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Those magnificent men or their flying machines?: Tradition and modernity in the 1928 National Air Races

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THOSE MAGNIFICENT MEN OR THEIR FLYING MACHINES?: TRADITION AND MODERNITY IN THE 1928 NATIONAL AIR RACES

An Abstract of a Thesis

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ABSTRACT

The history of aviation in the United States between 1920 and 1940 describes two phases--the dangerous aeronautic stunts and cross-country flights of the 1920s and the regulation of the 1930s—but does not analyze how the transition between the two occurred. The beginning of this transition occurred in the latter 1920s. First, American businesses, attempting to establish commercial air travel, downplayed the perceived danger as they marketed the flying experience to the general public. Second, women pilots showed that planes did not require mystical, unidentifiable masculine qualities in order to be flown and landed safely. The actual transition, however, took place during a cross-country air race, the 1928 National Air Races. These races forced Americans to re-examine their taste for danger and compelled many of them to consider safety and government regulation in its place.

The National Air Races consisted of a series of cross country races between New York City and Los Angeles. Over a period of five days, pilots executed a number of short, rigidly scheduled flights intent on displaying the safety of aviation to the public. John Livingston, one of the participants, achieved brief national fame for his ability to navigate through dense mountain fog and across sweltering deserts. As spectators eagerly awaited the flyers, thousands arrived in Los Angeles to witness daring aviation exhibitions. A fatal accident involving the U.S.

Army's stunt team *The Three Musketeers* threatened to discredit those espousing the safety of aviation. Hoping to counter any negative publicity encouraged by the mishap, famed pilot Charles Lindbergh appeared in Los Angeles to participate in a series of stunt flights. Livingston's victory in the National Air Races inspired many in his adopted hometown of Aurora, Illinois to promote his accomplishments as daring and perhaps even superhuman. The times had changed, however, and Livingston's short-lived fame indicates the realization on the part of many Americans that flight required regulation.

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Date	Dr. Trudy Eden, Chair, Thesis Committee
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For Jill and Sam

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THE TROUBLED INTERSECTION

Roosevelt Field buzzed with activity. The same Long Island airfield that witnessed the departure of Charles Lindbergh on his historic flight across the Atlantic some sixteen months earlier rattled and hummed with the sounds of almost forty planes "tuned to the peak of their efficiency."[1] The 1928 Transcontinental Air Tour would soon begin. The aircraft, sorted into multiple categories based on engine-size, would traverse the nation destined for Los Angeles. Participants in the Class "A" and "B" competitions would span the country over five days via a series of short, rigidly scheduled flights. Cities across the nation eagerly awaited these layovers where pilots would register with race officials and refuel only to disappear into the sky in pursuit of their next destination. This series of stops -- only thirty minutes long in most cases -- offered many spectators their first glimpses of an airplane. It also gave pilots the opportunity to win "lap prizes" for the quickest registered times between cities. These prizes, usually around $500, were frequently donated by local Chambers of Commerce and area investors. Middling communities like Terre Haute, Indiana and El Paso, Texas provided overnight stops for the fliers and combined the event with citywide festivals and aviation

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[1] "38 Derby Fliers Set for Start at Dawn," *New York Times*, September 5, 1928.

exhibitions hoping to capitalize on the brief national attention. The biggest prize however, remained in Los Angeles. At the newly constructed Mines Field the winning pilot of each race would receive a $10,000 prize before an estimated crowd of 75,000 sightseers. But this was not the only spectacle on display at Mines Field.

Three months earlier this sixty four acre plot fifteen miles southwest of Los Angeles consisted of little more than fields of "wheat and barley."[2] Now it housed one of the nation's greatest airports. Aircraft hangars, exhibition halls, three runways, and a grandstand for thousands of spectators were all constructed for the 1928 National Air Races and Aeronautical Exposition. This nine-day event promised to reveal a "panorama of aerial progress during the past year."[3] Over two hundred aircraft and aeronautical companies would attend displaying the latest in aviation technology. "Parachute jumps, stunt flying," and other military exhibitions were just a portion of all that was offered. In addition to the transcontinental fliers departing from New York City, racers from San Francisco, Oakland, Mexico City, and Windsor, Ontario all embarked on various cross-country competitions. The Army, eager to show off its newly founded team of flying acrobats, *The Three Musketeers*,

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[2] "300 Planes Join in Air Meet Parade," *New York Times*, September 8, 1928.

[3] "Air Races to Show Aviation Progress," *Waterloo (IA) Evening Courier*, September 5, 1928.

promised to perform. Rumors even circled the festivities that the great Charles Lindbergh would be in attendance. Harry Bergman, writing for the International News Service, profoundly claimed that Los Angeles "today became the temporary capital of the aviation world. A new epic of science [will be] written in the California skies...as the rapid progress of man's latest and speediest means of transportation" is exhibited.[4]

Back in New York City the pre-dawn departure of the Class "A" racers on Wednesday September 5 demonstrated much of the ballyhoo associated with the race. Prominent aviatrix Viola Gentry signaled the first airplane to start by waving a handkerchief from a window in a nearby building. The starter's pistol, fired by flamboyant Los Angeles Mayor George E. Cryer, was heard by the participants and spectators in New York City through a transcontinental telephone connection. The first plane left Roosevelt Field at 5:42 a.m. The remaining participants departed in one minute intervals. By 6:20 the final plane disappeared into the horizon bound for western Pennsylvania and the first of sixteen stops on the five day journey. The citizens of Columbus, Ohio awaited their arrival by midday.[5]

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[4]Harry Bergman, "Los Angeles Awaits Racers," International News Service (INS). *The Aurora (IL) Beacon-News*, September 8, 1928.

[5] "Aurora Flyer in Derby Tomorrow," *Aurora (IL) Beacon-News,* September 5, 1928.

Aviators in the Class "B" races however did not receive such cooperation from the weather. Scheduled to depart for Pittsburgh on Thursday September 6, a dense fog enveloped most of the eastern seaboard prohibiting any flights from leaving. Lt. H.B. Clarke, Assistant Race Starter and Manager of Roosevelt Field, grounded all scheduled air-mail flights for New York City and subsequently cancelled all departures. While the weather appeared to clear up over New York by Friday morning there remained a considerable amount of question concerning the conditions surrounding Bettis Airfield just southeast of Pittsburgh. "Garbled weather reports" released throughout the day on Friday suggested that the weather improved enough for the race to begin.[6] But Clarke remained adamant on his decision to err on the side of caution. "We are running a race to Los Angeles," Clarke reminded an impatient assembly of reporters and spectators, "not a suicide sweepstakes. These boys will not [leave] from this field until they can expect the kind of weather I'd want if I were making the flight myself."[7]

On Saturday morning twenty-four pilots anxiously watched the skies awaiting Clarke's final decision. Encouraged by promising weather forecasts, officials declared the start of the class "B" air races. The first

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[6] "Hazardous Flight in Fog," *New York Times,* September 9, 1928.

[7] "31 of 37 Planes End Air Derby Lap," *Washington Post,* September 6, 1928.

leg of the tour, stretching from Roