skies*, 151-153.

³⁶¹ *Report of the Federal Aviation Commission* (Washington, D.C.: United States Government Printing Office, January 1935), Box 19, RG 197, NARA, 14-35.

itself primarily functioned to summarize existing attitudes vis-à-vis the government's proper relationship to aeronautics. In doing so, however, the Commission largely confirmed the value of Hoover's vision for American aeronautics, and at least to some extent exonerated Walter Brown. Clearly, most interested parties saw federal subsidies, increased regulation, and government oversight of rates and routes as necessary preconditions for further growth.

Clark Howell remained in close contact with Roosevelt for the duration of the Commission's activities and coordinated with the President when preparing to release the Commission's findings to the public. On January 25, 1935 Howell wrote the President to emphasize the "importance of sending a message to the two Houses of Congress" to express support for the Commission's activities. Howell summarized the FAC's findings for Roosevelt, and, in particular, focused on the fact that "practically all testimony before our Commission urgently recommended the creation of [an independent aviation] Commission."³⁶²

Although Roosevelt placed his support behind the Commission's activities, he did not move aggressively to initiate its recommendations at that time.³⁶³ It seems, however, that those recommendations had a continuing influence on his later action. His familiarity with the FAC report

³⁶² Clark Howell, Letter to Franklin Roosevelt, January 16, 1935, President's Official File 249b, Franklin Roosevelt Presidential Library, Hyde Park, New York.

³⁶³ Ironically, though he demonstrated general support for the Commission's activities, Roosevelt expressed tacit disapproval regarding the creation of an independent aviation commission. While he sought to streamline the administration of all transportation entities, the President believed that the creation of a new organization for aviation ran counter to that goal. As such, he worked to forestall new legislation based on the Commission's findings for the next two years. By 1937, however, it appears that Roosevelt had second thoughts and moved to support the creation of such an organization, as ultimately provided for by the Civil Aeronautics Act. It is not clear whether the President's initial recalcitrance emerged from political considerations, or he merely needed time to appreciate the value of the concept. Nonetheless, by 1937 Roosevelt used his power to help craft and push through new legislation establishing the creation of such an entity. See: Kommons, *Bonfires to Beacons*, 348-352, 361-369.

appears to have pushed him to take a more active role in the crafting of the Civil Aeronautics Act in 1937 and 1938. That legislation embraced the majority of recommendations put forward by the Commission, most importantly vesting federal control over aviation in a new regulatory agency—the Civil Aeronautics Authority. If nothing else, Roosevelt’s support for the creation of the FAC and his continued connection with its actions demonstrates an ongoing interest in federal aviation policy. Though that interest remained a far cry from Hoover’s focused vision, it nonetheless suggests that in the wake of the airmail scandal Roosevelt maintained an active interest in aviation’s importance to American society, commerce, and national defense.

In fact, national defense figured prominently in Roosevelt’s engagement with aviation policy throughout the 1930s. Perhaps reflecting his early commitment to the utilization of aircraft while serving as Assistant Secretary of the Navy, Roosevelt demonstrated an early recognition of aviation’s military value—particularly air power’s value to American military preparedness. Even more than Hoover, Roosevelt focused on the necessity of creating a powerful air service to protect the country in the event of war. While he, like Hoover, saw close connections between military and commercial aviation, Roosevelt focused much more intentionally on building up American air defense as an end in itself. This focus represents an important, and generally unacknowledged, element of his aviation policy.³⁶⁴

Significantly, Roosevelt maintained this focus in the midst of the Depression, a period of small military budgets and a time when isolationists held sway in Congress. In January of 1935 the

³⁶⁴ See: War at Sea and its Weapons: A Description of the Purpose of a Navy and the Use of Its Different Ships—Article I, General Introduction—Scouts and Aircraft, September 27, 1915, Box 40, Franklin D Roosevelt Family, Business and Personal Papers, Franklin Roosevelt Presidential Library, Hyde Park, New York; Bilstein, *Flight in America*, 128-131, and Sherry, *The Rise of American Airpower*, 49, 59-61.

President wrote the Secretary of War to express his concerns about the paucity of military aircraft. Referencing earlier correspondence in which he had pushed for the purchase of additional airframes, Roosevelt made clear his recognition that the current shortage of military planes reflected the “failure of appropriations prior to 1933.” While the President related that “it is unwise, from the point of view of national finances, and, incidentally, from the point of view of public opinion, for me to recommend additional increases over those contained in the budget,” he nonetheless emphasized the need for easy access to new planes. “In regard to aircraft,” he wrote, “it is essential, in my judgment, that more complete plans be laid for increased production in the event of war and also that the private manufacturers be speeded up on actual contract construction.” Roosevelt also demonstrated his familiarity with the idiosyncrasies of airframe development, writing, “I recognize the necessary delay incident to testing of the new types—in other words, the trial planes.” Despite those potential problems, however, the President maintained that “when the production order is given . . . it takes far too long to get deliveries.”³⁶⁵ In simple terms, Roosevelt felt he could not authorize new funds for military aircraft at the moment, but pushed the Secretary of War to do all he could to streamline the procurement process so that, in the event of a conflict, aircraft could be built as quickly and efficiently as possible.

The President’s concerns about military aviation only grew in subsequent years. In December of 1938 he received a memorandum from Dr. Joseph Ames, Chairman of the NACA, which warned of America’s increasing inability to compete with European nations in the air. Ames wrote, “the United States is rapidly falling behind, if it has not already fallen behind, in the development of aircraft.” In Ames’ opinion this fact resulted from “the emphasis that has been placed by European

³⁶⁵ Franklin Roosevelt, Memorandum for The Secretary of War, January 15, 1935, President’s Official File 249, Franklin Roosevelt Presidential Library, Hyde Park, New York.

nations on the importance of aeronautical research and their tremendous increase in research facilities.” The Chairman urged Roosevelt to approve funds for the improvement of American facilities—specifically those at Langley Field, totaling over 13 million dollars.³⁶⁶

Eight months later Roosevelt again focused on the increasing need for military aircraft. Writing to Charles Horner, President of the National Aeronautical Association, the President expressed his opinion that “few objectives are more important at the present time to the commerce of the United States and to the national defense than the continued progress of our aviation.” He referenced the “expenditure of great sums to increase the size and effectiveness of our military and naval air forces” and expressed hope that Horner would help the government educate the American people about aviation’s centrality to American security. “If progress is to continue,” the President argued, it was vital to awaken “the American public to a full realization of the importance of these efforts.”³⁶⁷ Certainly, by the summer of 1939 Roosevelt’s actions reflected an awareness of the deteriorating political situation in Europe, but his continuing focus on aviation’s military value is nonetheless consistent with earlier statements.

Roosevelt’s commitment to American military aviation represents one of the most coherent aspects of his aviation policy. Throughout his time in office he maintained a focus on aviation’s importance to American national defense. Even in the midst of the Depression Roosevelt pushed for more manufacturing capacity and focused on creating a procurement system that would serve the country well in the event of conflict. This focus is even more significant when considering that many contemporaries in the American military remained unconvinced about aviation’s value on the

³⁶⁶ Dr. Joseph Ames, Letter to Franklin Roosevelt, December 30, 1938, President’s Official File 249, Franklin Roosevelt Presidential Library, Hyde Park, New York.

³⁶⁷ Franklin Roosevelt, Letter to Charles Horner, August 30, 1939, President’s Personal File 3843, Franklin Roosevelt Presidential Library, Hyde Park, New York.

battlefield. In many ways, while military aviation took a back seat to airlines and record-setting efforts during the 1930s, Roosevelt's continued recognition of aeronautics' value to national defense speaks to his continuing engagement with aviation policy.

Concomitant with Roosevelt's increasing focus on military aviation during the latter part of the 1930s was his growing interest in securing sweeping new legislation. In the wake of the Federal Aviation Commission's activities and continuing debate in Congress about the best way to support aeronautical development, FDR took a leading role in the creation of the Civil Aeronautics Act.³⁶⁸ In addition to working closely with the bill's eventual sponsors—Pat McCarran (D-Nevada) and Clarence Lea (D-California)—Roosevelt created the Interdepartmental Committee on Civil Aviation Legislation with the goal of drafting a suitable bill. Throughout the legislative process he kept up a steady correspondence with interested parties and used his power to secure the passage of a bill in line with his interests. That bill ultimately created a new regulatory agency for aviation, in the process removing control from the Post Office, ICC, and Commerce Department. In doing so Roosevelt finally made good on Hoover's promises of almost twenty years before. The CAA placed

³⁶⁸ Between the passage of the Black-McKellar Bill in 1934 and the Civil Aeronautics Act in 1938, Senators and Representatives proposed numerous aviation-related statutes. Most of these sought to modify the basic structure of airmail rate payments and route organization without any significant changes to oversight or organization. In large part, this reflected the weaknesses of the 1934 legislation: it did not provide for the ICC to raise airmail rates and split regulatory power over airmail payments between the Post Office and ICC, leading to an administrative nightmare. In addition, the lack of flexibility regarding rates put the majority of airlines in dire financial straits. Most carriers had put in low bids when regaining control of their routes in 1934 under the assumption that rates could be revised at a later date. Unfortunately, the legislation forbade any increase in payments, with obviously detrimental results to their bottom lines. These factors led to a steady stream of laws proposing to streamline federal oversight of aviation and rectify these deficiencies. For more information see: van der Linden, *Airlines and Airmail*, 277-291, and Kommons, *Bonfires to Beacons*, 262-275.

aviation on a sound financial footing, provided for coherent and efficient regulation of rates, routes, navigation, and safety, and provided the administrative structure that would guide commercial aviation for the next forty years.

Beginning in the early months of 1937, Roosevelt began to take a more active interest in securing new aviation legislation. In the wake of the Federal Aviation Commission's report he had expressed lukewarm support for the Commission's recommendations—stating his general support for the report but remaining silent on the value of a new administrative body. As such, his actions had the result of stalling attempts to craft a sweeping new law. Roosevelt's reasons for this course of action remain unclear, but, nonetheless, by 1937 his tone had changed markedly.

In February of that year Clarence Lea, the primary Congressional supporter of what would become the Civil Aeronautics Act, wrote to Roosevelt in the hopes of securing the President's support for new legislation. Lea wrote that he was “trying to work out aviation regulatory legislation,” and “would be glad for any suggestion from you that would help us to express the Administration's viewpoint in this new legislation.” Lea referenced Roosevelt's “messages of January 13, 1935 and June 7, 1935,” and expressed hope that the President would make clear his wishes with regard to a new law.³⁶⁹ Two days later Roosevelt responded emphatically to Lea's query. In a memo to his secretary he wrote, “I want to get Clarence Lea down here right away”³⁷⁰—presumably to discuss new legislation.

By late spring, Congress was beset by proposals for new aviation laws. More than half a dozen new statutes had been put forward, though the two most significant came from Lea and Senator Pat

³⁶⁹ Clarence Lea, Letter to Franklin Roosevelt, February 8, 1937, President's Official File 2955, Franklin Roosevelt Presidential Library, Hyde Park, New York.

³⁷⁰ Franklin Roosevelt, “Memo For Mac,” February 10, 1937, President's Official File 2955, Franklin Roosevelt Presidential Library, Hyde Park, New York.

McCarran.³⁷¹ The situation called for executive leadership and in May Harry Truman wrote Roosevelt to brief the President on the legislative process. Roosevelt responded on May 29, stating that he had “not had an opportunity yet to go into the specific provisions” of the proposed legislation.” The President did, however, make it clear that he was “getting all the information I can on its various aspects.” In the same letter Roosevelt also emphasized his changing opinion regarding the creation of a new regulatory body. “For your information,” he wrote, “my general feeling is that . . . no administrative powers should be transferred to the Interstate Commerce Commission.”^{372 373}

At the same time, other lawmakers increasingly looked to the Administration to provide guidance. On May 26, Sam Rayburn (D-Texas) wrote Roosevelt, enclosing a letter from Lea and “urging the importance and necessity of administration interest in working out an aviation regulatory measure.” Rayburn stated his belief that “this is an important matter that should have early attention with a view of securing worthwhile legislation.”³⁷⁴ Less than a week later Roosevelt signaled his willingness to take an active role in mediating opposing pieces of legislation. Writing to his secretary, he stated his desire to “try to get Lea and Mead³⁷⁵ together and try to reconcile their two

³⁷¹ Kommons, *Bonfires to Beacons*, 357.

³⁷² Franklin Roosevelt, Letter to Harry Truman, May 29, 1937, President’s Official File 2955, Franklin Roosevelt Presidential Library, Hyde Park, New York.

³⁷³ In 1935 Roosevelt had expressed general approval of combining regulatory and administrative function for aviation in the ICC to streamline federal oversight. His opposition to that idea signaled his move to support the creation of an independent agency.

³⁷⁴ Sam Rayburn, Letter to Franklin Roosevelt, May 26, 1937, President’s Official File 2955, Franklin Roosevelt Presidential Library, Hyde Park, New York.

³⁷⁵ A Democratic Senator from New York and author of another proposed piece of aviation legislation.

bills.” Echoing his letter to Truman, he went on to make clear that “the important thing . . . is to prevent administrative duties from being handed over to the Interstate Commerce Commission.”³⁷⁶

By July, Lea was pushing for the passage of a new law before the end of the session. Writing to the President at the end of the month, he emphasized that he desired to see a new bill passed “very much . . . before Congress adjourns.”³⁷⁷ Roosevelt, however, remained unwilling to commit. Replying to Lea on August 5, he wrote, “I believe it would be desirable to postpone this matter until a later time when the various agencies of the Government concerned with this vital subject may have a better opportunity to work out a basic national program for aviation which will serve the needs of the country for some time to come.”³⁷⁸ In large part, Roosevelt’s recalcitrance appears to have emerged from continuing efforts by the Post Office and Commerce Department to block new legislation.³⁷⁹ Additionally, Lea’s bill represented only one of a series of new bills put forward during the session. Though by this time the President clearly supported new legislation, it appears that he remained unconvinced that Lea’s bill contained all of the answers.

In response to the increasingly confused legislative landscape, Roosevelt moved to create an independent committee tasked to author a new bill. In late July he wrote to Harllee Branch suggesting that as “it look [sic] now as if there will be no aviation legislation at this session . . . I suggest that as soon as the session closes, the Interdepartmental Committee on Civil Aviation be expanded to cover the whole aviation field . . . and that the Committee charge itself with the

³⁷⁶ Franklin Roosevelt, White House Memo, May 31, 1937, President’s Official File 2955, Franklin Roosevelt Presidential Library, Hyde Park, New York.

³⁷⁷ Clarence Lea, Letter to Franklin Roosevelt, July 30, 1937, President’s Official File 2955, Franklin Roosevelt Presidential Library, Hyde Park, New York.

³⁷⁸ Franklin Roosevelt, Letter to Clarence Lea, August 5, 1937, President’s Official File 2955, Franklin Roosevelt Presidential Library, Hyde Park, New York.

³⁷⁹ Presumably, both Departments opposed a reduction in their responsibilities vis-à-vis aviation. Nonetheless, it remains unclear exactly why Roosevelt opposed action in the summer of 1937.

preparation of a bill for the next session in January covering the whole subject of aviation, including mail.”³⁸⁰ By August, the President had altered his design and hoped to create an entirely new committee. Replying to a note from Roosevelt, Branch wrote that since no new legislation had been approved before the end of the session, “I agree with your suggestion that a special commission, composed of representatives of the governmental agencies at present concerned with the various phases of aviation, and any others whose knowledge and advice may be helpful, be named to go into this whole question and make recommendations to you.”³⁸¹

By September, Roosevelt had his special commission, the Interdepartmental Committee on Civil Aviation Legislation. Made up of representatives from the War, Navy, Commerce, and Post Office Departments, the President authorized the committee “to study aviation needs as related to future legislation, giving special attention to the bills introduced at the last session of Congress.”³⁸² Roosevelt hoped that the new body would be able to craft a bill adhering to his wishes, but close enough to Lea’s for the legislator to introduce it to Congress under the Representative’s name.

By and large, Roosevelt got his wish. The Interdepartmental Committee completed its work by the beginning of the new year. It recommended a bill embracing the central suggestions put forward by the Federal Aviation Commission—most significantly the creation of a new “Air Commission” as an independent regulatory body with broad responsibilities over civil and commercial aviation. In

³⁸⁰ Franklin Roosevelt, Memorandum for Harlee Branch, July 31, 1937, President’s Official File 2955, Franklin Roosevelt Presidential Library, Hyde Park, New York. The Interdepartmental Committee on Civil Aviation traced its roots to 1935. It represented an effort by representatives from the Post Office, State Department, and Treasury Departments to protect U.S. aeronautical interests overseas.

³⁸¹ Harlee Branch, Letter to Franklin Roosevelt, August 17, 1937, President’s Official File 2955, Franklin Roosevelt Presidential Library, Hyde Park, New York.

³⁸² Cross Reference, Franklin Roosevelt Memo to Mr. McIntyre Re: Secretary of Commerce, September 15, 1937, President’s Official File 2955, Franklin Roosevelt Presidential Library, Hyde Park, New York.

addition, the Committee's bill provided for governmental regulation of airmail and passenger rates, "close and continuous governmental control of financial aid for air lines," federal oversight of airlines' financial structures, provisions for certificates of convenience and necessity for carriers, and governmental support for research and development.³⁸³ As such, the bill represented a significant change from the existing regulatory structure and laid a stable and profitable foundation for the industry.

With the newly minted bill in hand, Roosevelt wasted little time in attempting to introduce the measure to Congress. In early January he submitted a copy of the legislation to Clarence Lea, with the hope that Lea could reconcile the Committee's bill with his own. Lea responded by using the President's bill as a basis from which to draft a new bill. The resulting piece of legislation, H.R. 9738, included the vast majority of the President's Commission's recommendations, and quickly gained the support of both the President and members of the aviation industry.³⁸⁴ Through the spring of 1938 Roosevelt kept a close watch on the bill's progress, largely through his secretary—and son—James Roosevelt. The younger Roosevelt accomplished this through an ongoing correspondence with Clinton Hester, a member of the Interdepartmental Commission and a key player in reconciling the President's bill with Lea's.

This line of communication proved particularly valuable as Lea attempted to reconcile H.R. 9738 with a competing bill introduced to the Senate by Pat McCarran. On February 8 Hester wrote Roosevelt to advise the Secretary that he had been in contact with the Post Office Department and

³⁸³ Comparison of Report of the President's Aviation Committee with H.R. 7273 (submitted by Mr. Lea), undated, President's Official File 2955, Franklin Roosevelt Presidential Library, Hyde Park, New York.

³⁸⁴ The Commission's original bill did differ in a number of particulars from Lea's synthesis—including recommending the creation of a five man Civil Aeronautics Authority rather than Lea's model of the three-man Aeronautics Board—but none of these undermined the core aspects of the legislation.

Senator McCarran attempting to reconcile both parties to the Lea bill.³⁸⁵ In early March James Roosevelt penned a memo for his father warning that although “Senator McCarran this afternoon sent to you a letter enclosing an aviation bill . . . Hester tells me it contains none of the White House recommendations.”³⁸⁶ The same day however, James penned another memo advising the President that “the aviation bill [presumably Lea’s] is moving right along.”³⁸⁷

Later in the month the President moved more forcefully to bring the competing pieces of legislation together. On March 18 Hester wrote to James Rowe, James Roosevelt’s Secretary, relating that, under instructions from the White House, he met with several legislators including Senator McKellar to get them “in line on the civil aviation legislation.”³⁸⁸ The President’s insistence eventually paid off, and by April 15 Hester was able to relate that Lea’s bill had moved out of the Representative’s sub-committee, and he was hopeful that the bill would be reported favorably to the House the following week.³⁸⁹

Though arm-twisting remained to be done, the House passed Lea’s bill on May 18, paving the way for differences between that bill and McCarran’s Senate bill to be resolved in conference. In the end, Roosevelt’s efforts were rewarded with a bill that conformed in all significant details to the one constructed by his Interdepartmental Committee. The House agreed to the conference report on

³⁸⁵ C. M. Hester, Memorandum to James Rowe, Assistant to James Roosevelt, February 8, 1938, Box 4, James Roosevelt Papers, Franklin Roosevelt Presidential Library, Hyde Park, New York.

³⁸⁶ James Roosevelt, Memo for President Roosevelt, March 3, 1938, Box 4, James Roosevelt Papers, Franklin Roosevelt Presidential Library, Hyde Park, New York.

³⁸⁷ Ibid.

³⁸⁸ C. M. Hester, Memorandum to James Rowe, Assistant to James Roosevelt, March 18, 1938, Box 4, James Roosevelt Papers, Franklin Roosevelt Presidential Library, Hyde Park, New York.

³⁸⁹ C. M. Hester, Memorandum to James Rowe, Assistant to James Roosevelt, April 15, 1938, Box 4, James Roosevelt Papers, Franklin Roosevelt Presidential Library, Hyde Park, New York.

Lea's bill on June 11, and the Senate followed suit on June 13. Ten days later, Franklin Roosevelt signed the Civil Aeronautics Act, formally establishing the regulatory foundation that would guide American aviation until deregulation in the 1970s.³⁹⁰

Policymakers, airline executives, and the press readily acknowledged the new law's significance. The June 27 edition of *Newsweek* hailed the Act as a "Magna Charta of the Air," drawing attention to the comprehensive nature of the legislation and remarking that the newly created Civil Aeronautics Authority would certainly be "more air-minded" than its forebears.³⁹¹ *Time* displayed a similar enthusiasm, in July telling its readers that "the new act was far better for all concerned than anything previously devised for air industry control."³⁹² Everyone, it seems, clearly understood the passage of the Civil Aeronautics Act to be a seminal moment in the development of American air commerce.

The passage of the Civil Aeronautics Act represented the culmination of more than twenty years of federal efforts to define the proper relationship between the government and aviation. Though that effort had begun under Herbert Hoover during his tenure as Commerce Secretary, it was Franklin Roosevelt who ultimately brought that dream to fruition. Roosevelt's role in promoting the development of American aviation has often been overlooked in light of his apparent mishandling of the airmail scandal and his at times inconsistent focus on aeronautics. Those facts notwithstanding, Roosevelt must be seen as a figure central to the maturation of American federal aviation policy. His engagement with the airmail scandal, creation of the Federal Aviation Commission, commitment to

³⁹⁰ Kommons, *Bonfire to Beacons*, 376-378.

³⁹¹ "A Magna Charta of the Air: New Control Setup Welcomed By Growing Industry," *Newsweek*, June 27, 1938, 39.

³⁹² "Civil Aeronautics Authority," *Time*, July 18, 1938, 35.

promoting military aeronautics, and crucial role in securing the passage of the Civil Aeronautics Act signaled his ongoing commitment to this issue. Though he did not publicly express a powerfully coherent vision for aviation's future like his predecessor, in the end his accomplishments speak for themselves.

Significantly, despite the marked differences between Hoover and Roosevelt's economic philosophies, the two men demonstrated remarkable unanimity in their efforts vis-à-vis aviation. Both consistently worked to promote commercial growth, emphasizing the need for federal subsidies, focusing on safety, and working to increase federal regulation and oversight. In addition, both undertook these efforts in the midst of the Depression, highlighting their commitment to aeronautical development. Operating in a cultural environment that increasingly embraced aviation's commercial value, Roosevelt was ultimately able to realize Hoover's dream of seeing commercial air transport reach maturity.

Ironically, however, another piece of Roosevelt's aviation policy has received virtually no attention. The President's dedication to public works resulted in the largest federal expenditures on aviation infrastructure in the nation's history, far eclipsing the efforts of the Bureau of Air Commerce. Through agencies like the Civil Works Administration, Public Works Administration and Works Progress Administration the federal government spent millions of dollars to build and improve airports around the country. Those expenditures resulted in the creation of tremendous new infrastructure and in large part created the conditions for the possibility of the postwar commercial aviation boom. Often overlooked, that history represents a central aspect of Roosevelt's commitment to promoting the continued development American aviation.

Chapter 5—Laying Foundations: New Deal Public Works and Aviation Infrastructure

In many ways American aviation came of age during the latter half of the 1930s. In spite of the turmoil created by the airmail scandal of 1934 and the passage of the subsequent Black-McKellar Bill, this period witnessed the beginnings of widespread profitable passenger service with the introduction of the Douglas DC-3 in 1936, the origins of the modern air traffic control system, and, with the passage of the Civil Aeronautics Act in 1938, the creation of a regulatory foundation that would guide commercial aviation into the jet age and beyond.³⁹³ In no small part, commercial aviation's rapid and sustained development reflected Franklin Roosevelt's commitment to promoting American aeronautics. Roosevelt's actions—from his creation of the Federal Aviation Commission to his pivotal role in shaping the Civil Aeronautics Act—furthered contemporary commercial growth and made clear his dedication to advancing the vision established by Herbert Hoover almost 20 years before.

During the same period, however, Roosevelt's sponsorship of New Deal public works had at least as significant an effect on the development of American aeronautics. Roosevelt and key advisors like Harold Ickes and Harry Hopkins utilized New Deal agencies like the Civil Works Administration (CWA), Public Works Administration (PWA), and Works Progress Administration (WPA) to reshape aviation infrastructure around the country, in the process constructing the literal foundations for future commercial growth. These actions signaled a sharp departure from Herbert

³⁹³ The DC-3's technology, speed, and efficiency lowered per-mile costs for airlines and, for the first time, made passenger operations profitable in their own right. See: Roger Bilstein, *Flight in America: From the Wrights to the Astronauts* (Baltimore: Johns Hopkins University Press, 2001), 85-96. The first air traffic control center opened at Newark, New Jersey in December of 1935. See: T.A. Heppenheimer, *Turbulent Skies: The History of Commercial Aviation* (New York: John Wiley and Sons, 1986), 121.

Hoover's commitment to the so-called "dock" concept, and indicated an increased federal willingness to promote aeronautical development.³⁹⁴ In that effort, Roosevelt and his allies oversaw a significant reinterpretation of Hoover's vision regarding the government's proper role vis-à-vis aviation and opened the door to a dramatic extension of federal responsibility.

Between 1933 and 1939 New Deal public works agencies expended tens of millions of dollars on aviation-related projects, in the process building or improving almost 1,000 airfields around the country. Significantly, the disbursement of these monies mandated local buy-in; towns and cities had to submit formal requests for federal funds. As such, New Deal public works spending on aviation infrastructure reflects a unique synergy between American air-mindedness and expanding federal effort to support aeronautical development. Hundreds of towns and cities clamored for access to federal funds to improve their local airports, while New Dealers strove to distribute federal capital to the projects with the greatest potential to advance American aviation. These efforts represent one of the most significant, and certainly one of the most overlooked, elements of Franklin Roosevelt's aviation policy. They mandate a reevaluation of that policy, but also highlight the enduring legacy of New Deal public works spending.

³⁹⁴ The idea that the federal government's responsibility to aid aviation should not extend past the proverbial dock, or airport boundary. When Hoover and William MacCracken began the push for federal aviation regulation they built upon the existing precedent set by federal oversight of shipping. In that industry, the federal government assumed responsibility for constructing and maintaining shipping lanes and harbors, but federal jurisdiction ended at the dock. Transferring that philosophy to aeronautics, the 1926 Civil Aeronautics Act mandated the federal government undertake the construction of airways, navigational aids, and emergency landing fields, but forbade the government from building, owning, or operating non-military airfields. See: Janet R. Daly Bednarek, *America's Airports: Airfield Development, 1918-1947* (College Station: Texas A&M University Press, 2001), 5-6.

Franklin Roosevelt came to embrace public works spending as a part of his ongoing efforts to combat the economic dilemmas brought on by the Great Depression. In an effort to jump-start the moribund economy and create employment opportunities for untold thousands of Americans, Roosevelt and his fellow New Dealers oversaw the creation of a wide-ranging public works infrastructure. Under the auspices of organizations like the PWA, CWA, and WPA, the Roosevelt Administration expended billions of dollars on public buildings, roads, bridges, dams, and airports. According to historian Jason Scott Smith, between 1933 and 1939 the federal government disbursed more than two-thirds of its emergency expenditures on public works programs, an increase of 1,650 percent over the four-year period preceding the Depression.³⁹⁵ Initially designed primarily to put Americans to work, these organizations ultimately changed the American landscape.

A survey of these programs' accomplishments makes clear how significant their legacy has been. During its tenure, the PWA, relying on private contractors and focusing for the most part on large-scale construction projects like the Boulder Dam, spent its funds in 3,068 of the nation's 3,071 counties. Following its creation in 1935, the WPA focused on lighter construction and eschewed private contracts. It was responsible for building 78,000 bridges, improving almost 40,000 public buildings, building 480 airports and improving 470 others.³⁹⁶ The WPA also created a number of subsidiary organizations, such as the Federal Writer's Project and the National Youth Administration. Among other efforts, WPA employees recorded oral histories of surviving former slaves, painted murals around the country, and employed thousands of young people while providing them with job training. These programs created physical reminders of the New Deal's lasting

³⁹⁵ Jason Scott Smith, *Building New Deal Liberalism: The Political Economy of Public Works, 1933-1956* (New York: Cambridge University Press, 2006), 1.

³⁹⁶ *Ibid.*, 2, 208.

influence on American life and, as Smith suggests, “wrought in concrete and steel a tangible representation of [New Deal] political philosophy.”³⁹⁷

For the most part, however, historians have overlooked these agencies’ lasting contributions to the American landscape. According to Smith, liberal historians like Arthur Schlesinger Jr. and William Leuchtenburg “presented public works programs as well-intentioned welfare programs that failed to end unemployment.”³⁹⁸ An overview of these historians’ works supports Smith’s point. Schlesinger offers an analysis of New Deal public works grounded in the assumption that these programs’ primary function was relief. He grants their productive capacities, but focuses on their short-term value to the Depression-era economy, rather than their lasting legacy for America.³⁹⁹ Leuchtenburg suggests that Roosevelt’s actions represented a “bold departure” resulting in “impressive achievement,” but nonetheless dismisses public works’ ultimate value. Leuchtenburg is particularly critical of the WPA, which he argues “never came close to meeting Roosevelt’s goal of giving jobs to all who could work.” In this analysis, public works should be viewed as a failure, having never achieved their intended function.^{400 401}

³⁹⁷ Ibid, 258. For more information on New Deal public works see: Nick Taylor, *American Made: The Enduring Legacy of the WPA: When FDR Put the Nation to Work* (New York: Bantam Books, 2009); William Leuchtenburg, *Franklin D. Roosevelt and the New Deal, 1932-1940* (New York: Harper and Row, 1963), 118-142; Arthur Schlesinger, Jr., *The Age of Roosevelt: The Coming of the New Deal*, (Boston: Houghton Mifflin, 1959), 282-296, and Gerald D. Nash, *The Great Depression and World War II: Organizing America, 1933-1945* (New York: Bedford/St. Martins, 1979), 33-36.

³⁹⁸ Smith, *Building New Deal Liberalism*, 14.

³⁹⁹ Schlesinger, Jr., *The Age of Roosevelt: The Coming of the New Deal*, 282-296.

⁴⁰⁰ Leuchtenburg, *Franklin D. Roosevelt and the New Deal*, 130.

⁴⁰¹ For other historians embracing a broadly similar perspective, see: Frank Freidel, *Franklin Roosevelt: A Rendezvous with Destiny* (Boston: Little, Brown and Company, 1990), and James McGregor Burns, *Roosevelt: the Lion and the Fox* (New York: Harcourt, Brace & World, Inc., 1956).

More recent interpretations give even less credence to public works agencies' value. Most visible among these analyses is the work of Howard Zinn. Zinn argues that public works programs represented an outgrowth of Roosevelt's "opportunistic" political savvy, embodying far more style than substance. In this analysis agencies like the PWA and WPA furthered a public works agenda "called into play only in times of desperation," ultimately serving to codify the "ideological and emotional limits" of the New Deal.⁴⁰² Summarizing this line of analysis, Smith argues that Zinn and his fellow revisionists portray New Deal public works as "underfunded measures that served only to prop up the existing order,"⁴⁰³ rather than honest attempts to improve the country's economic straits and promote infrastructure development.⁴⁰⁴

Collectively, these interpretations fail to grant New Deal public works agencies the credit they deserve. Public works spending, in fact, profoundly advanced American infrastructure. Although New Deal agencies did not realize the short-term goal of employing all out-of-work Americans and ending the Depression, these programs re-made America through the construction of bridges, buildings, roads, dams, airports, and countless other improvements. In Smith's words, these New Deal programs "were an extraordinarily successful method of state-sponsored economic development" that transformed the physical American landscape and redefined government's relationship to the people.⁴⁰⁵

⁴⁰² Howard Zinn, "The Limits of the New Deal," in *The Politics of History* 2d ed. (Urbana: University of Illinois Press, 1990), 133-134.

⁴⁰³ Smith, *Building New Deal Liberalism*, 14-15.

⁴⁰⁴ For further amplification see: Barton J. Bernstein, "The New Deal: The Conservative Achievements of Liberal Reform," in Barton J. Bernstein ed., *Towards a New Past: Dissenting Essays in American History* (New York: Vintage Books, 1967).

⁴⁰⁵ Smith, *Building New Deal Liberalism*, 19.

Nowhere was this truer than America's airports. Through federal funding and public works organizations, the nation's transportation infrastructure witnessed a revolution. When Franklin Roosevelt assumed the Presidency, the majority of American airports were little more than level grass fields with a windsock, a hangar or two, and possibly a lighted beacon. Although the Commerce Department worked steadily to improve navigation and radio aids for pilots and construct emergency landing fields along major airmail routes in the years after 1926, by the early '30s the majority of U.S. airports remained largely unimproved.

In large part, this situation reflected the legacy of Herbert Hoover's commitment to the so-called "dock" concept. The federal government's unwillingness to subsidize airport construction—and indeed its inability after the passage of the 1926 Air Commerce Act—resulted in airport development proceeding haphazardly throughout the 1920s and early 1930s.⁴⁰⁶ Further complicating matters, while the Air Commerce Act clearly defined airfields as a local responsibility, it did little to delineate the nature of that local control. As a result, by the mid 1920s a variety of public and private interests—municipalities, private individuals, and private organizations, among others—controlled various airports around the country.⁴⁰⁷

Beginning after the passage of the Air Commerce Act, several factors pushed airports to embrace increasingly standardized operating procedures. First, the formalization of federal regulation pushed state after state to pass enabling legislation formally approving municipal

⁴⁰⁶ In fact, as historian Janet Daly Bednarek suggests, the Air Commerce Act largely served to formalize existing practices. According to her, in the early 1920s neither the Post Office nor the military had sufficient funds to undertake widespread airfield construction. As a result they turned to local governments. Emphasizing the value of airports to growing towns and cities, both the Post Office and military lobbied urban centers to construct airfields, leading to a steady increase in facilities around the country. See: Bednarek, *America's Airports*, 6.

⁴⁰⁷ *Ibid*, 6.

ownership of airfields.⁴⁰⁸ Second, the newly created Bureau of Aeronautics moved aggressively to establish airways and enforce standardized safety and licensing regulations. This push for standardization in turn highlighted the need for uniform principles of airport operation. The evolution of navigational aids and radio communication further emphasized the need for consistent practices on the ground as well as in the air. Finally, as commercial aviation grew and matured, pilots and airlines increasingly embraced standardized practices in radio communication, scheduling, ticketing, and flight operations.⁴⁰⁹

As airports became increasingly standardized, support for municipal ownership also grew. Supporters of public ownership pointed to the leading role the federal government embraced in licensing, safety regulation, and infrastructure creation, arguing that local control should begin where federal control ended. Further, proponents contended that public ownership of airports represented the only way to ensure that all users would be treated fairly, as interested parties worried that private owners might be tempted to sell airport property if a more profitable use presented itself—something public control would protect against. Finally, in many cases airports proved to be unprofitable enterprises, a significant problem for private ownership but less of a concern for local governments that increasingly came to view airfields as a municipal asset: attracting air service, promoting modernization, and serving as a visible example of a town or city's "air mindedness."⁴¹⁰

⁴⁰⁸ Before 1926, it remained unclear whether local governments had the authority to own airfields. During this period the status of aviation regulation remained murky, and it was not at all clear whether local, state, or federal authorities would have responsibility for airports, airways, and general oversight. As a result, many municipalities were reluctant to undertake airport ownership. Following the passage of the Air Commerce Act, however, the federal government clearly defined its area of responsibility—ending at the “dock”—paving the way for municipalities to own and operate airports. See: *Ibid*, 14-48.

⁴⁰⁹ *Ibid*, 42.

⁴¹⁰ *Ibid*, 42.

As a result, by the mid 1930s the template for America's airports had for the most part been established. Airfields would serve as public utilities, embracing standardized operational principles and promoting both local and national interests. That template, however, predominantly applied to unimproved fields lacking a majority of the services crucial to modern commercial operations.

Airports' lack of improvement became an increasing liability as commercial operations matured in the early 1930s. As passenger services expanded and newer, larger, and faster aircraft came into service, grass fields and a lack of adequate terminal space proved increasingly inadequate to meet the growing needs of airlines and passengers alike. By 1934, with the passage of the Black-McKellar Bill and the introduction of the Douglas DC-2,⁴¹¹ it became increasingly clear that virtually all of America's airports would need significant improvements to handle growing passenger traffic and larger, heavier aircraft. The weight and speed of new aircraft necessitated paved, reinforced runways that would not become waterlogged after heavy rains or throw up clouds of dust during droughts. Airlines needed larger hangars for these planes, and growing passenger traffic mandated larger terminals and more organized ticketing and boarding procedures. Additionally, as radio and navigational aids continued to improve, airports found themselves needing ever-increasing funds to stay abreast of current developments.⁴¹² In short, the rapid development of commercial aviation and the increasing importance of passenger operations mandated that airports rapidly improve their facilities or risk missing out on airline service.

⁴¹¹ The immediate predecessor of the DC-3 and in many ways the first "modern" airliner.

⁴¹² While the Commerce Department took responsibility for funding and constructing airways, including radio and lighted beacons, their responsibilities ended at the airport boundary. Although the Bureau of Air Commerce did provide the beacon light for every airport, the field was responsible for ancillary lighting, ground-based radio facilities, and the manpower and electricity to operate those systems. See: Bednarek, *America's Airports*, 41-48, and Nick Kommons, *Bonfires to Beacons: Federal Civil Aviation Policy Under the Air Commerce Act* (Washington, D.C.: Smithsonian Institution Press, 1989), 132-134.

Unfortunately, the financial conditions created by the Depression meant that at the time when municipal governments had the greatest need to fund aviation-related improvements, they were the least able to do so. The economic downturn hamstrung municipalities unable to fund basic governmental services, to say nothing of paved runways, airport perimeter lighting, and large new terminal buildings. As a result, airport development lagged far behind the rapid progress affecting aircraft and airlines during the same period. By the mid 1930s, hundreds of American towns and cities found their ability to provide commercial service limited by their obsolete airports, and hundreds of others lacked fields suitable for commercial operations.

This context set the stage for the tremendous gains New Deal public works programs brought to American airports. FDR's willingness to abandon the dock concept—and its attendant limitations on federal aid—signaled a new federal willingness to support infrastructure development. Most significantly, the WPA Airways and Airports Division spent hundreds of millions of dollars to build new airfields and improve existing airports around the country. While the strictures imposed by the Air Commerce Act somewhat limited public works agencies' actions—for example, the WPA expended tremendous funds to pay for labor, but refused appropriations for materials—these agencies nonetheless wrought fundamental changes to American airport infrastructure.

Notably, aviation-related public works spending did not finance “make-work” programs. Between 1933 and 1939 public works agencies—led by the WPA's Airways and Airports Division—focused on providing funds to aviation-related projects that would offer the maximum benefit to both local communities and the nation at large. Those projects emerged from collaboration between municipal governments and federal officials. Localities had to voluntarily apply for federal dollars and substantiate the utility of the proposed work. WPA administrators carefully weighed applications, and demonstrated a willingness to reject requests they perceived to be trivial. Public

works funding thus provided a vital resource for communities unable to undertake airport improvements on their own—a crucial resource in the midst of the Depression. Further, the concrete results brought about by WPA activities highlight the gains New Deal public works brought to American aviation during a period of rapid aeronautical development.

New Deal public works' aviation-related activities must be seen as integral to Franklin Roosevelt's aviation policy and a fundamental element of the New Deal's lasting legacy. Public works projects modernized America's airports and created the literal foundation for the postwar boom in commercial aviation. New Deal agencies built and/or improved almost 1,000 U.S. airfields in the years before 1939, providing much-needed jobs to thousands of Americans and funding the creation of infrastructure that fueled commercial aviation's dramatic postwar growth. Through airport expansion, the construction of paved and concrete runways, new terminals, new and larger hangars, paved ramps, the installation of perimeter lighting, runway lighting, spotlights, and the construction of entirely new airports, these agencies fashioned the physical foundations that created the conditions for the possibility of widespread commercial passenger service in large, modern airliners. Largely ignored by scholars of both aviation and the New Deal, these agencies' actions serve as concrete evidence of the President's lasting commitment to promoting American aeronautical development. Their massive expenditures revealed a new federal willingness to take an activist role in airport construction, and the nature of the improvements they created stand as a testament to the value of those public works programs.

From the outset, public works formed a central element of Franklin Roosevelt's New Deal political agenda. Knowing even before his election that his response to the social and economic conditions created by the Depression would define the early years of his Presidency, Roosevelt

moved quickly to enact a dynamic legislative program. The first hundred days of Roosevelt's Presidency have rightly become legend. The rapid passage of bills like the Agricultural Adjustment Act and the National Industrial Recovery Act, along with the creation of institutions like the Securities and Exchange Commission, Federal Deposit Insurance Corporation, and Federal Emergency Relief Agency formed one of the most creative legislative periods in American history. These institutions radically altered the relationship between the American government and people, in the process redefining government's responsibility to its citizens. Along with later New Deal bills like the Social Security Act, these programs formed the core of a legislative revolution that continues to shape Americans' lives to the present day.⁴¹³

Within that larger context, public works formed a central element of Roosevelt's strategy to mitigate the harshest effects of the Depression. According to Jason Scott Smith, these programs "emerged at the intersection of economic development and unemployment," promoting the dual goals of works relief and infrastructure creation.⁴¹⁴ In doing so, they built on a tradition of utilizing government-funded building programs to allay high levels of unemployment. Smith relates that the goal of lowering prohibitive unemployment motivated state-sponsored infrastructure programs as old as the Erie Canal. As a result, by the early 20th century, a "generation of businessmen and politicians . . . came to associate public works spending with economic stabilization and economic growth."

⁴¹³ For more information on New Deal legislation and those programs' lasting legacy see: Paul K. Conkin, *The New Deal* 3d ed. (Wheeling: Harlan Davison, Inc., 1992); Alan Brinkley, *The End of Reform: New Deal Liberalism in Recession and War* (New York: Alfred A. Knopf, 1995); Richard Hofstadter, *The Age of Reform: From Bryan to F.D.R.* (New York: Vintage Books, 1955); Carl Degler, *Out of Our Past: The Forces that Shaped Modern America* (New York: Harper and Row, 1984); Leuchtenburg, *FDR and the New Deal*, and Schlesinger, Jr., *The Age of Roosevelt: The Coming of the New Deal*.

⁴¹⁴ Smith, *Building New Deal Liberalism*, 22.

That generation included figures like Herbert Hoover and William Gibbs MacAdoo, men whose economic philosophies emerged from a broadly progressive tradition.⁴¹⁵

Following America's descent into Depression in the fall of 1929, Hoover found himself in desperate need of methods through which to mitigate the effects of the economic downturn. Initially, he moved to increase funding for public road building, but quickly discovered that the economic situation called for more radical action. Hoover's subsequent creation of the President's Emergency Committee for Unemployment (PECU) and the Reconstruction Finance Corporation (RFC) signaled a new willingness to use federal funds to stimulate employment through public works.⁴¹⁶

Unfortunately for the Republican President, neither of these programs served to lift America out of the Depression. PECU expenditures proved insufficient to offset the massive decline in state and local construction projects, and the RFC's program of offering loans to banks and railroads received widespread criticism for offering money to those who needed it the least. By the eve of the 1932 election, Hoover's public works programs lay in disarray, and the country seemed farther than ever from economic recovery.⁴¹⁷

In spite of their apparent failure, Hoover's actions ultimately proved constructive by providing a template for his successors' public works agenda. Specifically, Hoover's passage of the Emergency Relief and Construction Act (ERCA) in 1932—the legislative foundation for the RFC—created the blueprint for Roosevelt's Public Works Administration. With the powers granted to it by the ERCA, the RFC provided for federal loans to states for work relief, made loans available to states for self-liquidating public works projects like roads and bridges, and approved additional federal funds for the creation of national public works projects like the Boulder Dam. In doing so,

⁴¹⁵ Ibid, 23-26.

⁴¹⁶ Ibid, 26-27.

⁴¹⁷ Ibid, 27-28.

Smith argues that the ERCA “established an important precedent by demonstrating alternative uses of the state’s capacity to influence society,”⁴¹⁸ a capacity Roosevelt would soon expand.⁴¹⁹

Upon assuming the Presidency, Roosevelt immediately moved to enlarge federal public works expenditures. FDR’s efforts began with the passage of the National Industrial Recovery Act (NIRA) in June of 1933. Title II of the NIRA provided for the creation of what ultimately became the PWA with an appropriation of 3.3 billion dollars. Those monies—the equivalent of more than 45 billion dollars today—represented almost six percent of the U.S. gross domestic product that year, and more than 165 percent of the government’s revenues. Roosevelt and his aides—notably Harold Ickes, Secretary of the Interior and subsequent Director of the PWA, and Francis Perkins, Secretary of Labor—hoped that the funds would be sufficient to relieve unemployment while simultaneously improving the nation’s infrastructure.⁴²⁰

In a July 1933 press release, Ickes described the goals of the newly announced public works program. “The intention,” he stated, “is to employ as much labor as possible in order to speed up the return of prosperity.” To that end, he argued that federal employment on public works projects would have benefits for all of society, not merely those receiving a government check.⁴²¹ Ickes

⁴¹⁸ Ibid, 28. For more information on Hoover’s public works agenda see: James Stuart Olsen, *Herbert Hoover and the Reconstruction Finance Corporation* (Ames: Iowa State University Press, 1977).

⁴¹⁹ It should also be noted that Roosevelt had at least some personal experience sponsoring a public works agenda before his election to the Presidency. As governor of New York, Roosevelt had sponsored a state program designed to mitigate the Depression’s effects on his constituents and provide improvements to New York’s infrastructure.

⁴²⁰ Smith, *Building New Deal Liberalism*, 2, 31.

⁴²¹ Significantly, Ickes worked to establish quotas for African Americans on PWA work rolls. The building trades had long been a virtually exclusive bastion of white male workers, and Ickes’ efforts represent one of the first organized attempts by the federal government to actively promote equality in a racially exclusive labor market. See: Ibid, 38.

suggested that “by employing as many people as possible at a living wage we will give buying power to the persons so employed.” This, in turn, would stimulate new buying power as local businesses profited from increased commerce. “Then, factories will begin to turn out more goods and the stores will sell more goods. Thus more and more people will be employed, until . . . we have an ascending economic spiral.”⁴²²

For Ickes, the goal of creating economic growth mandated that the PWA only expend funds on projects with a demonstrable value beyond the immediate employment they might offer. In his words, the PWA should only fund “socially desirable” projects. That social value, he contended, necessitated that any public works project “must contribute something of value to the community and not merely be a makeshift to supply work.”⁴²³ In a speech to the American Conference of Mayors in September 1933, Ickes expanded on that theme, suggesting that PWA programs offered “the greatest opportunity for municipal improvements in the history of the country.”⁴²⁴ As such, the Interior Secretary clearly delineated the dual goals of New Deal public works. Though Ickes later received criticism for his parsimonious disposition of PWA funds, his early articulation of Roosevelt’s agenda clearly established the ideological foundation for these New Deal programs.⁴²⁵

⁴²² Department of the Interior Memorandum to the Press: Interview with Harold L. Ickes, Secretary of the Interior, by Walter Trumbull, July 3, 1933, Box 1, RG 135, NARA.

⁴²³ Ibid.

⁴²⁴ Harold L. Ickes, Secretary of the Interior, Speech to the Conference of Mayors at A Century of Progress Exposition in Chicago, Illinois, September 23, 1933, Box 1, RG 135, NARA.

⁴²⁵ Unfortunately, the vast majority of PWA records were destroyed before being transferred to the National Archives and Records Administration. As a result, no specific project files remain from the period before 1940. As other records indicate—including references in Federal Aviation Commission testimony, passing statements in the records of the PWA’s Investigations Division, and references in WPA project files—the PWA did fund a number of aviation-related projects. The exact number, specific expenditures, and nature of those allocations, however, remain unclear. Nonetheless, subsequent public works agencies’ aviation-related allocations suggest the influence of Ickes’ rationale.

Soon, New Deal public works activities expanded far beyond the initial dictates of the NIRA. The preliminary PWA appropriation formed the beginning of what ultimately became a series of massive New Deal expenditures on public works. In 1935 Roosevelt created the WPA with an initial appropriation of 4.88 billion dollars, and both the PWA and WPA received additional funds during their respective tenures. Roosevelt also pushed for the creation of the CWA and the Civilian Conservation Corps (CCC), though these programs proved far less costly than either the PWA or WPA.⁴²⁶ Collectively, these programs signaled the ongoing centrality of public works to Roosevelt's New Deal. These agencies disbursed billions of taxpayer dollars to stimulate employment and improve the American landscape. Projects like the Hoover Dam, the Appalachian Trail, roads, bridges, airports, public buildings, and countless other improvements came to fruition under the auspices of New Deal public works. Admittedly, these programs did not pull the United States out of the Depression. They did, however, fundamentally change the American landscape and served to redefine the relationship between the American government and the people. In fact, Smith goes so far as to argue that the New Deal and its public works agenda "saved capitalism."⁴²⁷ Regardless of that fact, however, public works must be seen as an integral element of Roosevelt's New Deal agenda—not merely as an attempt to promote employment, but as an effort to promote the creation of valuable infrastructure.

Nowhere were those dual goals more apparent than in New Deal efforts to construct airports and other aviation-related infrastructure. New Deal public works offered a unique remedy for the

⁴²⁶ The CWA functioned as a short-term relief program in the winter of 1933-34, while the CCC put unemployed men ages 18-24 to work on projects related to conservation and the protection of natural resources between 1933 and 1942.

⁴²⁷ Smith, *Building New Deal Liberalism*, 259.

prevailing conditions aviation faced in the mid 1930s. Largely through the efforts of the WPA's Airways and Airports Division—which funded improvement programs for virtually every American airport—public works expenditures revolutionized the American air transport network, laying the groundwork for the modern air commerce system and creating the conditions for the possibility of dynamic growth during the postwar period. These efforts stand as a preeminent example of Roosevelt's efforts to support the growth of American commercial aviation. Almost universally overlooked by historians, Roosevelt's support for public works formed a vital pillar of his aviation policy and highlighted his willingness to embrace a dynamic model of economic development.

Even before the creation of the WPA in 1935, members of the Roosevelt Administration identified airports as sites that would benefit from public works expenditures. As early as 1933 the CWA embarked on an ambitious program to improve airports around the country. In an October 1934 memo, Harry Hopkins outlined the goals of that effort.⁴²⁸ Reporting that the CWA had launched the “airport program” in the winter of 1933, Hopkins stated that the public works agency undertook “improvement and construction on a very elaborate and extensive scale.” The program invited communities to “pledge themselves generously in one way or another” to acquire land for the creation of new or improvement of existing facilities. More than 2,000 did so, a figure almost equal to the number of the country's recognized airports at the start of the program.⁴²⁹ Significantly, CWA

⁴²⁸ At the time Hopkins was serving as the head of the Federal Emergency Relief Agency (FERA). In November of 1933 Roosevelt authorized him to establish the machinery of the CWA, a short-lived works program spanning the winter of 1933-34. Roosevelt later appointed Hopkins to head the WPA, a post he held until he became Secretary of Commerce in December of 1938.

⁴²⁹ Memorandum, October 29, 1934, Airway and Airport Projects Folder, Harry L. Hopkins Papers, Franklin Roosevelt Presidential Library, Hyde Park, New York. Hopkins reported that at the start of the program there were 2028 airports in existence in the United States. That number referred to all types of fields, including government, army, navy, municipal, emergency, and private.

efforts mandated local buy-in, basing appropriations on communities' willingness and ability to contribute to the process. The immediate positive response suggests widespread public support for aeronautical development, and highlights the collaborative nature of New Deal public-works policy with regard to aviation. In fact, the CWA program appears to have created the template that guided subsequent WPA activities.

In that effort, the CWA worked closely with the Commerce Department to ascertain the most beneficial way to disburse federal funds. According to Hopkins, "it was decided to make a study in cooperation with the Aeronautical Branch of Commerce . . . to determine a plan likely to give the best results from an aviation standpoint considering the needs and requirements of our national defense branches, the probable extension of commercial air transport, and the necessity for emergency facilities." The result of that study was an airport building program focused on the creation of safer landing fields. The CWA asked participating communities to confine expenditures to projects that "would result in the preparation of the best possible landing fields" designed to "directly add to the safety of commercial air transport."⁴³⁰

Though it lasted less than six months, the CWA program was an apparent success. The October memo documented that states and localities demonstrated "wholehearted support" for the plan. By the conclusion of the program, CWA funds had funded 2,000 projects, half of which had achieved completion.⁴³¹ In Hopkins' opinion the CWA effort "resulted in the greatest contribution to the

⁴³⁰ Ibid.

⁴³¹ In fact, Commerce Department officials hoped to facilitate the construction of an airport in every American population center with more than 5,000 residents—a monumental undertaking. This push reflected the ongoing federal effort to aggressively pursue infrastructure creation, and speaks volumes about the government willingness to explore all possible options through which to realize that goal.

safety and convenience of air transport during the history of its development.”⁴³² Though perhaps a bit of an overstatement, Hopkins’ enthusiasm demonstrates the Roosevelt administration’s early commitment to utilizing public works appropriations to fund airport improvement. Hopkins’ early engagement with aviation projects prefaced the actions of the WPA’s Airways and Airports Division. Even more significantly, the CWA’s cooperation with the Aeronautics Branch displayed a genuine desire to promote projects with maximum value for American aeronautics. Although it distributed less than two million dollars, the CWA effort set the stage for later, larger public works aviation projects and created a precedent for funding projects with definitive value for American aviation.

The influence of the short-lived CWA program soon spread far beyond Hopkins’ office. By the spring of 1935 reference to that program appeared in testimony before Roosevelt’s Federal Aviation Commission. John Geisse, head of the Bureau of Air Commerce’s Development Section, highlighted the program’s value in his prepared statement. Commenting that public works expenditures on airports “are in the interests of every man, woman and child in the United States,”⁴³³ he argued that public works projects had value both “as a stimulus to recovery and as an aid to national defense.”⁴³⁴

Geisse’s testimony centered on the material benefit public works’ expenditures could bring to communities, the nation, and the aviation industry. Geisse referred to the CWA program as a

⁴³² Memorandum, October 29, 1934, Airway and Airport Projects Folder, Harry L. Hopkins Papers, Franklin Roosevelt Presidential Library, Hyde Park, New York.

⁴³³ This statement highlights the centrality of aviation to the American consciousness during the period, but also suggests the limits of that vision. In the 1930s, many southern airports segregated eating facilities, restrooms, and waiting areas. Although airlines did not segregate aircraft—largely a result of the extremely small number of African Americans flying and the difficulties in accounting for variances in state and local laws on such a rapid mode of transport—airport segregation did signal that African Americans could not share equally in aviation’s rapid progress.

⁴³⁴ John Geisse, Testimony Before the Federal Aviation Commission, October 18, 1934, Box 15, RG 197, NARA.

template, arguing “what can be accomplished by . . . Federal assistance was most clearly demonstrated at the start of our Civil Works Administration Airport Project.” Geisse explained that the CWA program operated as “a semi-Federal project in which additional funds over [localities’] regular allotment were to be allocated to those communities desiring airport facilities and willing to acquire sites.” Like Hopkins, Geisse found the response from localities around the country to be immediate and enthusiastic. In fact, he told the Commission that his office “was absolutely swamped with requests for assistance.” In Geisse’s opinion, had the program continued it would have resulted in every American community of substance having its own airport.⁴³⁵

Unfortunately, the CWA program ended before that goal could be realized. As a result, Geisse focused on the pressing need for additional airfield construction. He reported that over 1,000 American cities with populations of 5,000 or more lacked landing facilities, in addition to more than 15,000 communities with populations under 5,000. Even more worrying, he reported that the majority of airports in America’s larger cities were “most inaccessible.” For Geisse, public works represented the best way to address the urgent need for improved aviation infrastructure. Federal expenditures would “accomplish much in eliminating this unfortunate condition,” he testified, and “permit the airplane to attain the utility of which it is capable.”⁴³⁶

Geisse’s testimony certainly reflected the influence of his position as an employee of the Bureau of Aeronautics, but his plea for public works resounded beyond his departmental agenda. Geisse’s identification of the CWA program’s value, and his focus on localities’ enthusiastic embrace of that program suggests widespread support for aviation-related public works projects. Further, Geisse’s statements convey localities’ inability to fund such improvements themselves.

⁴³⁵ Ibid.

⁴³⁶ Ibid.

Economic conditions conspired to limit air-minded communities' ability to improve facilities, a situation Geisse argued hurt both the localities themselves and the nation at large.

Indeed, Geisse argued that federal expenditures on aviation-related projects were uniquely capable of benefiting municipalities, the aviation industry, and the nation.⁴³⁷ While he argued that public works projects would have immediate material benefit for national defense, he also suggested that funding aviation projects had great potential to stimulate economic development. Geisse began this line of reasoning by explaining that “the amount of Federal expenditure which would be justified in fostering aviation . . . must be reached by consideration of the amount of employment which can be provided per dollar of Federal expenditures as compared to that which can be accomplished by other means.” Aviation-related spending, he claimed, had the potential to stimulate employment far more than spending on highways, public parks, and public buildings. Geisse reported that “airplane manufacturers . . . have been able to make sales in the vicinity of the C.W.A. airport projects that they could not possibly have made without this activity.” That “induced expenditure” for new aircraft “provides a continuous market for labor that is not provided in the other types of projects mentioned and which is additional to that occasioned directly and indirectly by the Federal expenditure.” Therefore, public works spending on aviation infrastructure had the

⁴³⁷ Again, this statement also suggests the limits of those benefits. In the years before World War II women were not allowed to serve as pilots or copilots on commercial aircraft. Instead, they found a role as cabin attendants. Though this role did offer much-needed employment and placed women in a position of responsibility—early flight attendants were almost all nurses, and had much greater responsibility than their modern peers—their exclusion from piloting commercial aircraft sharply delineated the extent of their share of benefits. Additionally, public works agencies offered their most direct assistance to occupations that traditionally excluded both African Americans and women: construction and other building-related trades. Despite Ickes and Hopkins' attempts to establish quotas for African American labor on federal-funded work relief projects, these projects ultimately reinforced the gendered and racial boundaries of the welfare state. See: Smith, *Building New Deal Liberalism*, 15.

potential to sustain an entire industry, as well as promoting the continued development of the nation at large.⁴³⁸

Indeed, for Geisse, promoting aeronautical development represented a foundational investment in America's future. As such, he argued that "Federal expenditures on aviation are not at all intended to provide greater pleasure or profit to those directly concerned in the purchase and sale of aircraft." Instead, they represented an avenue through which the government could promote national development. Reminding the Commission that their mission was to concern themselves "with the future of aviation, not the present," Geisse called upon Commission members to "consider the utility of the airplane not as it is today but rather what it may reasonably expect to become five or ten years hence." In his estimation, "the provision of landing facilities at close intervals and convenient to the places you or I may care to visit together with the development of safer and more economical airplanes will have a profound effect on our inclination to purchase an airplane." Geisse thus envisioned a truly air-minded nation, a nation with a dense network of commercial air transport, and a nation in which a significant minority of citizens actually owned a plane.⁴³⁹

Geisse's testimony demonstrates that he understood aviation-related public works to have ramifications far beyond airport boundaries. While highlighting these projects' immediate material benefits, he focused just as strongly on how the continuation of a public works agenda had the potential to revolutionize American life. Geisse was certainly inclined to emphasize aviation's current and future value, but his focus on public works remains significant. Like Hopkins, Geisse saw public works not merely in terms of immediate employment, but in terms of what that employment could create. Indeed, if anything, Geisse's statements seem overly focused on the

⁴³⁸ Ibid, 15.

⁴³⁹ Ibid, 15.

revolutionary potential public works had to create a truly air-minded nation. Nonetheless, Geisse's identification of the CWA program's immediate material value and the potential of similar projects to revolutionize American aviation stands as a testament to the influence of emerging public works ideology—specifically, public works' central place in plans for aeronautical development.

Those plans accelerated dramatically following Roosevelt's creation of the WPA in the spring of 1935. Under the direction of Harry Hopkins, Roosevelt tasked the WPA with providing direct employment—largely to unskilled laborers—on building projects around the country. Unlike the PWA, which operated through government contracts with private contractors, the WPA focused on maximizing the number of workers on government payrolls. That goal has resulted in scholars criticizing Hopkins and other WPA administrators for promoting make-work projects and valuing employment over production.⁴⁴⁰ In this analysis, the WPA's inability to pull the United States out of its depressive cycle highlights the agency's ultimate failure. As Jason Scott Smith points out, however, the WPA did in fact build things—often working on construction projects with lasting value for the country.

This was certainly the case regarding WPA efforts to construct aviation-related infrastructure. In fact, from the outset, Hopkins and other WPA administrators demonstrated a clear focus on funding projects with the highest potential to promote the rational growth of American aviation.

⁴⁴⁰ Exemplifying this interpretation is William Leuchtenburg's analysis. He describes Harry Hopkins' central goal as "putting to work as many men as he could who were currently on relief." Roosevelt's decision to allocate more authority—and more federal dollars—to Hopkins' WPA than to the more parsimonious Ickes' PWA, in Leuchtenburg's words, represented a "regrettable" decision. That decision also aroused criticism from contemporary figures—Ickes first among them. According to Leuchtenburg the PWA administrator viewed Hopkins as an "irresponsible spender." See: Leuchtenburg, *Franklin D. Roosevelt and the New Deal*, 125.

Working closely with local governments and private interest groups, the WPA's Airways and Airports Division demonstrated a keen interest in aeronautical development, and within the confines of its agency's mission strove to maximize the value that its appropriations brought to construction projects around the country.⁴⁴¹

From its inception, the WPA Airways and Airports Division's work reflected the influence of the CWA airport-building program preceding it. Significantly, WPA administrators looked upon their efforts as an attempt to realize the unfulfilled goals that the CWA and Bureau of Air Commerce had identified two years before. In September of 1935, Airways and Airports Division Technical Supervisor L. L. Odell reported that as of the 14th of the month, the WPA had approved work on 459 projects around the country, encompassing a total federal appropriation of \$57,500,000.⁴⁴² That figure dwarfed the total CWA expenditures for airport construction, and begins to give a sense of the magnitude of the scale upon which WPA efforts took place.

Odell, however, provided those figures in order to demonstrate how far short WPA appropriations fell of the goals set by the Bureau of Air Commerce. Odell related that the joint CWA/Commerce program had identified a total of 1,229 first priority work projects, necessitating the allocation of \$80,400,000 in federal funds. The Supervisor, however, estimated that Commerce had undervalued the cost of many of those projects. In Odell's opinion, the completion of all 1,229 projects would require the disbursement of an additional \$76,500,000, for a total of \$113,000,000. Despite the enormity of this sum, Odell "respectfully suggested that WPA funds in the total amount

⁴⁴¹ Notably, the WPA's inability to provide funds for materials and inability to provide labor for projects on private property.

⁴⁴² L. L. Odell, Works Progress Administration Division of Airways and Airports Memorandum, September 24, 1935, Box 5, RG 237, NARA.

(including projects already approved) . . . be earmarked for allocation to Airway and Airport work” in order to “meet the requirements of the Bureau of Air Commerce program.”⁴⁴³

While the WPA ultimately fell short in its effort to realize the goals established by the Commerce program,⁴⁴⁴ Odell’s focus on funding meaningful projects certainly challenges the WPA’s make-work stereotype. As with the CWA efforts, the Airways and Airports Division took its lead from the Bureau of Air Commerce, the government agency most closely associated with aeronautics. That relationship suggests that the WPA formed a part of a larger government effort to promote the continued development of American flying. Obviously, this took place within the strictures of WPA efforts to promote employment, but it remains significant that administrators identified goals related to infrastructure development, not merely work rolls.

Additionally, both the CWA and WPA airport-building programs highlight the Roosevelt Administration’s abandonment of the “dock” concept of government responsibility for airways. Utilizing public works funds for airport construction flew in the face of Hoover and MacCracken’s theory that government responsibility should end at the airport’s boundary. Although this new willingness to fund federal aviation-related construction projects certainly had its roots in the pressing economic needs of the 1930s, it remains significant that Roosevelt and Hopkins did not hesitate to create an Airways and Airports Division within the WPA and disburse funds for airport construction. In fact, this move may have precipitated a legislative change. The Civil Aeronautics Act removed proscriptions on federal funding for airports, allowing the government to take the lead

⁴⁴³ Ibid.

⁴⁴⁴ WPA administrators quickly realized that the limitations imposed on the WPA precluded funding for the entirety of the proposed projects. Many emerged from localities with little or no need for additional employment, and others necessitated materials, rather than labor, for completion.

in funding the creation of a national air traffic control system and encouraging an ongoing federal push for airfield improvement.⁴⁴⁵

By the spring of 1936, the WPA had backed away from its hopes of fully realizing the goals established by the Bureau of Air Commerce program. Nonetheless, the public works agency maintained its commitment to funding aviation-related projects with demonstrable aeronautical value. A March press release stated that as of February 15, the agency had released funds for 410 airport and airway projects. Those projects, 325 of which were already under construction, would employ 50,000 men, and involved funds totaling \$21,090,965.⁴⁴⁶ The same document also provided

⁴⁴⁵ In fact, the Civil Aeronautics Act explicitly mandated the expansion of federal engagement with airfield construction. The legislation included a proviso authorizing an immediate federal survey of the nation's airports and established a federal airport-aid program to support airfield development with an initial appropriation of 12 million dollars. See: Kommons, *Bonfires to Beacons*, 372-373, and Bednarek, *America's Airports*, 98-99.

⁴⁴⁶ The discrepancy between these numbers and the ones from L. L. Odell listed previously reflects the sometimes-convoluted nature of the WPA appropriations process. States and localities applied to the WPA for funds for use on specific projects. The President had to approve all requests, which then had to be cleared by the WPA Washington, D.C. office. At that point, projects were "approved," but funds could not yet be released. Following the approval process, the Washington office referred the approved applications to WPA state administrators, who then released funds for construction. State administrators made their determinations on the basis of localities and states' needs, as well as the potential for projects to have immediate effects on employment and infrastructure. Thus, a project could be "approved," but have the release of its funds pending for some time. Further complicating matters, these WPA figures only reflect federal allocations, not state and local contributions. WPA policy mandated that states and localities provide matching funds for any proposed work. That fact further highlights the necessity of local buy-in for any WPA funded construction. See: Smith, *Building New Deal Liberalism*, 85-88, 101-122; L. L. Odell, Chief Technical Officer, Letter to Frank Y. McLaughlin, California State Works Progress Administrator, November 8, 1935, Box 4, RG 69, NARA; Works Progress Administration Engineering Division Review of San Diego Airport Improvement Proposal, December 22, 1937, Box 5, RG 69, NARA; WPA Engineering Division, Memo to the Project Control Division, November 29, 1937, Box 13, RG 69, NARA; W. M. Aldous, Letter to John S. Wynne, December 18, 1936, Box 23, RG 69, NARA, and Newark, N.J. Works Progress Administration Project Proposal, August 6, 1936, Box 27, RG 69, NARA.

an update on the number of Washington-approved aviation-related projects. To date, Roosevelt had signed off on more than 1,400, encompassing total allocations of \$110,172,828.⁴⁴⁷

According to Hopkins, those approvals reflected a concerted effort by WPA administrators to fund projects with a maximum value for both employment and infrastructure. The Director explained, “the WPA airways and airport program illustrates the co-ordinated effort required in the creation of works of national value through employment of labor formerly on relief.” WPA staff, he related, worked closely with other federal agencies, including the Departments of Treasury, War, Navy, Commerce, and the Post Office to maximize the value of WPA public works. The Airways and Airport Division, moreover, continued to work in concert with the Bureau of Air Commerce to ensure the utility of aeronautical projects. “Arrangement has been made with the Bureau of Air Commerce,” Hopkins emphasized, “for the inspection of all WPA airway and airport projects as to their aeronautical fitness.”⁴⁴⁸ As he had since 1933, Hopkins worked diligently to support improvements to aviation infrastructure while simultaneously fulfilling his obligation to put Americans to work. Though the strictures imposed by the WPA’s enabling legislation made it impossible to strictly adhere to the Bureau of Air Commerce’s ultimate goals, WPA administrators maintained their focus on aeronautical progress.

As state administrators released funds on more and more projects, both WPA employees and the American public began to appreciate the concrete gains the Airways and Airports Division brought to the American landscape. In the fall of 1937, the WPA’s Washington office sent a party of observers on a three-week airport inspection trip around the country, traveling more than 11,000

⁴⁴⁷ Works Progress Administration Press Release, March 29, 1936, Airway and Airport Projects Folder, Harry L. Hopkins Papers, Franklin Roosevelt Presidential Library, Hyde Park, New York.

⁴⁴⁸ Ibid.

miles and visiting 30 states. Designed to evaluate the work WPA activities had accomplished to date, members' interactions with local government officials and the general public also revealed Americans' opinions of that work. A. B. McMullen, Chief of the WPA Airport Section Safety and Planning Division, reported that he "found the highest praise for the work the WPA has done, particularly on airports."⁴⁴⁹ That praise, however, did not necessarily reflect a comprehensive knowledge of WPA activities. W. Sumpter Smith, the WPA's Principal Aeronautical Engineer, wrote he "was surprised at the fact . . . that the great majority of the local businessmen with which the personnel of our party came into contact had practically no idea of the actual workings of the WPA, how they functioned, or just what they were actually accomplishing." Despite that ignorance, Smith indicated that "these businessmen were amazed to know the extent of actual worthwhile permanent physical facilities" being constructed with WPA funds.⁴⁵⁰

Public appreciation for these WPA projects seems to have sprung at least in part from their relationship to aeronautics. McMullen wrote that "the most outstanding and interesting incident in connection with this trip was the keen interest in aviation demonstrated by the public officials, business men [sic] and influential citizens wherever we went." Significantly, he also found that Americans' interest in aviation encompassed far more than a desire to improve their individual communities. McMullen enthusiastically commented on Americans' almost universal "desire to see not only a satisfactory airport in their own community but a nationwide system of airports adequate to permit the continual growth and safe operation of air transportation in the United States."

⁴⁴⁹ A. B. McMullen, Letter to Corrington Gill, Assistant Administrator, Works Progress Administration, November 23, 1937, Box 6, RG 237, NARA.

⁴⁵⁰ W. Sumpter Smith, Memorandum for Corrington Gill, Assistant Administrator, Works Progress Administration, November 25, 1937, Box 5, RG 237, NARA.

This focus on development extended beyond infrastructure creation. Relating his discovery of “another idea that seemed to be prevalent in all sections of the country,” McMullen observed that citizens highlighted the “necessity for a well planned long-term program of airport and airway development with the Federal Government.”⁴⁵¹ Collectively, McMullen’s comments highlight aviation’s continued prevalence for a majority of Americans. Local enthusiasm for the WPA program—evidenced by the number of local requests, towns and cities’ willingness to spend their own dollars to match WPA allocations, and the enthusiastic receptions these administrators enjoyed—serves as a telling example of contemporary American “air-mindedness.” Simultaneously, these actions suggest that both local governments and the American public shared federal hopes for continued aeronautical development.

Americans’ continued passion for aviation is not surprising, but it is significant. By the late 1930s the pioneering days of flying were, for the most part, in the past. Lindbergh’s trans-Atlantic flight had occurred ten years before, but the American public maintained a keen interest in aeronautical development. McMullen’s observations confirm that the “winged gospel” was still alive and well in many parts of the country, in spite of eight years of economic misfortune. That fact certainly aided the WPA Airways and Airports Division’s popularity, but McMullen’s report also points to a more focused interest in the continued development of American aeronautics. Americans’ identification of the need for a comprehensive and coherent air transport network and a focused federal plan for continued development suggest that many citizens saw aviation’s sustained advancement as a corollary to America’s own fortunes. Though public works represented only one part of a much larger edifice, Americans could point with pride to the—literally—concrete gains the

⁴⁵¹ A. B. McMullen, Letter to Corrington Gill, Assistant Administrator, Works Progress Administration, November 23, 1937, Box 6, RG 237, NARA.

WPA wrought. In the context of the Depression, these gains offered hope for the future far beyond the immediate employment created by these projects.

WPA administrators shared both the pride in public works programs' accomplishments and the recognition of the continued need for federal guidance and funding. McMullen wrote that, as a result of WPA actions, "airport construction has advanced at least 15 years." In his judgment, "present day transport planes could not be economically operated had it not been for the new airports constructed and the improvements and enlargements made on existing airports by . . . Work Relief agencies." Progress to date, however, merely emphasized the need for additional federal action. "Even considering the progress that has been made," McMullen reported, "the airports of the United States are still far behind the development of the airplane and the air transport requirements of [the present day]."⁴⁵² New aircraft like the DC-3 and the continued development of radio communications and air traffic control accelerated the rate of change and highlighted the need for even faster infrastructure construction to keep pace.

For both McMullen and Smith, that context dictated the need for a focused development plan for U.S. airports. In his report, Smith emphasized the "absolute necessity" of "a national plan for the logical development of a Federal Airways System." Such a plan, Smith argued, demanded a construction program "for carrying out the orderly development of . . . ground facilities" and uniform standards and layouts for "the proper development of individual airports and other aviation ground facilities."⁴⁵³ He further explained that the program would require "constructing or improving 1,000 additional airports" beyond those already improved with WPA funds, an

⁴⁵² Ibid.

⁴⁵³ Smith explained that these standards included at least two paved runways with associated drainage, lighting, and auxiliary facilities, but did not include hangars or terminal buildings.

accomplishment he considered the “minimum required to constitute an adequate national airways system necessary to accommodate flying equipment already in use or actually under construction.” Smith estimated that a plan of that magnitude would cost more than 300 million dollars.⁴⁵⁴

McMullen echoed the need for a further program for infrastructure development, though his articulation did not include a plan as specific as Smith’s. In his letter, McMullen emphasized the need to “make a modern airport usable 24 hours a day, 12 months a year.” That necessity, coupled with the rapid enlargement of transport aircraft, made paving, lighting, and other associated infrastructure “absolutely necessary” for the successful operation of flying fields. McMullen estimated the cost of his program at 285 million dollars—strikingly close to Smith’s valuation.⁴⁵⁵

Unfortunately, these types of development programs lay outside the purview of the WPA, a fact both men recognized. McMullen lamented the fact that “the present WPA investment being made in airports could be of a more permanent and useful nature if more funds were available for materials and equipment.” The Safety and Planning section chief, however, had no illusions about the WPA’s ability to meet those needs. Writing, “from the nature of its purpose the WPA may always be limited as to the funds it can expend for materials and equipment,” McMullen recommended that “an annual appropriation for airport construction be made available to and administered by some Federal agency.”⁴⁵⁶

Smith expressed an even clearer understanding of the limitations embodied by a work relief program. “It is obvious,” he wrote, “that a relief program should be concerned primarily with work only at those locations where needy unemployed persons are eligible for relief . . . funds available

⁴⁵⁴ W. Sumpter Smith, Memorandum for Corrington Gill, Assistant Administrator, Works Progress Administration, November 25, 1937, Box 5, RG 237, NARA.

⁴⁵⁵ A. B. McMullen, Letter to Corrington Gill, Assistant Administrator, Works Progress Administration, November 23, 1937, Box 6, RG 237, NARA.

⁴⁵⁶ Ibid.

for non-labor purposes will very likely be inadequate for any high-type construction.” From these facts, Smith drew the obvious conclusion, recording, “I do not believe it practicable for a relief organization, such as the WPA, to carry out a nation-wide airport program if preference is to be given to the necessity for aviation facilities rather than to the requirement for relief.” Like McMullen, he suggested the need for a federal airport program administered by “some federal agency,” within which the WPA would operate as a source of labor where conditions permitted.⁴⁵⁷

These comments demonstrate WPA administrators’ nuanced understanding of their agency’s role, and the limitations imposed by that function. Far from overseeing a make-work program, both Smith and McMullen seemed frustrated by the WPA’s inability to bring plans for comprehensive aviation infrastructure improvements to fruition. At the same time, however, both men clearly recognized that the WPA’s primary responsibility was to provide work relief, not promote a national airways program. Balancing these two goals, Smith and McMullen highlighted the progress WPA funds had brought about to date and the potential for further gains while emphasizing the need for a different federal agency to take the lead in promoting a national program of airway development.

Significantly, both men understood WPA airways construction to be part of a larger effort to develop American aeronautics. Though work relief remained the WPA’s central project, Airways and Airports Division administrators placed WPA activities within the larger context of a national airways program. In their view, the labor provided by public works projects offered an avenue through which to accomplish larger goals, not merely an end in and of itself. Their depictions of local leaders’ enthusiasm only further the view that, at least with regard to the WPA’s aviation-

⁴⁵⁷ W. Sumpter Smith, Memorandum for Corrington Gill, Assistant Administrator, Works Progress Administration, November 25, 1937, Box 5, RG 237, NARA.

related work, all concerned parties embraced public works not only for their contributions to local employment, but also as a way to promote aeronautical progress.

Ultimately, both Smith and McMullen realized that the WPA's airway and airport program could not fulfill all of America's aviation infrastructure needs. Nonetheless, both men highlighted the dramatic success WPA actions encompassed. At least with regard to aviation, it appears that public works had the potential to fulfill the dual goals of putting Americans to work while offering an avenue for valuable infrastructure improvements. Reflecting on the lengthy inspection trip, McMullen summarized Airways and Airports Division activities to date. "In general," he wrote, "the airport program conducted by the WPA is popular throughout the United States and the permanent improvements made on airports, which are the foundation of all aviation, have done a great deal to counteract or silence critics of the Works Progress."⁴⁵⁸ Though not without difficulties, from McMullen's perspective, at least, WPA actions were a rousing success.

An examination of WPA activities at the local level reveals a similar pattern. Localities enthusiastically applied for funds, highlighting their commitment to aeronautical progress and demonstrating their willingness to support that commitment with local dollars. WPA regional administrators worked with local authorities, public figures, and interest groups to promote employment while attempting to maximize the value of aviation-related infrastructure improvements. In communities like Chicago, Knoxville, Newark, San Diego, and St. Louis, the WPA either dramatically improved or built entirely new airports. The efforts to achieve those goals demonstrates the sometimes contentious relationship between WPA administrators and community

⁴⁵⁸ A. B. McMullen, Letter to Corrington Gill, Assistant Administrator, Works Progress Administration, November 23, 1937, Box 6, RG 237, NARA.

leaders. At the same time, they emphasize federal administrators' consistent efforts to promote projects with maximum value for each locality and the nation.

WPA appropriations helped to fund a variety of aviation infrastructure improvements around the country. First and foremost, states and localities used public works appropriations to fund airport improvements. Whether this resulted in the construction of entirely new fields or the improvement of existing ones, WPA funds played a foundational role in transforming America's airports. In Chicago, local leaders initially hoped to use WPA funds to construct a new airport on a man-made island in Lake Michigan. According to the *Chicago Daily Tribune*, "both the legislature and the city council . . . passed resolutions recommending the construction of such an airport,"⁴⁵⁹ a project they felt was well suited for public works appropriations.⁴⁶⁰ Unfortunately, opposition from local civic groups, who cited the noise pollution and the expense of such an undertaking, led to the project arriving stillborn.

Local officials and civic leaders agreed, however, that Chicago needed a larger airport to compete in the air transport arena. Chicago's current municipal field was too small to handle larger aircraft under development in the late 1930s, requiring more land, longer, paved runways, new taxiways, and a variety of other infrastructure improvements to maintain commercial service.⁴⁶¹ The situation had become so dire that in 1936 the *Chicago Daily News* reported that Edgar Gorrell of

⁴⁵⁹ "Start Work on the Airports," *Chicago Daily Tribune*, July 16, 1935, Box 13, RG 69, NARA.

⁴⁶⁰ In fact, Mayor Kelley had already approached the PWA for funds, only to be rejected by Harold Ickes.

⁴⁶¹ Aircraft such as the Douglas DC-4, a four engine aircraft that succeeded the DC-3.

National Air Transport had warned the city that airlines would be forced to “cut Chicago off their main travel lines” in the absence of such development.⁴⁶²

In response, in 1937 Chicago asked the WPA for more than 2.4 million dollars to improve the municipal airport. Those funds would be used to pave and enlarge existing runways, build new runways, construct concrete taxiways, complete a new drainage system including sewers, grade the airport and construct concrete sidewalks.⁴⁶³ Subsequently, Chicago requested additional funds to construct a light lane for an Instrument Approach System.⁴⁶⁴ These projects employed more than 4,000 laborers, and largely achieved completion by the fall of 1939. As a result, Mayor Edward Kelley referred to the updated municipal airport as “one of the finest . . . in the country devoted to commercial purposes.”⁴⁶⁵ By all measures, WPA funds transformed the Chicago airport, modernizing it to deal with a new generation of aircraft and preparing the airfield to deal with the boom in postwar passenger traffic.

In Knoxville, Tennessee, WPA allocations helped construct a new regional airfield. Sponsored by the city of Knoxville, local leaders hoped the field would serve both Knoxville and the nearby cities of Alcoa and Maryville. Although a small municipal airfield existed on the site prior to the WPA project, it proved insufficient to meet contemporary commercial needs, necessitating significant changes in order to provide the area with regular passenger service. Work began in

⁴⁶² “Mayor Certain Present Airport Can Be Enlarged,” *Chicago Daily News*, December 4, 1936, Box 13, RG 69, NARA.

⁴⁶³ WPA Result of Engineering Review, November 29, 1937, Box 13, RG 69, NARA.

⁴⁶⁴ A visual system for helping planes land in bad weather. WPA Project Update, Data As reported 3-1-38, Box 13, RG 69, NARA.

⁴⁶⁵ Edward Kelley, Letter to Jesse H. Jones, Federal Loan Administrator, November 19, 1940, Box 13, RG 69, NARA.

February of 1936 with a federal appropriation of \$593,690.⁴⁶⁶ According to a WPA progress report, federal funds supported “grading, providing drainage and lighting facilities, paving additional runways, extending present landing areas, and performing other appurtenant and incidental work.”⁴⁶⁷

Largely complete by the fall of 1937, the new airfield sparked excitement in citizens and local officials. The front page of the October 15, 1937 edition of the *Knoxville News-Sentinel* proclaimed, “12,000 or More See Dedication of New Airport.” The article reported that “12,000 to 15,000 persons . . . braved a cold autumn day to see the thrills in store for them.” The dedication included flying exhibitions, a parachutist in a “bat-wing suit,” and speeches by local dignitaries. According to Harry S. Berry, the Tennessee State WPA administrator, the opening of the new airport “marked the most important date in our transportation history since the first locomotive came through here 80 years ago.”⁴⁶⁸ The McGhee Tyson airport opened widespread commercial airline service to Knoxville for the first time, and created the foundation of the airfield still serving the region today.

Like Chicago, Newark applied to the WPA for funds to improve an already active municipal airport. Before World War II, Newark was the busiest airport in the United States. Beginning as the eastern hub of the transcontinental airmail service, Newark soon played host to tremendous traffic as it served the New York metropolitan area and maintained its central place in the U.S. airmail network. As with Chicago, by the mid 1930s, Newark desperately needed improvements to maintain its level of service and enable the field to accommodate newer, larger aircraft.⁴⁶⁹ Looking to the

⁴⁶⁶ Knoxville Airport, H. S. Sanders, Regional Engineer, WPA, undated, Box 38, RG 69, NARA.

⁴⁶⁷ Statement of Project Estimate Detail, March 22, 1938, Box 38, RG 69, NARA.

⁴⁶⁸ “12,000 or More See Dedication of New Airport,” *Knoxville News-Sentinel*, October 15, 1937, Box 38, RG 69, NARA.

⁴⁶⁹ Even before the city’s engagement with the WPA, Newark had a history of utilizing public works to improve its airfield. The city had already received over one million dollars from the PWA to build a new terminal building, completed before the WPA’s

WPA for aid, Newark applied for almost 4 million dollars in federal funds. These appropriations paid for drainage work, expansion of the airport through the use of fill dirt and grading, paving runways, taxiways and hardstands for aircraft, landscaping, including grading and seeding, excavation, and the construction of new hangars.⁴⁷⁰

With total expenditures of more than 5 million dollars, the Newark project was a qualified success. Although the improvements had the desired effect on the airport's ability to accommodate the increasing needs of planes and passengers, in the end the construction of LaGuardia Field in New York—completed in October of 1939—signaled the beginning of the end for Newark's prominence in the New York area. Nonetheless, WPA appropriations brought significant changes to the airport, improvements that would have been financially untenable without federal aid.

San Diego also renovated and updated its airport with WPA labor and financial assistance. Lindbergh Field operated as one of Southern California's major transport hubs, serving both the city of San Diego and the many military facilities in the vicinity. Like the airports in Chicago and Newark, Lindbergh Field needed major improvements to provide infrastructure for larger planes and greater passenger volume. Turning to the WPA for assistance, in September 1937 the city applied for almost 400 thousand dollars to support "grading, surfacing, oiling and paving Lindbergh Field,

creation in 1935. See: Fred S. Childs, Report Relating to the Proposed Construction of the Newark Airport Hangar, April 1936, Box 27, RG 69, NARA, and Morton M. Milford, Special Assistant to the Administrator, Memo to Mr. C.C. Thompson, October 22, 1936, Box 27, RG 69, NARA.

⁴⁷⁰ Engineering Review, Newark Airport W.P.A. Project, James W. Costello, Chief Engineer- Department of Public Affairs, A. H. Armstrong, Principal Assistant Engineer, Newark Airport, May 10, 1938, Box 27, RG 69, NARA.

together with construction of storm drains, boundary lights, Control Waiting Station, masonry wall, concrete walks, steps and ramp, and a wharf and float.”⁴⁷¹

In addition to providing ground facilities, Lindbergh Field served as a seaplane base, and therefore had needs beyond those of other airports. San Diego’s 1937 request for funds to support the construction of a wharf and float reflect this element of airport operations. In 1939, the city submitted an additional public works proposal with the aim of further improving both its ground and water-based facilities. In January, the city requested an appropriation of \$184,569 for “constructing airplane hangars, constructing a control station building, walks, walls, and steps; erecting fences; installing water and sewer connections; building seaplane landing facilities . . . moving, installing and constructing lighting and power facilities; making and installing pipe for storm drains.”⁴⁷² As a result of that construction, San Diego’s Lindbergh Field was able to serve as an important wartime transport center, addressing both civilian and military needs, and offering facilities for both ground and seaplanes.

In St. Louis, public works made much more modest improvements to the local airport, Lambert Field. An appropriation of just under 110 thousand dollars went toward runway extension and drainage, while an additional request for \$5,243 funded the construction of a new aircraft hangar.⁴⁷³ The *St. Louis Globe-Democrat* also reported that federal funds supported the construction of “five radio towers . . . to guide pilots to the field during foggy weather.”⁴⁷⁴ Notably, state WPA

⁴⁷¹ Works Progress Administration Project Proposal, September 27, 1937, Box 5, RG 69, NARA.

⁴⁷² Works Progress Administration Project Proposal, January 5, 1939, Box 5, RG 69, NARA.

⁴⁷³ Otto Kein, Memorandum Re: Inspection Report of the St. Louis, Missouri Airport Project, December 15, 1938, Box 23, RG 69, NARA.

⁴⁷⁴ “\$200,000 Airport Projects Planned,” *Saint Louis Globe-Democrat*, June 24, 1937, Box 23, RG 69, NARA.

administrators rejected several St. Louis proposals for further improvements because local officials could not adequately demonstrate the projects' value.

Although airport construction and improvement lay at the core of the Airways and Airports Division's mission, WPA laborers also worked on other infrastructure improvements. In California, for example, the WPA funded an air-marking program. State officials applied for funds to paint "508 roof markers in 508 towns as an aid to air navigation."⁴⁷⁵ According to the *San Diego Evening Tribune*, Helen Richey, a friend of Amelia Earhart and the famous aviatrix's partner on her last Bendix Trophy race⁴⁷⁶ headed the project. Designed to make air travel safer, the paper reported, "ten foot letters" would be placed on barns, factories, and mountains. The markings would "announce the names of the town, an arrow indicating the direction of the nearest airport and another pointing north."⁴⁷⁷ Seemingly quaint by modern standards, this project nonetheless formed a valuable safety aid for both private and commercial pilots and expanded on a program begun by the Commerce Department more than ten years before.

The above examples demonstrate the diverse ways in which localities utilized public works expenditures to support the development of aviation infrastructure. WPA laborers built hangars and terminal buildings, built, lengthened, and paved runways, landscaped, filled, and graded airports, built drainage facilities, erected navigational aids, cleared new land, and built seaplane docking stations. These projects represented important infrastructure improvements at a critical time for U.S. commercial aviation. The majority of airports receiving WPA funds desperately needed new

⁴⁷⁵ J.W. Gentry, District Director, WPA Report of Completed or Discontinued Project, June 6, 1937, Box 4, RG 69, NARA.

⁴⁷⁶ A cross-country air race first run in 1931.

⁴⁷⁷ "WPA Plans Air Markers," *San Diego Evening Tribune*, November 17, 1936, Box 5, RG 69, NARA.

facilities in order to receive newer, larger aircraft and keep up with rising passenger volume. In addition, new navigational aids and increasing communications technology demanded ever larger and more advanced ground facilities. WPA appropriations made much of this construction possible at a time when many American communities struggled to provide their citizens with basic services. In the above communities, WPA building projects created the foundation of the airports that would serve these communities in the postwar era, leaving a lasting legacy far beyond the immediate labor the construction provided.

These activities also demonstrate the extent to which local communities actively supported aviation-related infrastructure creation. The WPA model was not top down; it mandated voluntary action on the part of localities. Population centers around the country enthusiastically responded to the opportunities WPA funds promised, with local government, civil leaders, and the general population playing an active role in the application process and displaying enthusiasm about new construction. While the appropriations process was not without tension, the massive scope of Airways and Airports Division activities speaks volumes about American towns' and cities' desire to see new and/or improved airports in their community.

WPA administrators clearly understood the significance of the work their appropriations supported and worked diligently to approve only those projects that would bring lasting value to individual communities and the nation at large. Although this brought them into conflict with local civic groups and elected officials at times, these men demonstrated a consistent willingness to reject projects that failed to achieve minimum standards.

As with the CWA program of 1933-34, the WPA worked with the Bureau of Air Commerce to maximize the value of aviation-related public works. In 1937 A. B. McMullen wrote Earl Popp, the Bureau's regional supervisor, in reference to San Diego's application for WPA funds. McMullen

noted that the Washington, D.C. office's Project Control Division requested that the California proposal receive approval from Commerce before the release of funds. The Department did so, but only under a specific set of conditions. To wit, "that before the project is released for operations by the State Administrator and the Chief Regional Engineer, a master plan and complete working plans be prepared and submitted to and approved by the Bureau of Air Commerce and the Chief Regional Engineer."⁴⁷⁸

San Diego represented far from an isolated case. It appears that WPA administrators applied this policy across the board, as demonstrated by correspondence between the Project Control and Engineering Divisions in reference to the Chicago airport. In November 1937 the Engineering Division recommended the approval of Chicago's application for funds, "subject to approval of plans and specifications by the Bureau of Air Commerce and the Regional Engineer-WPA prior to beginning of work."⁴⁷⁹

At times, this oversight resulted in WPA administrators tabling or rejecting applications outright. Chicago's application for 8.5 million dollars to fund a new island airport received close scrutiny from administrators, eventually resulting in the proposal's rejection. "Conditionally approved" as of September 1935, WPA administrator Harry Goldberg expressed concern that the project did not cohere with WPA goals. Writing that "opponents raise a number of objections" in opposition to the proposal, Goldberg highlighted the fact that "other airports proposed in the same general location would serve to better purpose for a smaller or no expenditure of government money." As such, Goldberg concluded that Chicago's plan ran "counter to the provision of the spirit

⁴⁷⁸ A. B. McMullen, Chief, WPA Airport Section Safety and Planning Division, Letter to Earl C. Popp, Regional Supervisor, Bureau of Air Commerce, December 25, 1937, Box 5, RG 69, NARA.

⁴⁷⁹ WPA Engineering Division, Memo to the Project Control Division, November 29, 1937, Box 13, RG 69, NARA.

and provisions of the Work Relief Act.” He also emphasized the central role the Bureau of Air Commerce played in the decision, reminding his superiors that “final decisions rest first, upon the Department of Air Commerce.”⁴⁸⁰

Even more striking are WPA and Bureau of Air Commerce assessments of several St. Louis proposals. Bureau correspondence between Airport Engineer W. M. Aldous and John Wynne, Chief of the Bureau’s Airport Section, shows that St. Louis had a history of presenting hastily prepared and inadequately researched proposals for WPA funds—a fact the Bureau did not look well upon. Late in 1936 Aldous reported that the WPA rejected a September 1935 proposal to reconstruct the banks of a creek, and related that proposals approved in both August and September were far over budget. In reference to a proposal from October 1936, Aldous wrote, “it is just as well . . . that it was rejected as the quantities [of materials] involved are sheerest guesswork.” Summing up St. Louis’s efforts to secure public works appropriations, he concluded that all of the city’s proposals were “classified as purely relief . . . the estimates as submitted on all past projects represented just guesses.” As a result, the engineer urgently recommended “that necessary authority be requested by the WPA . . . to utilize these funds for . . . desirable work instead of having to spend them for man time by unduly loading up the job.”⁴⁸¹

Apparently, however, Aldous’s concerns did not result in a significant change in St. Louis’s efforts to secure WPA grants. In 1939, B. M. Harloe, WPA Chief Engineer, warned the Missouri State WPA Administrator that city officials needed to be reminded to submit plans for “suitable public projects representing permanent improvements,” not merely make-work projects. Additionally, Harloe emphasized that “the Works Progress Administration . . . may not properly

⁴⁸⁰ Harry Goldberg, Letter to L. L. Odell, October 18, 1935, Box 13, RG 69, NARA.

⁴⁸¹ W. M. Aldous, Letter to John S. Wynne, December 18, 1936, Box 23, RG 69, NARA.

recommend the approval of applications which require disproportionate expenditures of Federal funds . . . for work whose permanent value is not commensurate with the expenditures required.”⁴⁸²

At times, the close cooperation between the WPA and Bureau of Air Commerce could have more positive effects for localities. In Newark, the Bureau actually pushed the WPA to undertake additional construction with the goal of improving safety at the New Jersey field. Writing to F. C. Harrington, WPA Assistant Administrator, John Wynne related that “the Department of Commerce has been trying for some time to interest the City of Newark in installing . . . [a] new airway traffic control unit on top of the administration building.” According to Wynne, Newark had been unwilling to expend the funds for the projects and, as a result, Wynne hoped Harrington would include “this small unit . . . in the present enormous investment plan now going on at Newark Airport.” Highlighting the significance of the air traffic control unit, Wynne argued, “from a safety viewpoint, the Department of Commerce is more interested in the unit than any item of improvement for the new airport.”⁴⁸³

As these examples demonstrate, the WPA Airways and Airports Division maintained a distinct focus on promoting only those public works projects with the potential to provide longstanding value to communities and the nation. Working closely with the Bureau of Air Commerce to ensure that proposals met this criterion, WPA administrators did not hesitate to modify or reject applications they perceived to lack adequate planning or sufficient value. In many ways it seems that the WPA’s effort to promote aviation infrastructure operated almost as an arm of the Commerce Department. Commerce’s willingness to ask the WPA for funds highlights the close working relationship between the two agencies and the coherence of their goals. Certainly, the WPA’s primary mission

⁴⁸² B. M. Harloe, Letter to Matthew S. Murray, April 6, 1939, Box 23, RG 69, NARA.

⁴⁸³ John S. Wynne, Letter to F. C. Harrington, November 17, 1936, Box 27, RG 69, NARA.

remained to provide work relief, but within that context the Airways and Airports Division worked tirelessly to improve U.S. aviation infrastructure.

The WPA's focus on work relief did, however, place a variety of limits on the types of construction the public works agency could undertake. Most significantly, the WPA's focus on providing federal funds for unskilled labor, but not for materials or skilled workers meant that, at times, communities could not achieve their desired airport improvement goals. In Newark, construction on a new hangar stalled when engineers realized that construction of the building's large, sliding doors could not be accomplished with the existing workforce. In a report on the proposed construction of the hangar, Fred Childs, Chief Engineer for the WPA State Division of Operations, voiced his concerns regarding this issue. "Certain construction features," he wrote, "will demand that skilled craftsmen be engaged to perform special construction work." In light of limits imposed by WPA contracts, Childs suggested that "it would be most desirable . . . to carefully consider the practicability of having all special work performed under private contracts."⁴⁸⁴ That, of course, would mean that funds for such contracts would not come from WPA appropriations, forcing the city to pay for them itself or look to another government agency like the PWA.

In many instances, local funding proved to be a potential barrier to WPA activities. Because the WPA did not provide funds for materials, that responsibility fell upon local communities.⁴⁸⁵ Although theoretically the WPA's focus on procuring matching funds from localities would provide for necessary materials and, if necessary, skilled labor, in reality these strictures limited the WPA's

⁴⁸⁴ Fred S. Childs, Report Relating to the Proposed Construction of the Newark Airport Hangar, April 1936, Box 27, RG 69, NARA.

⁴⁸⁵ WPA applications reveal that the localities almost exclusively focused their mandated matching funds on materials and skilled labor—commodities that federal monies could not support. This freed up federal appropriations to pay for unskilled labor, maximizing the value of WPA activities.

ability to undertake certain projects. Additionally, its focus on work relief meant that the WPA could only embark on construction in areas that had sufficient numbers of needy workers. While for the most part this did little to limit WPA activities, in some cases this resulted in significant expenditures for aviation-related projects with less value than others in sparsely populated areas or areas with low unemployment.

Finally, the WPA's inability to undertake construction on private land had the potential to disrupt operations. Nowhere was this more evident than in Chicago. After abandoning a proposal to build a new airport downtown on a manmade island, the city instead looked to expand the existing municipal airport. Those plans included almost doubling the field's acreage in order to construct new runways and lengthen existing ones. As part of the effort, the city purchased a significant piece of land from the Chicago and Western Indiana Railroad. Unfortunately, the Railroad maintained a right-of-way for tracks that bisected the enlarged airfield property. That strip of private property precluded WPA workers from extending two runways, and threatened to undermine the entire project. Eventually, the city reached a compromise, acquiring a right of way for the railroad around the new field, but at an estimated cost of more than 800 thousand dollars to be borne by the city.⁴⁸⁶ In other communities, airfields were partially or totally privately owned, leading to an inability to utilize public works funding. Although not a significant barrier to airport improvements, this issue, like those above, demonstrates the sometimes difficult nature of public works agencies' efforts to promote America's air transport network.

⁴⁸⁶ "Airport Plan Hits New Snag: WPA Cannot Move Tracks," *Chicago Daily News*, April 23, 1937, Box 13, RG 69, NARA; "Airport Compromise is Near," *Chicago Herald and Examiner*, July 23, 1937, Box 13, RG 69, NARA.

Between 1933 and 1939 America's aviation infrastructure witnessed a revolutionary change. Largely through the efforts of New Deal public works agencies, America's airports were modernized through the construction of concrete runways, lighting systems, taxiways, terminals, hangars and control towers. These changes came at a crucial period in American aeronautical development, and at a time of vital need for the American workforce. Rapidly advancing technology resulted in the creation of new, larger transport aircraft and an expanding air transport network precisely at a time when communities found themselves unable to assume the cost of new airport construction. In that context New Deal public works achieved the dual goal of putting Americans to work and promoting the development of U.S. aviation infrastructure—in the words of historian Jason Scott Smith, they formed “an extraordinarily successful method of state-sponsored economic development.”⁴⁸⁷

The history of these agencies' activities—particularly that of the WPA's Airways and Airports Division—have been almost totally overlooked by scholars of aviation and the New Deal. In many ways, it appears that Airways and Airports Division's activities offer the clearest and most successful example of New Deal public works policy working in practice. The construction or improvement of more than 900 airports around the country, as well as programs like the air marking campaign in California, created the conditions for the possibility of the postwar commercial air transport boom. Though perhaps not the ideal way to make over America's aviation infrastructure, WPA activities demonstrate that administrators consistently worked to encourage projects with the maximum value for localities and the nation. Far from promoting a make-work program, the WPA worked closely with the Bureau of Air Commerce and local communities to encourage construction projects that would have a lasting value for American aeronautics.

⁴⁸⁷ Smith, *Building New Deal Liberalism*, 19.

These public works projects must stand at the center of any discussion of aeronautical development during the 1930s. Franklin Roosevelt's promotion of public works as a source of employment and an avenue through which to encourage infrastructure improvements found great success with American aviation. The activities of these New Deal agencies also set a precedent for federal work on airports—a fact not lost on the President. In no small part due to the effectiveness of public works airport construction projects, the Civil Aeronautics Act removed the legal barriers preventing federal work on airfields and set the stage for greater governmental responsibility in the postwar period. Along with his establishment of the Federal Aviation Commission and his consistent drive to shape the Civil Aeronautics Act, the President's creation of the CWA, PWA, and WPA offers the clearest evidence of Roosevelt's efforts to promote the development of American aviation. Though they failed to bring the United States out of the Depression, the actions of these public works agencies created the foundation of the modern American air transport network—the airways and airports we still utilize to this day.

Chapter 6—Conclusion

Almost three-quarters of a century have passed since the enactment of the Civil Aeronautics Act. In that time American commercial aviation has continued to develop—entering the jet age, flirting with supersonic aircraft, and embracing the hub-based system created by deregulation. In that time Americans’ collective relationship with commercial flying has undergone a fundamental change, in the process shattering the consensus created by Herbert Hoover and his allies that held sway for more than half a century. In recent years flying has become banal, a necessary evil, something to be endured in the quest to reach a destination more quickly. Americans bemoan high fares, checked-baggage fees, the lack of in-flight meals, seemingly incomprehensible routing, small seats, and delays. At the airport, passengers must tolerate ticket lines and security checkpoints, have their liquids and gels organized in containers of three ounces or less, clearly presented in a plastic bag for inspection. To pass through security everyone must remove his or her shoes, keys, cell phones, belts, jackets and anything else containing metal. Passengers live in fear of the bag check, standing forlornly to the side of the security line, hoping to be released while a stranger examines personal items. Arriving on time seems a minor miracle, particularly if the baggage does too.⁴⁸⁸

These prevailing conditions stand in sharp contrast to Americans’ continued love affair with aviation. Perhaps because our contemporary experiences lack glamour, daring, and romance, we are

⁴⁸⁸ Exemplifying Americans’ current frustrations with flying are articles like the following: Joe Sharkey, “Can Airports Calm the Nerves?” *The New York Times*, December 30, 2007; “Practical Traveler: Passengers Speak Up: The Views From the Back of the Plane,” *The New York Times*, December 16, 2007; Matthew Wald, “E.P.A. is Prodded to Require Cuts in Airline Emissions,” *The New York Times*, December 6, 2007; Randall Stross, “Theater of the Absurd at the TSA,” *The New York Times*, December 17, 2006, and Matthew Wald, “Aviation Experts Bemoan Delays in the Sky: Air Traffic System is Scorned as Badly in Need of Modernization,” *The New York Times*, September 29, 1999.

drawn even more strongly to aspects of aeronautics highlighting those characteristics. The bookshelves at Borders, Barnes and Noble, and Books-A-Million abound with aviation-related material, from glossy photo books of aircraft to memoirs of fighter aces and record-setting pilots. Hollywood continues to churn out movies focused on various aspects of flying. *The Memphis Belle* (1990), *Air Force One* (1997), *The Aviator* (2004), and *Flyboys* (2006) represent only a few of the most recent films in this genre.⁴⁸⁹ Die-cast airplanes, plastic and wood models, and remote control aircraft take center stage in toy and hobby shops around the country, and air shows continue to draw large crowds for both contemporary and historic demonstrations. In New York's Hudson River Valley the Old Rhinebeck Aerodrome has created a living museum. The Aerodrome embodies the authentic atmosphere of a 1920's airfield, with a grass field, hangars, tools, workshops, and, of course, the largest collection of airworthy vintage aircraft in the country. Every summer the field plays host to air shows, drawing tens of thousands from across the country.

Tellingly, the interwar period forms a focal point of Americans' fascination with aeronautics. From the Smithsonian National Air and Space Museum's "Golden Age of Flight" exhibit to the recently released film *Amelia* (2009), which offers a romanticized view of Amelia Earhart's life and aerial exploits, this era continues to captivate. The reasons are not hard to pinpoint. These years encompassed perhaps the most glamorous and dynamic period in American aviation history. Rapid technological advances created the conditions for the possibility of flying higher, farther, and faster than ever before. For the first time aircraft could cross oceans, reach dizzying speeds, and claw their

⁴⁸⁹ *The Memphis Belle* fictionalized the story of the first U.S. 8th Air Force B-17 bomber crew to complete their tour of 25 missions successfully during World War II. *Air Force One* starred Harrison Ford and chronicled a failed terrorist attempt to capture the President aboard his aircraft. *The Aviator* presents audiences with a broadly historical account of Howard Hughes' life and aerial exploits. *Flyboys* offers audiences a fictional account of the Lafayette Escadrelle, the famous World War I fighter unit made up of American volunteers.

way into the stratosphere. Simultaneously, the period gave rise to some of the most accomplished and charismatic figures in American aviation history. Charles Lindbergh stands apart from his peers, but others like Amelia Earhart, Wiley Post, Roscoe Turner, Jacqueline Cochran, and Howard Hughes became household names as they continually pushed the boundaries of what humans and the machines they created could accomplish. Contemporary American passions for flying further highlighted these men's and women's efforts, as aviation dominated media coverage and events like the National Air Races drew hundreds of thousands of spectators from across the country.

Most representations of the interwar period offer interested parties an easily comprehensible, progressive narrative. In these views America and Americans are triumphant, recovering from the embarrassment created by the nation's failed effort to field an Air Service during World War I to lead the world in aeronautical development and personal accomplishment.⁴⁹⁰ American ingenuity and technological expertise quickly combined to produce aircraft that were the envy of the world. Aerial heroes from the period seem to embody core American values—hard work, perseverance, triumphing over seemingly impossible odds. Their exploits exemplified Americans' desires for danger, glamour, and adventure. It was an era when a boy from small-town Minnesota could rise from obscurity by designing his own aircraft with the help of a little-known aircraft manufacturer working out of a glorified shed in San Diego and securing funding from a group of little-known St. Louis businessmen to become the first person to fly across the Atlantic by himself—in the process beating out millionaires, European national heroes, and all of the detractors who christened him the “flying fool” before his departure.

⁴⁹⁰ America entered World War I woefully unprepared to field an effective aerial fighting force. Though some American pilots had flown with the French Lafayette Escadrille for several years, America did not produce any aircraft capable of fighting in the skies over France. In fact, for the duration of the war American pilots took to the air in French and British planes—American airframes only proving adequate for training purposes.

Within this broader narrative, the federal government's crucial role in promoting aeronautical development has faded into the background. Though governmental efforts to implement legislation, build infrastructure, and regulate American aeronautics lack the glamour of air racing or trans-oceanic flights, those efforts played a vital role in supporting American aviation's continued growth. Most Americans, however, remain unaware of the ongoing efforts from policymakers like Herbert Hoover, William MacCracken, Walter Brown, Franklin Roosevelt, and Harry Hopkins to support the expansion of a nascent industry that they perceived to be essential to America's future.

Largely overlooked by the American public, this topic has received similarly scant attention from historians. Political and economic historians addressing the interwar period either ignore federal aviation policy or damn it with faint praise. Seminal works like Joan Hoff Wilson's *Herbert Hoover: Forgotten Progressive*, William Leuchtenburg's *FDR and the New Deal* and Ellis Hawley's *The New Deal and the Problem of Monopoly* devote scant attention to these men's actions vis-à-vis aviation, and, in the case of Hawley, go so far as to discredit Roosevelt's engagement with aeronautics. Monographs that do directly address air transport and federal aviation policy—most notably those from Robert van der Linden and Nick Kommons—offer incomplete analyses that fail to adequately account for the continuity and significance of federal efforts under both Republican and Democratic Administrations, an oversight that also extends to the work of scholars such as Elizabeth Bailey, David Lee, and Richard Vietor.⁴⁹¹

⁴⁹¹ See: Elizabeth E. Bailey, "Aviation Policy: Past and Present," *Southern Economic Journal*, Vol. 69, No. 1 (July 2002), 12-20; David D. Lee, "Herbert Hoover and the Development of Commercial Aviation, 1921-1926," *The Business History Review*, Vol. 58, No. 1 (Spring, 1984), 78-102, and Richard H. K. Vietor, "Contrived Competition: Airline Regulation and Deregulation, 1925-1988," *The Business History Review*, Vol. 64, No. 1 (Spring, 1990), 61-108.

This work represents an attempt to offer a comprehensive analysis of federal aviation policy from the early 1920s until the eve of World War II. During that time federal policymakers, led by Herbert Hoover, created and implemented a remarkably coherent federal aviation policy that created the conditions for the possibility of aviation's growth into a mainstream transportation technology. Crafted at a time when aviation was still in its infancy, that policy represented an extraordinarily forward-thinking analysis of aeronautics' potential for development. So prescient was that vision, in fact, that it remained virtually unchanged for the next two decades—through Republican and Democratic administrations, through the Great Depression, and through the incredible technological progress aviation experienced during those years. The continuity of federal actions speaks to Hoover's foresight, but also to the importance that policymakers placed on promoting aeronautical growth. By the end of the 1930s federal efforts had created the physical and regulatory foundations of the modern American air transport system, in the process helping to refashion American cultural attitudes about flying.

The origins of American federal aviation policy emerged from the chaotic period immediately following the First World War. Wartime mobilization resulted in the military training thousands of pilots and building tens of thousands of aircraft, virtually all of which were quickly removed from government service after the cessation of hostilities. Those pilots and aircraft subsequently formed the core of the barnstorming movement, a uniquely American development that introduced millions of Americans to aviation for the first time. The same era witnessed the rise of early commercial carriers, though these ventures almost uniformly failed to achieve solvency. Even during these early years, Americans demonstrated a fascination with aviation. Thousands turned out around the country

for air shows, and untold more paid for rides with barnstormers as the latter traveled through their communities. Americans' enthusiasm for flying, however, remained an enthusiasm for the spectacle—and the danger—associated with flight.

Herbert Hoover's initial drive to create a focused and coherent federal aviation policy grew out of his desire to organize that chaos and mold aviation into a viable commercial proposition. Hoover had great foresight in this endeavor, looking forward to a time when aviation would form a vital part of the American transportation network. His associationalist economic philosophy provided a ready model through which to support the development of a nascent industry, and Hoover worked diligently during his tenure as Commerce Secretary to support aeronautical development. In that effort, Hoover relied on allies like William MacCracken and Harry New, men who shared Hoover's faith in aviation's potential, and who had the knowledge and the ability to shape federal policy.

Hoover's vision revolved around regulation, infrastructure, safety, and promotion. Hoover relied heavily on existing models—most specifically, the federal government's engagement with shipping—but realized that aviation's nascent status mandated a unique policy framework. Specifically, he recognized that airlines needed federal financial support in order to reach maturation. That overarching necessity led Hoover and his allies to create a fiscal model predicated on airlines receiving revenue from the U.S. Post Office for carrying mail. In choosing this course, Hoover walked a narrow path between a truly free market on the one hand and nationalization—the model embraced by virtually every European nation at the time—on the other. Simultaneously, Hoover pushed for the creation of safety and licensing regulations to help bring aviation into the commercial mainstream and address widespread concerns about flying's perceived danger and recklessness. Presciently, Hoover realized that while a majority of Americans enthusiastically embraced flying, that support was predicated on aviation's glamour and danger—attributes with the

potential to undermine commercial success. As such, Hoover hoped to create a regulatory framework that would highlight aviation's safety, stability, and utility while working to minimize flying's more dangerous aspects.

Hoover's ally, William MacCracken, brought that desire to fruition through his authorship of the 1926 Air Commerce Act. After its passage, the federal government received broad new powers to license pilots and airframe manufacturers, implement safety regulations, support infrastructure creation, and oversee commercial development. Along with the passage of the 1925 Contract Airmail Act, the 1926 Bill created the conditions for the possibility of successful commercial operations. These pieces of legislation reflected the ongoing work of federal policymakers, but ultimately represented the beginning, rather than the end, of federal engagement with American commercial aeronautics.

During Hoover's term as President he continued to foster aviation's growth. Hoover kept up an ongoing correspondence with prominent airline executives and other central figures in American aeronautics, and continued to utilize his associational philosophy to support the evolution of federal policy. Hoover also appointed Walter F. Brown as Postmaster General, a decision that was to have a profound effect on governmental engagement with commercial flying. Brown enthusiastically embraced Hoover's vision, and worked to shape federal airmail legislation to support the development of passenger—rather than exclusively mail—service. His efforts culminated in Congress passing the 1930 McNary-Watres Act, which expanded the Postmaster's authority to use airmail contracts to promote commercial development. Brown interpreted his new powers broadly, supporting the expansion of so-called pioneer operators at the expense of newer, smaller carriers, and using a series of operators' conferences to rationalize the national airmail map. Though Brown acted in what he believed to be the best interests of both airlines and the country, these actions drew the ire

of those airlines cut out of Brown's vision. These carriers ultimately allied themselves with Congressional Democrats in an effort to overturn Brown's policies.

That opposition coalesced after Democrats' success in the 1932 elections. Led by Alabama Senator Hugo Black, Democrats created a special committee to investigate supposed fraud and collusion with regard to airmail contracts. The Committee hearings drew significant media attention, resulted in Brown being largely discredited, and led to the passage of a new 1934 airmail bill sponsored by Black himself.

Significantly, however, the Black Committee hearings and the new legislation did not result in an abandonment of Hoover's vision. Black appears to have been motivated by a desire to assure the continued commercial success of American commercial aviation, a fact that informed the legislation created under his direction. Though the airmail scandal of 1934 did cause significant turmoil—most significantly after President Franklin Roosevelt and his Postmaster General, James Farley, cancelled all private airmail contracts and ordered the Army to fly the mail—at its end, federal policy remained fundamentally unaltered. Black and his allies supported Post Office airmail subsidies, eschewed nationalization, and demonstrated their willingness to utilize the power of the federal government to support aeronautical development.

Under the direction of Franklin Roosevelt, federal aviation policy continued to demonstrate remarkable continuity. Though the President's actions vis-à-vis the airmail scandal—most significantly his focus on labor issues and his push for open, competitive bidding—displayed some differences with Hoover's vision, Roosevelt's overall treatment of aviation policy differed little from that of his predecessor. Roosevelt worked to reestablish private airmail contracts in the wake of the disastrous Army experiment, created the Federal Aviation Commission to oversee a comprehensive evaluation of federal policy, and played a key role in the crafting and passage of the 1938 Civil

Aeronautics Act. Through all of these actions Roosevelt never looked to nationalize America's airlines, and remained focused on using federal power to foster commercial development through infrastructure creation, promoting safe operations, and regulating routes to support rational growth.

The President's key role in shaping the seminal 1938 legislation offers the preeminent example of his fundamental agreement with Hoover's vision. That legislation created a new independent agency to regulate aviation, broadening federal powers and signaling the government's ongoing commitment to promoting aeronautical development. Its passage codified Hoover's initial vision for American commercial aviation and established a regulatory paradigm that would endure for the next 40 years.

Simultaneously, Roosevelt oversaw a significant expansion of federal power vis-à-vis aviation. Through his creation of federal public works agencies the President oversaw the disbursement of hundreds of millions of dollars on aviation-related infrastructure projects around the country. In so doing, Roosevelt eschewed the limitations of Hoover's dock concept and displayed a willingness to radically expand the government's ability to support aviation's growth. The creation and/or expansion of almost 1,000 airports around the country stands as a testament to the enduring contribution those agencies brought to American aeronautics.

The coherence and continuity of federal aviation policy during the interwar period is truly remarkable. Hoover's initial vision emerged at a time when aviation was a glorified sideshow, lacking any firm commercial foundations. That vision's perseverance through the Great Depression and the transition from Republican to Democratic leadership indicates its dynamism, but also showcases policymakers' continuing commitment to making aviation a central aspect of American life. It remains one of the preeminent examples of the government successfully fostering the growth of a commercial enterprise.

The essential continuity of federal policy, moreover, suggests the need to reevaluate prevailing assumptions about the relationship between Hoover's Associationalism and FDR's New Deal. At least with regard to aviation, both administrations exhibited a fundamental agreement regarding the core aspects of federal policy—subsidization, regulation, safety, infrastructure creation, and promotion. Both associationalists and New Dealers, it seems, deemed aviation's continued development important enough to warrant federal assistance. Additionally, both groups saw airmail subsidies as a way to walk a tightrope between the destructive potential of a truly free market and the specter of nationalization. This basic agreement highlights important aspects of continuity between these two economic models while once again emphasizing Americans' overwhelming focus on aeronautical development.

Hoover and Roosevelt's policies, however, were not identical, and their differences also hold insight for scholars of the interwar period. Hoover's focus on utilizing existing regulatory structures—epitomized in his adherence to the dock concept—exposes the limitations of his associationalist vision. Though Hoover oversaw a remarkable expansion of federal power vis-à-vis aviation, that expansion occurred within an existing policy framework. Roosevelt, however, quickly demonstrated that the New Deal knew no such limits. Most significantly, his embrace of public works signaled Roosevelt's commitment to radically expanding the federal government's responsibility for the industry. The President's support for the Civil Aeronautics Act furthered this trend, breaking away from existing bureaucratic structures and establishing aviation as an industry worthy of an independent government agency.

It is doubtful, however, that any of Hoover or Roosevelt's policies could have been sustained without the widespread American enthusiasm for flying. Though early in the period Americans undoubtedly associated aviation with danger and heroism rather than safe and reliable transportation,

throughout the era they displayed a passionate interest in flying. That passion, it appears, created an environment conducive to the development of federal policy. Though most obvious in Americans' attendance at air races and embrace of aerial heroes like Charles Lindbergh and Amelia Earhart, Americans' interest in flying helped to keep aviation at the forefront of citizens' consciousness for the duration of the period. Federal policy, moreover, seemed to have played an important role in altering Americans' perceptions of flying by making aviation safer and more ubiquitous. Clearly, Americans embraced all things aeronautical in the years before World War II—a key contextual factor in any discussion of federal policy.

In the decades since 1938, American commercial aviation has come to play an even more important role in American life. Its dynamic growth, moreover, speaks powerfully to the success of the policy framework created in the 1920s and '30s. The postwar boom, rise of jet aircraft, and commercial flying's ever-increasing centrality to Americans' lives in the decades following World War II serve as concrete reminders of that success. Ironically, however, the upheaval affecting the air transport industry in the wake of deregulation offers perhaps the most compelling evidence for the wisdom of policies crafted during the interwar period. In recent years, the changes wrought by deregulation have combined with concerns about terrorism and an increasing focus on environmental issues to profoundly alter our collective relationship with commercial flying. Today, the majority of Americans take flying for granted except when their flights are delayed or their luggage lost. Though these circumstances suggest that we have lost much of our enthusiasm for commercial aviation, it

also demonstrates the extent to which the vision crafted by those early policymakers has been realized.⁴⁹²

Commercial flying began a period of exponential growth with America's entrance into World War II. Though the 1938 Civil Aeronautics Act had created the regulatory foundation that would guide commercial operations until the late 1970s, at the time of its passage America was still mired in the Depression and flying remained the province of the well-to-do. The war swept aside all of those limits, and by 1945 created a profoundly different context ripe for airline expansion.

World War II helped promote commercial growth through pilot training, infrastructure creation, airframe manufacturing, and economic development. Building on the legislative victory of the Civil Aeronautics Act, in 1939 Roosevelt inaugurated the Civilian Pilot Training Program (CPTP). The CPTP authorized the federal government to finance 72 hours of classroom instruction and between 35 and 50 hours of flight instruction for prospective pilots. Initially centered on eleven colleges and universities around the country, the program soon expanded to include 1,132 educational institutions and 1,460 flight schools nationally.⁴⁹³ By 1944 the program had turned out an estimated 400,000 graduates.⁴⁹⁴ These pilots formed the backbone of the Army Air Force pilot pool during the war, offering the military an easily accessible and generally well-trained pool of

⁴⁹² See: Bailey, "Aviation Policy: Past and Present;" Mark Rose, Bruce Seely, and Paul Barrett, *The Best Transportation System in the World: Railroads, Trucks, Airlines, and American Public Policy in the Twentieth Century* (Columbus: The Ohio State University Press, 2006), 228-239, and T.A. Heppenheimer, *Turbulent Skies: The History of Commercial Aviation* (New York: John Wiley and Sons, 1986), 314-350.

⁴⁹³ "U.S. Centennial of Flight Commission: Civilian Pilot Training Program (CPTP)," http://www.centennialofflight.gov/essay/GENERAL_AVIATION/civilian_pilot_training/GA20.htm, Accessed October 25, 2010. For more information on the CPTP see: Dominick Pisano, *To Fill the Skies with Pilots: The Civilian Pilot Training Program, 1939-1946* (Urbana: University of Illinois Press, 1993).

⁴⁹⁴ Roger Bilstein, *Flight in America: From the Wrights to the Astronauts* (Baltimore: Johns Hopkins University Press, 2001), 161.

flyers from a civilian source and freeing up military resources for advanced training and other functions. The CPTP was a great success during wartime, but ultimately had at least as significant an effect on commercial flying. Like the flight training many barnstormers received as a result of World War I mobilization, the CPTP created a large band of well-qualified pilots who would eventually fill out airline ranks in the postwar years.

The war also supported continuing infrastructure creation. Wartime needs prompted the construction of a new wave of airfields, above and beyond those already created by New Deal public works. Many of these were built under the auspices of the WPA as a continuation of the pre-war program. Between 1939 and 1943, in fact, the agency expended upwards of three billion dollars to construct airfields for military use. The Army Corps of Engineers also contributed to the process, building over 500 new fields through the Developing of Landing Areas for National Defense (DLAND) program. After the war's conclusion, the federal government turned about half of the WPA and DLAND fields over to civilian control, creating hundreds of new opportunities for localities to gain access to the national air transport network.⁴⁹⁵

Additionally, commercial aviation benefitted directly from wartime conditions. As historian Carl Solberg writes, “when at last the United States went to war, all the airlines went to war” as well. Following formal U.S. intervention, the military took control of 200 of the nation's 360 commercial airliners, contracting them to fly specific missions for military purposes. By pre-existing agreement, under this arrangement airlines kept their private identity and profit-making function, but served military ends. General Henry “Hap” Arnold formalized this state of affairs by creating the Military

⁴⁹⁵ Heppenheimer, *Turbulent Skies*, 120.

Air Transport Command, which for the duration of the war operated national and international air routes and oversaw the ferrying of men and equipment overseas.⁴⁹⁶

Newer, larger aircraft also came into service during the war, accelerating a process that began in the late 1930s. In the years before the conflict, Douglas, Lockheed, and Boeing had all begun development of larger, four-engined commercial airliners. These planes—most notably the Douglas DC-4 and the Lockheed Constellation—entered service shortly after the war began. Immediately pressed into military service, wartime necessity mandated the rapid development and manufacture of these aircraft that, for the first time, could cross the country nonstop and even span oceans. As a result, production accelerated dramatically, filling the coffers of manufacturers and bringing thousands of new aircraft into service.

Aeronautical technology leaped ahead during wartime as well. Huge military budgets allowed manufacturers to invest in new and unproven technologies at government expense. The rapid development of military aircraft resulted in concomitant gains for their civilian counterparts. Engine turbochargers and turbo-superchargers came into widespread use, manufacturers perfected cabin pressurization, and aircraft came to fly higher, faster, and farther than ever before. Airframe and engine manufacturers thus entered the postwar era well positioned to develop the next generation of passenger aircraft.⁴⁹⁷

Collectively, these conditions prepared American commercial aviation for dramatic gains in the immediate postwar era. As a result of wartime conditions, the country had hundreds of new airports, thousands of qualified pilots, and scores of war-surplus aircraft ready to serve the needs of the

⁴⁹⁶ Carl Solberg, *Conquest of the Skies: A History of Commercial Aviation in America* (Boston: Little, Brown and Company, 1979), 262; Bernard C. Nalty, ed., *Winged Shield, Winged Sword: A History of the United States Air Force* (Washington, D.C.: The United States Air Force, 1997), 251.

⁴⁹⁷ Heppenheimer, *Turbulent Skies*, 75-169; Bilstein, *Flight in America*, 169-178.

traveling public. Additionally, the military's decision to appropriate airlines' fleets into government service provided a constant stream of revenue during the wartime years and ensured that the vast majority of flights were full. In 1944, for instance, over 90% of seats were filled on domestic routes, a significantly higher percentage than in the years before the war.⁴⁹⁸ Simultaneously, airframe and engine manufacturers ended the war with coffers bursting from wartime contracts and new technologies ready to be put to use in the next generation of airliners. Finally, the war pulled the United States out of the Depression, ushering in a new era of prosperity that opened the possibility of air travel to untold numbers of Americans.

During the postwar years, American airlines experienced tremendous growth. Passenger traffic—which had begun to trend upwards in the period immediately before the war—grew exponentially, from 6.7 million in 1945 to 12.5 million a year later.⁴⁹⁹ In fact, between 1943 and 1950, passenger numbers for the scheduled domestic airlines grew more than six fold.⁵⁰⁰ Much of this growth reflected the conditions created by the war, but they also highlighted changing economic realities. Bucking the postwar inflationary trend, the average price of a ticket fell by one-third between 1940 and 1946. That fact, coupled with postwar prosperity, meant that airlines could, for the first time, compete directly against the railroads. Whereas Pullman service had accounted for more than six times the passenger miles of airlines in 1941, that advantage had shrunk by half five years later.⁵⁰¹ By 1951, America's railroads found themselves relegated to second place. In that year,

⁴⁹⁸ R.E.G. Davies, *A History of the World's Airlines* (London: Oxford University Press, 1964), 243.

⁴⁹⁹ Heppenheimer, *Turbulent Skies*, 124.

⁵⁰⁰ Davies, *A History of the World's Airlines*, 243.

⁵⁰¹ Heppenheimer, *Turbulent Skies*, 124-125.

airline passenger-miles surpassed those for railroads for the first time, a gap that would widen markedly in subsequent years.⁵⁰²

Commercial growth occurred under the watchful eye of the Civil Aeronautics Board (CAB). The CAB oversaw route allocation on all interstate airline travel, monitored ticket prices and airmail subsidies, and approved all new routes and air carriers. In this sense that body embraced the pre-Civil Aeronautics Act duties of the Post Office, Interstate Commerce Commission, and Bureau of Air Commerce, in the process further consolidating federal control over commercial development. Under CAB direction, the postwar years witnessed the steady expansion of airline service across the country, largely at the hands of the pre-war “big four” airlines—United, American, TWA, and Eastern. Though some new carriers like Delta did experience growth during this era, for the most part the CAB stifled attempts to upset its carefully crafted system.⁵⁰³

Significant changes also came to the passenger experience during the era. Wartime technological development and profitability sponsored the creation of a new generation of aircraft that dramatically changed air travel. Representing the pinnacle of piston-engined airline development, aircraft like the Douglas DC-7 and Lockheed Super Constellation introduced passengers to pressurized cockpits, allowing aircraft to fly above low-level turbulence and minimize discomfort during ascents and descents. These same aircraft also allowed for longer-range operation at higher speeds, for the first time permitting nonstop transcontinental operations in both directions

⁵⁰² Bilstein, *Flight in America*, 178. Significantly, only seven years later more passengers crossed the Atlantic on aircraft than on ships—signaling the death-knell for the cruise lines that had dominated transatlantic transport for more than a century.

⁵⁰³ See: Davies, *A History of the World's Airlines*, 243-270; Vietor, “Contrived Competition,” and Harold J. King, “The Rate-Making Function of the Civil Aeronautics Board,” *American Journal of Economics and Sociology*, Vol. 1, No. 2 (January, 1942), 167-190.

and ushering in the age of nonstop trans-Atlantic service.⁵⁰⁴ Simultaneously, these planes' operating efficiency built upon the profitability of the DC-3 and unquestionably made passenger service a lucrative undertaking. These aircraft represented such dramatic advances that aviation historian R.E.G. Davies claims that the "years after 1945 were an era of complete American dominance in the supply of civil transport aircraft."⁵⁰⁵

International service also witnessed dramatic change in the years following the war. Pan American, which before the war had been the "chosen instrument" of the U.S. overseas, lost its monopoly on international routes. Carriers like TWA now began to compete for the lucrative transatlantic run, and other airlines inaugurated service across the Pacific and to Central and South America. At the same time, the U.S. also entered into agreements governing international air travel. Most notably, the U.S. joined the International Air Transport Association (IATA), which functioned as a kind of CAB-writ-large in the international arena. The IATA oversaw safety standards, coordinated schedules for international routes, and served as a rate-fixing organization to limit competition.⁵⁰⁶ Like the CAB, the IATA functioned to promote structured, orderly growth, doing so with great success in the postwar years.⁵⁰⁷

⁵⁰⁴ Prior to the development of these aircraft, earlier planes like the Douglas DC-4 and DC-6 could cross the country nonstop from east to west, but prevailing winds prevented them from doing so in the other direction. These same aircraft could cross the Atlantic, but only with a refueling stop in Newfoundland—a time-consuming and annoying inconvenience for passengers.

⁵⁰⁵ Davies, *A History of the World's Airlines*, 432.

⁵⁰⁶ At its height, the IATA worked tirelessly to prevent any specific carrier from gaining a competitive advantage. The organization established standards for airline seat headroom and legroom, and even prescribed guidelines for in-flight menus to prevent a carrier from luring customers with better food than its competitors. See: Bilstein, *Flight in America*, 178.

⁵⁰⁷ *Ibid*, 425-426.

Ironically, though the years following World War II in many ways represented the pinnacle of U.S. airline operations, the period also saw commercial aviation cede its technological edge to the military. Wartime research and development—much of it funded by the government—paved the way for the creation of what President Dwight Eisenhower termed the “military industrial complex.” In the context of rising Cold War tensions and high military budgets, the postwar years underwrote a dynamic period of aeronautical development at government behest. Military test pilots like Chuck Yeager became the era’s aerial heroes, replacing figures like Charles Lindbergh, Amelia Earhart and Roscoe Turner. The Air Force’s test center at what would become Edwards Air Force Base in California developed into the focal point of advances, from the breaking of the sound barrier to the origins of the space program. Military development of new technologies like jet engines, rocketry, guided missiles, and flight at sustained supersonic speeds far surpassed the advances of civilian aircraft. However, many of the same companies that built airliners also held military contracts and, as a result, newly developed technologies eventually trickled down into the civilian sector.⁵⁰⁸

More than anything else, the postwar period reflected the continuing strength and vitality of Hoover’s vision for American aviation. Though technology advanced and passenger traffic grew dramatically, the foundational policies crafted by Hoover and his allies in the early 1920s remained more than adequate to the task of guiding the sustained growth of American air transport. The Civil Aeronautics Administration (CAA) oversaw a federal regulatory apparatus that remained true to Hoover’s initial desire to promote safety, oversight, and infrastructure creation.⁵⁰⁹ In fact, the CAA’s expanding role in supporting the implementation of radio navigation aids and instrument landing

⁵⁰⁸ See: Bilstein, *Flight in America*, 178-195; Heppenheimer, *Turbulent Skies*, 137-169, and David Courtwright, *Sky As Frontier: Adventure, Aviation and Empire* (College Station: Texas A&M University Press, 2004), 110-140.

⁵⁰⁹ The 1938 Civil Aeronautics Act created both the Civil Aeronautics Administration and the Civil Aeronautics Board.

systems during the period highlights the continued relevance of that vision. Simultaneously, CAB oversight of rates and routes proved foundational to the continued development of rational, structured growth—largely confirming the efficacy of Hoover and Brown’s actions during the late 1920s and early 1930s. Indeed, the extent to which these foundational policies remained relevant to a rapidly evolving commercial industry is astounding. Not until the late 1970s did the government move away from the vision, a decision that would ultimately have profoundly damaging consequences for American commercial aviation.⁵¹⁰

The seeds of that change began to emerge with the introduction of jet aircraft in the late 1950s. The launch of new jet airliners like the Boeing 707 and Douglas DC-8 began a period of rapid technological development that ultimately proved harmful for the airlines. Commercial jets burst onto the scene in 1949 when the British first flew their Comet—though that aircraft ultimately proved to be a disaster for the British air transport industry.⁵¹¹ U.S. manufacturers followed suit, with the Boeing and Douglas aircraft achieving their first flights in 1957 and 1958, respectively. These new aircraft achieved significantly higher speeds than their piston-engined counterparts, could fly even higher—thus avoiding turbulence—and were much quieter and vibrated less than propeller-driven aircraft. Jets were also glamorous, and passengers soon demonstrated a marked enthusiasm

⁵¹⁰ See: Solberg, *Conquest of the Skies*, 331-332, 361-367, and Heppenheimer, *Turbulent Skies*, 70-183, 261-291, 314-343.

⁵¹¹ Introduced into commercial service in early 1952, the Comet immediately demonstrated the massive gains in speed and altitude that jets could offer. Unfortunately, the British aircraft proved to be fragile, and two Comets were lost to crashes in early 1954 as a result of metal fatigue leading to explosive depressurization. In the wake of these tragedies, the British were forced to go back to the drawing board and totally redesign the aircraft, in the process losing the technological advantage to their American cousins. For more information see: Davies, *A History of the World’s Airlines*, 451-455.

for the new airliners. Pan American Airways formally opened the jet age for U.S. airlines in 1955 with an order for 20 Boeing 707s, and the other large U.S. carriers soon followed suit.⁵¹²

Airlines' embrace of the new jet aircraft, however, had adverse effects on their bottom lines. Jets entered service before the older piston-engined aircraft had reached the end of their useful lives. In the words of R.E.G. Davies, this resulted in a situation where "manufacturers designed, developed, and went into production with new types at a rate which . . . was faster than the depreciation period over which airlines were accustomed to paying for the aircraft." In other words, airlines were purchasing new jet aircraft before they had paid off the previous generation of planes, planes that were still new enough to provide valuable—and profitable—service. This situation, according to Davies, was unique to aviation, sharply distinguishing it from other transportation forms in which technological development never progressed more quickly than commercial growth could support.⁵¹³ As a result, by the early 1960s airlines struggled to secure the newest aircraft while simultaneously paying off their older counterparts—a situation that placed the carriers in increasingly precarious financial straits.⁵¹⁴

The introduction of jets also had profound implications for other aspects of America's air transport network. As C. E. Woolman, President of Delta Airlines, noted in 1956, "we are buying airplanes that haven't been fully designed, with millions of dollars we don't have . . . we are going to operate them off airports that are too small, in an air traffic control system that is too slow, and we

⁵¹² Ibid, 479-483.

⁵¹³ It should be noted that the airlines were not blameless in creating this situation. Juan Trippe—the head of Pan Am—almost singlehandedly pushed the entire U.S. airline industry to embrace jet aircraft with his initial purchase. Trippe moved aggressively to secure the new planes in order to maintain Pan Am's world leadership in technology and prestige. As a result, other carriers rushed to follow his lead, lest their reliance on outdated, propeller-driven aircraft cost them customers. See: Ibid, 482-485.

⁵¹⁴ Ibid, 479.

must fill them with more passengers than we have ever carried before.”⁵¹⁵ America’s airports and air traffic control system soon struggled to keep pace with the rapid development of newer, larger, faster aircraft.

At the dawn of the jet age only fourteen U.S. airports could support the new aircraft, meaning that, at least initially, airlines were sharply limited in the routes on which they could utilize jets.⁵¹⁶ Additionally, increasing passenger numbers quickly overwhelmed the ticketing and boarding systems in airports of the period. Chicago showed the way into the future with the opening of O’Hare Airport in 1955,⁵¹⁷ but for decades, airlines and passengers alike struggled with outdated ticketing, boarding, and luggage-handling operations.

These advances also forced the government to address serious shortcomings in its regulatory apparatus. A 1950 reorganization of the Commerce Department moved the CAA—formerly overseen directly by the Commerce Secretary—to the office of an undersecretary, relegating the agency to a subservient status. During Dwight Eisenhower’s Presidency the agency also witnessed budget cuts as part of the President’s efforts to curb spending. These circumstances resulted in the CAA being less and less able to effectively regulate an industry experiencing tremendous growth. This situation was forcefully brought home in June of 1956 when two airliners collided in mid air over the Grand Canyon in Arizona. In the wake of the disaster the CAA received a new influx of federal dollars, and under the leadership of a new director, James Pyle, moved aggressively to

⁵¹⁵ Quoted in Heppenheimer, *Turbulent Skies*, 170.

⁵¹⁶ Jet aircraft need significantly longer runways than do their piston-engined counterparts. For instance, a fully loaded Douglas DC-7, one of the largest propeller-driven airliners, needed roughly 7,000 feet of runway, whereas the initial Boeing 707 needed at least 11,500. For more information, see: *Ibid*, 185.

⁵¹⁷ The new airport was the first to utilize the now commonplace organizational scheme of terminals radiating out from a central hub, and also pioneered the use of moving jetways to board passengers.

modernize its operations. The Agency increasingly embraced a radar-based air traffic control system, clarified flight rules, and took an increasingly active role in establishing positive control over the nation's airways. Though much work remained to be done, by 1958 the CAA was well on the way to creating a federal regulatory apparatus fit for the jet age. In that year the Federal Aviation Act moved the CAA's function to a new, independent regulatory body, the Federal Aviation Agency. The new agency embraced a broader mandate that transferred control of air safety regulation from the CAB to the FAA and also encompassed control over a joint civil-military system of air navigation and air traffic control.⁵¹⁸

The introduction of jet aircraft also suggested the next logical step for commercial aviation: supersonic travel. American efforts to construct a supersonic transport (SST) represented the apogee of federal engagement with commercial aviation, but also exposed a growing opposition to federal oversight that would eventually lead to deregulation. The process began in 1961, when President John F. Kennedy authorized the FAA to undertake a series of feasibility studies to determine the viability of constructing a supersonic airliner. Kennedy's actions represented a reaction to both European and Russian intentions to construct such an aircraft, but also created a newly activist role for the FAA. At the President's behest, the FAA would oversee the development of an American SST, for the first time placing a federal agency in charge of the development of a commercial aircraft. Additionally, from the beginning, federal officials recognized that the government would have to heavily subsidize the construction of such an aircraft. Initially, Kennedy stated that the

⁵¹⁸ See: Heppenheimer, *Turbulent Skies*, 175-183. In 1972, the FAA—renamed the Federal Aviation Administration—was placed under the control of the newly-created Department of Transportation. The same year witnessed the creation of the National Transportation Safety Board, which took control of the CAB's role in investigating air crashes. Simultaneously, the CAB merged with the Department of Transportation, maintaining its control over airline rates and routes until deregulation in 1978. See: Solberg, *Conquest of the Skies*, 365.

government would carry up to 75 percent of the development cost, a figure that would rise to over 90 percent in subsequent years. This willingness to pay for the research and development of the SST again signaled a new expansion of federal power into the commercial sector.⁵¹⁹

In 1967, Boeing won the government contract to begin construction of the new SST, with the intention of completing an initial prototype no later than 1973. Almost immediately, however, the project met with significant and sustained public criticism. Initially, this focused on the SST's production of a sonic boom along its flight path.⁵²⁰ As early as 1970 the FAA responded with an order restricting supersonic operations to overwater routes. This limited the SST's appeal, making it unlikely that such an aircraft would find use for transcontinental service. Simultaneously, the project began to draw fire from environmental groups concerned that exhaust gasses from the high-altitude flights would harm the ozone layer.⁵²¹ By 1971 criticism had reached a level sufficient for Congress to vote down additional appropriations for the project, effectively signaling the end of the American SST program.⁵²²

The end of America's effort to create a supersonic airliner in many ways signaled the end of an era. From the mid 1920s until the early 1970s, America had led the world in aeronautical development. From the early airmail network to the DC-3 to the postwar aviation boom, American aircraft manufacturers and airlines had remained at the forefront of technological and commercial

⁵¹⁹ Heppenheimer, *Turbulent Skies*, 209-211.

⁵²⁰ Aircraft traveling at supersonic speed produce a sonic boom that travels along their direction of travel, affecting all areas on that line. Larger aircraft produce larger booms, and the SST was large enough to produce a sonic boom with the potential to shatter windows, above and beyond the annoyance the sound would create. For more information on SST technology, development, and the fight against supersonic air travel in the United States, see: Ibid, 227-260.

⁵²¹ Interestingly, Charles Lindbergh played a leading role in promoting environmentally-based opposition to the SST program. See: Ibid, 246.

⁵²² Bilstein, *Flight in America*, 265-266.

progress. Much of that fact, it seems, stemmed from Americans' enthusiasm for flying. Whether attending the National Air Races in the 1930s or rushing to get tickets on new jetliners, Americans' passion for aeronautics played a crucial role in promoting the continued growth of American air transport. By the early 1970s, however, it appeared that the consensus no longer applied to airline travel. A 1971 public opinion poll demonstrated that 85 percent of Americans opposed the continued development of an SST—an opinion that did not necessarily apply to all commercial flying, but an attitude that suggests Americans' changing relationship with aeronautics.⁵²³ No longer, it seems, did Americans prioritize technological development over environmental concerns. This changing relationship with aviation doomed the SST project, but also presaged a changing political consensus regarding federal engagement with commercial flying.

These changing attitudes found their ultimate manifestation in the Airline Deregulation Act of 1978. The Act represented a shattering of the consensus that had driven the growth of American commercial aviation for the preceding 53 years. Ironically, the push for deregulation was led by small airlines that did not share in the bounty CAB oversight offered to large carriers. As they had in 1932, these carriers allied themselves with Congressional Democrats who argued that the government had an obligation to support commercial competition. These forces were opposed by large, well-established airlines perfectly happy with a status quo that had brought them stable and profitable operations for more than half a century. Led by Senator Edward Kennedy (D-Massachusetts) and President Jimmy Carter, the proponents of deregulation ultimately won the day, supported by an American public who believed that the end of federal regulation would bring new lower fares. By the end of 1981 domestic airlines would have total freedom in choosing their

⁵²³ Heppenheimer, *Turbulent Skies*, 247.

routes—a freedom that would extend to ticket pricing a year later. By 1984 the CAB would fade out of existence.⁵²⁴

The Airline Deregulation Act formally closed the book on Herbert Hoover’s vision for American air commerce. The bill markedly liberalized the playing field for airlines, in the process removing the government’s ability to shape commercial growth by naming routes and setting rates. Though federal officials did maintain their responsibilities over air traffic control, navigational aids, licensing, and safety through the activities of the FAA and NTSB, 1978 signaled the end of a consensus that had guided U.S. airlines to world dominance. In many ways, the end of that consensus represented an admission that commercial aviation had reached a new level of maturity. Flying was now central to Americans’ existence—an integral part of America’s transportation network. In 1980 almost 300 million passengers flew Americas airways, a far cry from the tiny numbers of the pre World War II era.⁵²⁵ Simultaneously, however, it remained clear that airlines continued to be fragile economic operations. Federal subsidies and the structure imposed by the CAB had for the most part hidden that fact, but ever-climbing aircraft costs and rising energy prices suggested that American commercial aviation remained on shifting financial sands.

In the wake of deregulation, those factors pushed airlines towards their contemporary organizational forms. A series of mergers and acquisitions rocked the industry as many carriers found themselves unable to compete in the newly liberalized economic climate. Shockingly, Pan Am, for over half a century the most glamorous and dynamic airline in the world, fell victim to the prevailing conditions, shuttering operations in 1991. Surviving operations increasingly moved to embrace the “hub-and-spoke” system that limited costs and maximized aircraft utilization. Airlines

⁵²⁴ Ibid, 314-321.

⁵²⁵ Ibid, 314.

also offered travelers an increasing number of discount fares as they struggled to compete against their rivals. As a result of these changes, passenger numbers continued to grow, but many airlines found themselves in increasingly dire financial straits. The fragility of the contemporary industry profoundly reflects these conditions, as airlines struggle to avoid bankruptcy amid high energy costs, continuing worries about carbon emissions, and security concerns.⁵²⁶

Americans' relationship with commercial flying has also witnessed a significant shift. No longer do we thrill at the thought of taking to the skies. The hub-and-spoke system creates frustrating flight routings, and delays at major hubs often wreak havoc on the entire system. In the wake of the events of September 11, 2001—which, in many ways, represented only the most recent of a string of hijackings that trace their origins to the late 1960s—security concerns form an increasingly prominent facet of airline travel. Checkpoints, screening, bag checks, and worries about safety in the skies define the experience for many passengers. Flying has become something to be endured; no longer do we view commercial flying as glamorous and exciting. That fact certainly reflects commercial aviation's centrality to modern American life, but also highlights the difference between contemporary attitudes and those of the preceding three-quarters of a century. Today Americans complain about airport noise, protest over airline carbon emissions, and express outrage over security hassles, where their forbears thrilled at the opening of a new local airport.⁵²⁷

⁵²⁶ Bilstein, *Flight in America*, 285-292; Heppenheimer, *Turbulent Skies*, 314-344; Rose, Seely, and Barrett, *The Best Transportation System in the World*, 228-239, and Viotor, "Contrived Competition."

⁵²⁷ See: "Practical Traveler: Passengers Speak Up: The Views From the Back of the Plane," *The New York Times*, December 16, 2007; Matthew Wald, "E.P.A. is Prodded to Require Cuts in Airline Emissions," *The New York Times*, December 6, 2007; Randall Stross, "Theater of the Absurd at the TSA," *The New York Times*, December 17, 2006; Matthew Wald, "Tougher Security, More Delays: Many Foreign Visitors Face Increased Scrutiny at Airports, and Flight Cancellations Because of Threats are the Latest Headache," *The New York Times*, January 18, 2004, and Matthew Wald, "Aviation

Ironically, our contemporary frustrations with aviation serve to emphasize the prescient nature of Herbert Hoover's initial vision for American aeronautics. At the same time, however, they highlight how far we have come from those early days. Perhaps because of aviation's ambivalent place in the lives of contemporary Americans, interest in aviation—most significantly in the “golden age” between the world wars—remains significant. The Smithsonian Institution's National Air and Space Museum offers the clearest evidence of Americans' continued love affair with flying. In 2009, more than seven million visited the museum on the national mall, and over a million more frequented the museum's annex near Dulles Airport.⁵²⁸ In fact, since it opened in 1976 the Air and Space Museum has consistently vied for the honor of hosting more visitors than any other Smithsonian institution. Contemporary visitors can experience galleries devoted to World War I, World War II, the “Pioneers of Flight” and the “Golden Age of Flight,” as well as an exhibition focused on commercial air transport entitled “America by Air.” The museum holds Charles Lindbergh's *Spirit of St. Louis*, the X-1 in which Chuck Yeager broke the sound barrier in 1947, a Douglas World Cruiser from the first around-the-world flight, and the X-15, the fastest aircraft ever to fly, in addition to myriad other treasures. Americans' fascination with these aircraft highlight the enduring passion this country has for flying and its continued interest in the history of aeronautics.

Both the “Golden Age of Flight” and “America by Air” exhibits focus on the years between the world wars, and each speaks powerfully to Americans' collective narrative of that era. Both present

Experts Bemoan Delays in the Sky: Air Traffic System is Scorned as Badly in Need of Modernization,” *The New York Times*, September 29, 1999.

⁵²⁸ “Smithsonian Institution Has Record Year in 2009, With 30 Million Visits,” *The Washington Post*, January 7, 2010; “National Air and Space Museum Press Kit,” http://www.nasm.si.edu/events/pressroom/presskits/museumkit/facts_uhc.cfm, Accessed July 12, 2010.

visitors with overwhelmingly progressive visions of American aviation and highlight the nation's leading role in interwar aeronautics. They emphasize technological development, commercial growth, and pilots' bravery, daring, and heroism while narrating flying's seemingly inevitable rise to national and world prominence. In doing so, however, these depictions oversimplify interwar aviation by ignoring many of the ambiguous aspects of aviation's growth and overlooking the complexities associated with commercial flying's political and economic history.

Opened in 1982, the "Golden Age of Flight" exhibit presents the clearest evidence of the Air and Space Museum's adoption of a celebratory narrative. Focused on air racing, record-setting flights, military aviation, private flying, and technology, the exhibit codifies the interwar period's triumphal legacy. The exhibit's introductory panel explains that the period "is a rather loosely defined period that in its broadest sense includes the years between the World Wars . . . The 'most golden' years of the period were from shortly after Lindbergh's flight in 1927 through 1939." Reading further, visitors learn that the "Golden Age is considered 'golden' because of the many advances in aviation technology, the many record flights, and the intense interest of the public in aviation."⁵²⁹

The Smithsonian's explicit embrace of the term "golden age" highlights the museum's focus on presenting an overwhelmingly positive narrative. In fact, the exhibit functions to explicitly emphasize the glamour and heroism of the era. The introductory panel continues by explaining that the "golden age" was "a time when an individual, with little or no capital, could suddenly propel himself into the forefront of the field. Heroes were made overnight; companies boomed and busted in the course of a season. The names of the air race and aerobatic pilots, the explorers and

⁵²⁹ "Introductory Panel," "The Golden Age of Flight" Exhibit, Smithsonian National Air and Space Museum, Washington, D.C.

adventurers were household words, and their exploits were constantly in headlines and newsreels.”⁵³⁰ These are not new images, but their prevalence in the Air and Space Museum speaks to the universality of this narrative.

In their exhibit proposal, Air and Space Museum staff clearly acknowledged the prevalence of that narrative. Lamenting the fact that “today it is difficult to learn who won the Reno Unlimited Air Race⁵³¹ or even that it took place unless there was a major accident during the event,” scriptors harked longingly back to the days when “the winners of the Thompson and Bendix races⁵³² were front page news.” As such, they presented the “Golden Age of Flight” exhibit as a way to educate the public about the many “classic and important aircraft produced during that period,” and the many pilots who “established reputations that endure to this day.”⁵³³

Significantly, the “Golden Age of Flight” exhibit ignores aviation’s at-times contentious political history, and fails to address Americans’ widespread concerns over safety during the period. While its focus on air racing, record-setting flights, and the personal heroism of many interwar pilots does accurately reflect the widespread excitement Americans expressed about flying during the era—and contemporary Americans’ desires to learn about the most exciting and triumphal aspects of this dynamic period—the exhibit does patrons a disservice by failing to account for the complexities inherent in the history of the period. Most obviously, the exhibit makes no mention of Americans’ widespread worries about aviation’s safety, and speaks sparingly of the significant number of aerial

⁵³⁰ Ibid.

⁵³¹ The modern descendant of the closed-course races begun in the 1920s.

⁵³² The Thompson was the highlight of the national air races; an unlimited closed-course race designed to provide spectators with a thrilling show as planes flew laps around pylons close to the ground. The Bendix was a cross-country race.

⁵³³ Concept Script, “Airplanes of the Golden Age,” co-scripted by Claudia Oakes and Donald Lopez, January 20, 1982, Box 1, Accession 07-141, Smithsonian Institution Archives, Washington, D.C.

pioneers who met their deaths as a direct result of their efforts to fly higher, farther, and faster than ever before. As such, the “Golden Age of Flight” offers an incomplete and in many ways misleading portrait of the era, and consequently misses the opportunity to educate visitors about the complex nature of interwar aviation.

The more recent “America By Air” exhibit falls victim to many of the same limitations. Opened in November of 2007, the new exhibit represents an effort to educate the public about the origins and development of American commercial aviation. “America By Air” offers patrons a thematic overview of commercial flying from its origins before the First World War to the present day. Organized around three central threads—the federal government’s efforts to shape the industry, the effects of technological development, and the passenger experience—the exhibit purports to provide a comprehensive treatment of aviation’s commercial development. The exhibit retreats from the explicitly congratulatory context that defined the earlier exhibition, and instead displays a broadly progressive narrative emphasizing the federal government’s guiding hand in technological and commercial development. Curators break up the history of commercial aviation into several temporal sections that pair informational panels describing narrative history with thematic presentations focused on biographies of pilots and regulators, technological advances, and interesting visual representations. Two sections—the “Early Years of Air Transportation” and “Airline Expansion and Innovation”—focus on the interwar period. The former details the years from World War I until 1926, while the later describes the period from 1927 to the beginning of World War II.

“The Early Years of Air Transportation” details the origins of the American airmail network, from the beginnings of the Army’s fledgling service to the private takeover in the years following the passage of the Kelly Act. Throughout, its narrative is driven by a focus on the government’s active role in promoting the growth of air transport. Visitors learn that the Post Office “began using

airplanes to move the mail in order to help establish a national air transportation system,”⁵³⁴ and that the Post Office and Commerce Department “worked together to develop better navigation technologies.”⁵³⁵ By the summer of 1927, the exhibit explains, federal efforts had created “an effective commercial airline system . . . providing reliable air mail service” and continuing “to shape the new industry by regulating airways, guiding aviation’s growth, and promoting safety and technology.”⁵³⁶

The “Early Years of Air Transportation” section also speaks directly to the legislative foundation for that commercial network. A small panel showcasing the pen Calvin Coolidge used to sign the 1925 Kelly Act describes that bill, focusing on the commercial gains it engendered by allowing the Post Office to contract with private carriers to transport the mail. The panel also offers a succinct summary of the 1926 Air Commerce Act, again emphasizing the federal government’s guiding hand.⁵³⁷ Additionally, curators offer brief biographies of prominent governmental figures such as Paul Henderson, Second Assistant Postmaster General during the early years of airmail service, Clyde Kelly, champion of the 1925 Contract Airmail Act that came to bear his name, and William MacCracken, Jr., the primary author of the Air Commerce Act and the first Assistant

⁵³⁴ “The Post Office Begins Flying the Mail” Panel, “The Early Years of Air Transportation” Section, “America by Air” Exhibit, Smithsonian National Air and Space Museum, Washington, D.C.

⁵³⁵ “Beacons Replace Bonfires” Panel, “The Early Years of Air Transportation” Section, “America by Air” Exhibit, Smithsonian National Air and Space Museum, Washington, D.C.

⁵³⁶ “Airlines Take Over Carrying the Mail” Panel, “The Early Years of Air Transportation” Section, “America by Air” Exhibit, Smithsonian National Air and Space Museum, Washington, D.C.

⁵³⁷ “The Legislative Foundation” Panel, “The Early Years of Air Transportation” Section, “America by Air” Exhibit, Smithsonian National Air and Space Museum, Washington, D.C.

Secretary of Commerce for Aeronautics. Brief sketches, these panels proffer a concise outline of each man's accomplishments, and give patrons context for the exhibit's broader narrative.

The exhibit section, however, fails to engage several prominent issues related to this period in commercial aviation's development. Most notably, the exhibit overlooks Herbert Hoover's foundational role in creating and promoting American federal aviation policy. In addition, curators accept Post Office and Commerce Department actions as a given, failing to explain that informal Post Office subsidies actually represented one of a number of possible federal strategies for dealing with air transport. No mention, for example, is made of European countries' move to nationalize major carriers—a viable and successful method of state-sponsored economic development. Finally the exhibit section does not place aviation's commercial growth in the larger context of American transportation policy. The script does not mention aviation's relative position vis-à-vis railroads or shipping; this fact simplifies the exhibit's narrative and again emphasizes the progressive nature of aeronautical development, but fails to provide visitors with a comprehensive overview of relevant issues.

Like the preceding section, curators organize “Airline Expansion and Innovation” around a progressive chronological narrative. Again emphasizing the government's role in promoting commercial growth, curators highlight the “solid infrastructure” that “took shape under government guidance” as “regulatory reforms reshaped the industry.”⁵³⁸ The section opens by highlighting the supposed need to reform the late 1920s airmail system. “While airlines often prospered flying the mail,” the script relates, “the system had problems.” Specifically, “the Post Office's bidding process for air routes resulted in an unfair payment system, and short-term contracts discouraged airlines

⁵³⁸ “Introductory Panel,” “Airline Expansion and Innovation” Section, “America by Air” Exhibit, Smithsonian National Air and Space Museum, Washington, D.C.

from investing in long-term development.” The solution lay in “larger, multi-engine aircraft,” that had the capability to carry passengers as well as cargo. Unfortunately, “such airplanes were too costly to operate. Reform was needed for the airline system to grow.”⁵³⁹

According to the exhibit script, the impetus for reform came almost exclusively from Postmaster General Walter F. Brown. Referring to Brown as a “visionary,” curators paint Brown as “the most important architect of the nation’s passenger airline industry.” He “helped draft legislation [the 1930 McNary-Watres Act] to reform the way airlines were paid, streamline the nation’s air routes, and encourage airline growth and innovation.” In so doing, Brown “made subsidies for airlines more fair” by changing the basis of payment from a system based on weight to one based on space, and “provided economic incentives to encourage airlines to carry passengers.”⁵⁴⁰

By casting Brown as a visionary reformer, “America By Air” presents a narrowly defined, and in some ways one-sided, perspective on a contentious period in commercial aviation history. Though curators’ characterization of Brown coheres with the exhibit’s focus on offering patrons a progressive vision of governmental engagement with commercial aeronautics, doing so implicitly ties that narrative to a particular definition of that vision. Specifically, Brown’s pride of place signals curators’ tacit acknowledgement that Brown’s progressive Republican vision for American aviation represented the correct developmental path.

That perspective, moreover, has immediate consequences for the remainder of the “Airline Expansion and Innovation” section. Subsequent panels refer dismissively to Brown’s “Spoils

⁵³⁹ “The Need For Reform” Panel, “Airline Expansion and Innovation” Section, “America by Air” Exhibit, Smithsonian National Air and Space Museum, Washington, D.C.

⁵⁴⁰ “A Visionary Reforms the Industry” Panel, “Airline Expansion and Innovation” Section, “America by Air” Exhibit, Smithsonian National Air and Space Museum, Washington, D.C.

Conferences” and the airmail “Scandal” of 1934. Describing the 1930 conferences, visitors read that “to ensure the survival of well-run passenger airlines,” the Postmaster “encouraged them to merge with air mail lines—a move that saved many airlines from extinction during the Depression.” The panel goes on to relate that Brown “forced the mergers in the interest of efficiency and excluded small, marginal carriers.”⁵⁴¹ The exhibit characterizes the 1934 uproar over supposed corruption and collusion as “unfounded,” and relates that President Roosevelt cancelled airmail contracts in response to “political pressure” rather than from any genuine desire to reform the industry.⁵⁴²

These depictions suggest that Roosevelt and Congressional Democrats bore responsibility for attempting to destroy Brown’s “visionary” reforms out of a partisan desire to discredit Brown, rather than any legitimate concern over airmail policy. While historians can debate the relative merits of Brown’s policies, the museum’s one-sided depiction of this contentious period in commercial aviation’s development oversimplifies the issue and unfairly villainizes Brown’s opponents. Certainly, Walter Brown played a crucial role in promoting the development of commercial air transport in the United States. Visitors leave “America by Air,” however, in the mistaken belief that Franklin Roosevelt’s only contribution to commercial aeronautics lay in a selfish desire to score political points to the detriment of American aeronautics.

Significantly, this means that “America By Air” fails to address Roosevelt’s role in creating the Federal Aviation Commission, his support for the 1938 Civil Aeronautics Act, or his promotion of public works spending on airways and airports. The omission of these facts results in a coherent and easily digestible narrative of Progressive Republican support for aviation, but does not do justice to

⁵⁴¹ Ibid.

⁵⁴² “The Air Mail ‘Scandal’” Panel, “Airline Expansion and Innovation” Section, “America by Air” Exhibit, Smithsonian National Air and Space Museum, Washington, D.C.

the complexities inherent in the development of federal policy. Though not as egregiously as the “Golden Age of Flight,” “America By Air” maintains the museum’s focus on offering visitors a dumbed-down treatment of American aviation, a treatment that overlooks or dismisses potentially troublesome or ambiguous aspects of aeronautical development and highlights a story defined by commercial progress and technological innovation. As such, these exhibits emphasize the ongoing need for a comprehensive analysis of this seminal period in aeronautical development.

Its shortcomings notwithstanding, the Air and Space Museum’s treatment of the interwar period highlights Americans’ continued interest in the era. Air travel’s ambivalent place in contemporary Americans’ lives, it seems, has only furthered the attractiveness of a period of dynamic growth, individual heroism, and commercial success. In our excitement, however, we should not lose sight of the complex and often contentious nature of aeronautical development during the era. The years between the world wars fostered the creation of our modern air transport system. A result of the work of a visionary band of advocates, commercial aviation grew from humble beginnings to span the country, oceans, and eventually the world. That growth occurred largely as a result of focused federal actions. From the crafting and passage of the 1926 Air Commerce Act to the activities of the WPA’s Airways and Airports Division, federal officials and federal dollars underwrote a coherent program of aeronautical development. Without that federal engagement, our modern transportation infrastructure would undoubtedly look far different. A largely untold story, the evolution of federal aviation policy remains foundational to understanding America’s developmental path in the 20th century.

Bibliography

Primary Sources:

Archival Collections:

Columbia University Special Collections, New York, New York.

Columbia University Oral History Project, “Aviation” section

Herbert C. Hoover Presidential Library, West Branch, Iowa.

Herbert Hoover Papers as Secretary of Commerce
Presidential Campaign General Correspondence
Herbert Hoover Presidential Papers
William MacCracken Jr. Papers
Clarence M. Young Oral History

Franklin D. Roosevelt Presidential Library, Hyde Park, New York.

Franklin D. Roosevelt Papers Relating to Family, Business and Personal Affairs
Franklin D. Roosevelt Papers as Assistant Secretary of the Navy
Franklin D. Roosevelt Papers as Governor of New York
Franklin D. Roosevelt Presidential Papers
Harry Hopkins Papers
James Farley Papers
James Roosevelt Papers
Eleanor Roosevelt Papers

Manuscript Division, Library of Congress, Washington, D.C.

Hugo Black Collection

National Archives and Records Administration, Washington, D.C.

Record Group 28—Records of the Post Office Department
Record Group 46—Records of the Senate Special Committee to Investigate Ocean Mail and Air Mail Contracts

National Archives and Records Administration, College Park, Maryland.

Record Group 69—Records of the Works Progress Administration
Record Group 135—Records of the Public Works Administration
Record Group 197—Records of the Civil Aeronautics Board
Record Group 237—Records of the Federal Aviation Administration and Preceding Agencies

Smithsonian Institution Archives, Washington, D.C.

Accession 00-008—National Air and Space Museum, Aeronautics Department, Chairman Records, 1990-1994

Accession 07-141—National Air and Space Museum, Department of Aeronautics, Exhibition Records, 1971-1988

Accession 07-184—National Air and Space Museum, Department of Aeronautics, Exhibition Records, 1972-1985

Accession 099-081—National Air and Space Museum, Department of Aeronautics, Records, 1965, 1970-1989

Accession 99-127—National Air and Space Museum, Aeronautics Department, Exhibition Records, 1971-1974

University of Miami Special Collections, Miami, Florida

Pan American Airways Papers

Periodicals:

Newspapers:

The New York Times 1918-2010

The Washington Post 1918-2010

Magazines:

Life 1936-1939

Newsweek 1933-1939

Reader's Digest 1922-1939

The Commonwealth 1924-1939

The Nation 1918-1939

The Saturday Evening Post 1918-1939

Time 1923-1939

Secondary Sources:

Books and Articles:

Bailey, Elizabeth E. "Aviation Policy: Past and Present." *Southern Economic Journal*, Vol. 69, No. 1 (July 2002): 12-20.

Ball, Howard. *Hugo L. Black: Cold Steel Warrior*. New York: Oxford University Press, 1996.

Banner, Stuart. *Who Owns the Sky?: The Struggle to Control Airspace From the Wright Brothers On*. Cambridge: Harvard University Press, 2008.

Barber, William J. *From new era to New Deal: Herbert Hoover, the economists, and American economic policy, 1921-1933*. New York: Cambridge University Press, 1985.

Barnes, Catherine A. *Journey From Jim Crow: The Desegregation of Southern Transit*. New York: Columbia University Press, 1983.

Bednarek, Janet R. Daly. *America's Airports: Airfield Development, 1918-1947*. College Station: Texas A&M University Press, 2001.

Berg, A. Scott. *Lindbergh*. New York: G.P. Putnam's Sons, 1998.

Bergerud, Eric. *Fire in the Sky: The Air War in the South Pacific*. Boulder: Westview Press, 2000.

Bernstein, Barton J. "The New Deal: The Conservative Achievements of Liberal Reform," in Bernstein, Barton J., ed. *Towards a New Past: Dissenting Essays in American History*. New York: Vintage Books, 1967.

Biddle, Wayne. *Barons of the Sky: From Early Flight to Strategic Warfare: The Story of the American Aerospace Industry*. Baltimore: The Johns Hopkins University Press, 2001.

Bilstein, Roger E. *Flight in America: From the Wrights to the Astronauts*. Baltimore: Johns Hopkins University Press, 2001.

— *Flight Patterns: Trends in Aeronautical Development in the United States, 1918-1929*. Athens: University of Georgia Press, 1983.

Boyne, Walter J. *Beyond the Wild Blue: A History of the United States Air Force*. New York: St. Martin's Press, 1997.

— *Clash of Wings: World War II in the Air*. New York: Simon and Schuster, 1994.

Brinkley, Alan. *Voices of Protest: Huey Long, Father Coughlin & The Great Depression*. New York: Vintage Books, 1983.

— *The End of Reform: New Deal Liberalism in Recession and War*. New York: Alfred A. Knopf, 1995.

Brooks, Peter W. "The Development of Air Transport." *Journal of Transport Economics and Policy*, Vol. 1, No. 2 (May, 1967): 164-183.

Brown, Anthony E. *The Politics of Airline Deregulation*. Knoxville: University of Tennessee Press, 1987.

Bunke, Harvey C. "Commercial Aviation and the Civil Aeronautics Act of 1938." *Southern Economic Journal*, Vol. 20, No. 4. (April 1954): 356-368.

- Burner, David. *Herbert Hoover: A Public Life*. New York: Atheneum, 1984.
- Burns, James MacGregor. *The Lion and the Fox: The First Political Biography of Franklin Delano Roosevelt*. New York: Harcourt, Brace & World, Inc., 1956.
- Butler, Susan. *East to the Dawn: The Life of Amelia Earhart*, Reading: Addison-Wesley, 1997.
- Button, Kenneth, ed. *Airline Deregulation: International Experiences*. London: David Fulton Publishers, 1991.
- Caidin, Martin. *Barnstorming*. New York: Bantam, 1965.
- Chambers II, John Whitclay. *The Tyranny of Change: America in the Progressive Era, 1900-1917*. New York: St. Martins Press, 1980.
- Cochran, Jacqueline, *The Stars at Noon*. Boston: Little Brown and Company, 1954.
- Conkin, Paul K. *The New Deal* 3d ed. Wheeling: Harlan Davidson, Inc., 1992.
- Cook, James, J. *Billy Mitchell*. Boulder: Lynne Reinner, 2002.
- Corn, Joseph J. *The Winged Gospel: America's Romance With Aviation, 1900-1950*. New York: Oxford University Press, 1983.
- Courtwright, David. *Sky As Frontier: Adventure, Aviation and Empire*. College Station: Texas A&M University Press, 2004.
- Crouch, Tom D. *A Dream of Wings: Americans and the Airplane, 1887-1905*. New York: W.W. Norton and Company, 2002.
- ed. *Charles A. Lindbergh: An American Life*. Washington, D.C.: Smithsonian Institution Press, 1977.
- Daley, Robert. *An American Saga: Juan Trippe and his Pan American Empire*. New York: Random House, 1980.
- David, Paul T. *The Economics of Air Mail Transportation*. Washington, D.C.: The Brookings Institution, 1934.
- Davies, R.E.G. *A History of the World's Airlines*. London: Oxford University Press, 1964.
- Airlines of the United States Since 1914*. Washington, D.C.: Smithsonian Institution Press, 1998.

—*Rebels and Reformers of the Airways*. Washington, D.C.: Smithsonian Institution Press, 1987.

Davis, Kenneth S. *F.D.R.: The New Deal Years, 1933-1937, A History*. New York: Random House, 1979.

Degler Carl. *Out of Our Past: The Forces that Shaped Modern America*. New York: Harper and Row, 1984.

Dennenberg, Barry. *An American Hero: The True Story of Charles A. Lindbergh*. New York: Scholastic, 1996.

Dierikx, Marc. *Clipping the Clouds: How Air Travel Changed the World*. Westport: Praeger Publishers, 2008.

Dilger, Robert J. *American Transportation Policy*. Westport: Praeger Publishers, 2003.

Fortier, Norman. *An Ace of the Eighth: An American Fighter Pilot's Air War in Europe*. New York: Ballantine Books, 2003.

Fraser, Chelsea. *Heroes of the Air*. New York: Thomas Crowell Company, 1942.

—*The Story of Aircraft*. New York: Thomas Crowell Company, 1939.

Freidel, Frank. *Franklin Roosevelt: A Rendezvous with Destiny*. Boston: Little, Brown and Company, 1990.

Frederick, John H. *Commercial Air Transportation*. Homewood: Richard D. Irwin, 1961.

Freeman, Roger A. *The Mighty Eighth: A History of the Units, Men, and Machines of the U.S. 8th Air Force*. London: Cassell & Co., 2000.

—*Zemke's Wolfpack: The True Story of Hub Zemke and the 56th Fighter Group—Top Aces Over Europe in World War II*. New York: Pocket Books, 1988.

Fritzsche, Peter. *A Nation of Fliers: German Aviation in the Popular Imagination*. Cambridge: Harvard University Press, 1992.

Gaudry, Marc and Mayes, Robert, eds. *Taking Stock of Air Liberalization*. Boston: Kluwer Academic Publishers, 1999.

Gibbs-Smith, Charles Harvard. *Aviation: A Historical Survey From its Origins to the End of World War II*. London: Her Majesty's Stationery Office, 1970.

- Gilbert, Glen. *Air Traffic Control: The Uncrowded Sky*. Washington, D.C.: Smithsonian Institution Press, 1973.
- Glines, Carrol V. *The Saga of Air Mail*. Princeton: Van Nostrand, 1968.
- Goldstein, Lawrence. *The Flying Machine and Modern Literature*. Bloomington: Indiana University Press, 1986.
- Hamilton, James. *The Power to Probe: A Study of Congressional Investigations*. New York: Random House, 1976.
- Hawley, Ellis. *The New Deal and the Problem of Monopoly: A Study in Economic Ambivalence* 2d ed. New York: Fordham University Press, 1995.
- ed. *Herbert Hoover as Secretary of Commerce: Studies in New Era Thought and Practice*. Iowa City: University of Iowa Press, 1981.
- Hawley, Ellis W., Rothbard, Murry N., Himmerburg, Robert F. and Nash, Gary D. *Herbert Hoover and the Crisis of American Capitalism*. Cambridge: Schenkman Publishing Company, 1973.
- Haynesworth, Leslie and Toomey, David. *Amelia Earhart's Daughters: The Wild and Glorious Story of American Women Aviators From World War II to the Dawn of the Space Age*. New York: William Morrow and Co., 1998.
- Heppenheimer, T.A. *Turbulent Skies: The History of Commercial Aviation*. New York: John Wiley and Sons, 1986.
- Hofstadter, Richard. *The Age of Reform: From Bryan to F.D.R.* New York: Vintage Books, 1955.
- Hudson, James J. *Hostile Skies: A Combat History of the America Air Service in World War I*. Syracuse: Syracuse University Press, 1968.
- Huthmacher, J. Joseph, and Susman, Warren I., eds. *Herbert Hoover and the Crisis of American Capitalism*. Cambridge: Schenkman Publishing Company, 1973.
- Jablonski, Edward. *Flying Fortress: The Illustrated Biography of the B-17s and the Men Who Flew Them*. New York: Doubleday, Inc., 1965.
- Josephson, Mathew. *Empire of the Air: Juan Trippe and the Struggle for World Airways*. New York: Harcourt, Brace and Company, 1944.
- King, Harold J. "The Rate-Making Function of the Civil Aeronautics Board." *American Journal of Economics and Sociology*, Vol. 1, No. 2 (January, 1942): 167-190.

Kolko, Gabriel. *The Triumph of Conservatism: A Reinterpretation of American History, 1900-1916*. New York: The Free Press, 1963.

—*Railroads and Regulation, 1877-1916*. Princeton: Princeton University Press, 1965.

Kommons, Nick A. *Bonfires to Beacons: Federal Civil Aviation Policy Under the Air Commerce Act*. Washington, D.C.: Smithsonian Institution Press, 1989.

Krog, Carl E. and Tanner, William R. *Herbert Hoover and the Republican Era: A Reconsideration*. Lanham: University Press of America, 1984.

Launius, Roger D. *Reconsidering a Century of Flight*. Chapel Hill: University of North Carolina Press, 2002.

Lawson, Alan. *A Commonwealth of Hope: The New Deal Response to Crisis*. Baltimore: The Johns Hopkins University Press, 2006.

Leary Jr., William M. *Aerial Pioneers: The U.S. Airmail Service, 1918-1927*. Washington, D.C.: Smithsonian Institution Press, 1985.

—“At the Dawn of Commercial Aviation: Inglis M. Uppercru and Aeromarine Airways.” *The Business History Review*, Vol. 53, No. 2 (Summer, 1979): 180-193.

Lee, David D. “Herbert Hoover and the Development of Commercial Aviation, 1921-1926.” *The Business History Review*, Vol. 58, No. 1 (Spring, 1984): 78-102.

Lerner, Michael A. *Dry Manhattan: Prohibition in New York City*. Cambridge: Harvard University Press, 2007.

Leuchtenburg, William E. *Franklin Roosevelt and the New Deal: 1932-1940*. New York: Harper, 1963.

—*The Perils of Prosperity, 1914-1932*. Chicago: University of Chicago Press, 1993.

—*Herbert Hoover*. New York: Times Books, 2009.

Levine, Michael E. “Regulating Airmail Transportation.” *Journal of Law and Economics*. Vol. 18, No. 2 (October, 1975): 317-359.

Lewis, David W., ed. *Airline Executives and Federal Regulation: Case Studies in American Enterprise from the Airmail Era to the Dawn of the Jet Age*. Columbus: The Ohio State University Press, 2000.

- Lewis, David W. and Trimble, William F. *The Airway to Everywhere: A History of All American Aviation, 1937-1953*. Pittsburgh: University of Pittsburgh Press, 1988.
- Lewis, David W. and Newton, Wesley Phillips. *Delta: History of an Airline*. Athens: University of Georgia Press, 1979.
- Lipsner, Benjamin B. *The Airmail: From Jennies to Jets*. New York: Wilcox & Follett Company, 1951.
- Lyons, Eugene. *Herbert Hoover: A Biography*. Garden City, New York: Doubleday & Company, Inc., 1948.
- Manchester, William. *The Glory and the Dream: A Narrative History of America, 1932-1972*. New York: Bantam Books, 1974.
- Maynard, Crosby. *Flight Plan for Tomorrow: The Douglas Story*. California: Douglas Aircraft Company, 1962.
- McGraw, Thomas K. ed. *Regulation in Perspective: Historical Essays*. Cambridge: Harvard University Press, 1981.
- McManus, John C. *Deadly Sky: The American Combat Airman in World War II*. Novato: Presido, 2002.
- Meyer, John R. and Oster, Clinton V. eds. *Airline Deregulation: The Early Experience*. Boston: Auburn House Publishing Company, 1981.
- Meyer, Lisa D. *Creating GI Jane: Sexuality and Power in the Women's Army Corps During World War II*. New York: Columbia University Press, 1996.
- Mosley, Leonard. *Lindbergh: A Biography*. New York: Doubleday & Company, Inc., 1976.
- Nalty, Bernard C., ed. *Winged Shield, Winged Sword: A History of the United States Air Force*. Washington, D.C.: The United States Air Force, 1997.
- Nash, Gerald D. *The Great Depression and World War II: Organizing America, 1933-1945*. New York: Bedford/St. Martins, 1979.
- Nash, Lee, ed. *Understanding Herbert Hoover: Ten Perspectives*. Stanford: Hoover Institution Press, 1987.
- Nye, David E. *American Technological Sublime*. Cambridge: Massachusetts Institute of Technology Press, 1994.

Olsen, James Stuart. *Herbert Hoover and the Reconstruction Finance Corporation*. Ames: Iowa State University Press, 1977.

Overy, Richard J. *The Air War, 1939-1945*. Washington, D.C.: Potomac Books, Inc., 2005.

Pedigree of Champions: Boeing Since 1916. Seattle: Boeing, 1985.

Pisano, Dominick. *To Fill the Skies with Pilots: The Civilian Pilot Training Program, 1939-1946*. Urbana: University of Illinois Press, 1993.

—ed. *The Airplane in American Culture*. Ann Arbor: University of Michigan Press, 2003.

Pisano, Dominick and van der Linden, F. Robert. *Charles Lindbergh and the Spirit of St. Louis*. Washington, D.C.: Smithsonian Institution Press, 2002.

Pisano, Dominick and Lewis, Cathleen S., eds. *Air and Space Historiography: An Annotated Bibliography*. New York: Garland Publishing, Inc., 1988.

Provenzo Jr., Eugene F. "The St. Petersburg-Tampa Airboat Line." *The Florida Historical Quarterly*, Vol. 58, No. 1 (July, 1979): 72-77.

Rae, John B. "Financial Problems of the American Aircraft Industry, 1906-1940." *The Business History Review*, Vol. 39, No. 1 (Spring 1965): 99-114.

Rich, Doris L., *Jackie Cochran: Pilot in the Fastest Lane*. Gainesville: University Press of Florida, 2007.

—*Amelia Earhart: A Biography*. Washington, D.C.: Smithsonian Institution Press, 1989.

Rickenbacker, Edward V. *Rickenbacker*. Englewood Cliffs: Prentice-Hall, Inc., 1967.

Rose, Mark, Seely, Bruce and Barrett, Paul. *The Best Transportation System in the World: Railroads, Trucks, Airlines, and American Public Policy in the Twentieth Century*. Columbus: The Ohio State University Press, 2006.

Rust, Daniel L. *Flying Across America: The Airline Passenger Experience*. Norman: University of Oklahoma Press, 2009.

Sampson, Anthony. *Empire of the Sky: The Politics, Contests and Cartels of World Airlines*. New York: Random House, 1984.

Schary, Philip B. "The Civil Aeronautics Board and the All-Cargo Airlines: The Early Years." *The Business History Review*, Vol. 41 No. 3 (Autumn, 1967): 272-284.

Schlesinger Jr., Arthur. *The Age of Roosevelt: The Coming of the New Deal*. Boston: Houghton Mifflin, 1959.

Sherry, Michael S. *The Rise of American Airpower: The Creation of Armageddon*. New Haven: Yale University Press, 1987.

Smith, Henry Ladd. *Airways: The History of Commercial Aviation in the United States*. New York: Knopf, 1942.

Smith, Jason Scott. *Building New Deal Liberalism: The Political Economy of Public Works, 1933-1956*. New York: Cambridge University Press, 2006.

Smith, Jean Edward. *FDR*. New York: Random House, 2007.

Solberg, Carl. *Conquest of the Skies: A History of Commercial Aviation in America*. Boston: Little, Brown and Company, 1979.

Taylor, Nick. *American Made The Enduring Legacy of the WPA: When FDR Put the Nation to Work*. New York: Bantam Books, 2009.

van der Linden, F. Robert. *Airlines and Airmail: The Post Office and the Birth of the Commercial Aviation Industry*. Lexington: The University Press of Kentucky, 2002.

Vietor, Richard H. K. "Contrived Competition: Airline Regulation and Deregulation, 1925-1988." *The Business History Review*, Vol. 64, No. 1 (Spring, 1990): 61-108.

Vorderman, Don. *The Great Air Races*. New York: Bantam, 1969.

Ware, Susan. *Beyond Suffrage: Women in the New Deal*. Cambridge: Harvard University Press, 1987.

Weirather, Larry. *The China Clipper, Pan American Airways and Popular Culture*. Jefferson: MacFarland and Company Publishers, 2007.

Wells, Mark K. *Courage and Air Warfare: The Allied Aircrew Experience in the Second World War*. London: Frank Cass, 1995.

Wilson, Joan Hoff. *Herbert Hoover: Forgotten Progressive*. Prospect Heights: Waveland Press, 1975.

Wohl, Robert. *A Passion for Wings: Aviation and the Western Imagination, 1908-1918*. New Haven: Yale University Press, 1994.

—*The Spectacle of Flight: Aviation and the Western Imagination, 1920-1950*.
New Haven: Yale University Press, 2005.

Zinn, Howard. "The Limits of the New Deal," in *The Politics of History* 2d ed. Urbana: University of Illinois Press, 1990.

Dissertations:

Ashcroft, Bruce Alan. *Why We Wanted Wings: American Aviation and Representations of the Air Force in the Years Before World War II*. The University of Texas, Austin, 2003.

Call, Stephen Charles. *A People's Air Force: Air Power and American Popular Culture, 1945-1965*. The Ohio State University, 1997

Carlson, Erik Dunton. *The Origins and Development of the Civil Aeronautics Board and the Economic Regulation of Domestic Airlines, 1934-1953*. Texas Tech University, 1996.

Colvin, Susan Elaine. *A History of International Commercial Aviation, 1903-1939*. The University of Arkansas, 1993.

Douglas, Deborah Gwen. *The Invention of Airports: A Political, Economic and Technological History of Airports in the United States, 1919-1939*. The University of Pennsylvania, 1996.

Johnson, Christopher Derek. *Markets in the Air: The Development of American Aviation Culture, 1918-1934*. Northwestern University, 1998.

Johnson, Randall D. *Herbert Hoover and the Aeronautical Telecommunications System: His Influence on its Development and Deployment as Secretary of Commerce, 1921- 1927*. Ohio University, 2000.

Jones, Howard G. *Entrepreneurial Success and Failure in the Aviation Industry: The History of the Waco Aircraft Company, 1919- 1963*. Johns Hopkins University, 2000.

Karsner, Douglas George. *"Leaving on a Jet Plane": Commercial Aviation, Airports, and Post-Industrial American Society*. Temple University, 1993.

Michaels, Patricia Ann. *The Development of Passenger Service on Commercial Airlines, 1926-1930*. The University of Kansas, 1980.

Millward, Elizabeth. *Scaling Airspace: Gender in the British Imperial Skies, 1922- 1937*. York University (Canada), 2003.

Rand, Lawrence A. *The McNary-Watres Air Mail Act of 1930: Herbert Hoover and his Impact Upon the Commercial Airline Industry in the United States*. New York University, 1998.

Rust, Daniel Lee. *Flying Across America: The Evolving Transcontinental Airline Passenger Experience, 1927- 1960*. The University of Idaho, 2003.

Shaw, Eric J. *Controls on Developing Technology: The United States Commercial Air Transportation System During the Interwar Period, 1919- 1939*. Salve Regina University, 2000.

Snider, Jill D. *Flying the Freedom: African-American Visions of Aviation, 1910-1927*. The University of North Carolina at Chapel Hill, 1995.

Smith, Rhonda Lynn. *Jacqueline Cochran: An American Aviator in Peace and War*. The University of Kentucky, 1999.

Stratton, Scott David. *The End of Aviation's Honeymoon and "The World's Greatest Air Race": The New Age of Airmindedness and the 1934 MacRobertson Air Competition*. Arizona State University, 2007.

van der Linden, Frank Robert. *Progressives and the Post Office: Air Mail and the Creation of United States Air Transportation*. George Washington University, 1997.

van Vleck, Jennifer. *No Distant Places: Commercial Aviation and American Globalism, 1915-1968*. Yale University, 2008.

Master's Theses:

Leonhirth, Janene Gupton. *They Also Flew: Women Aviators in Tennessee, 1922-1950*. Middle Tennessee State University, 1990.

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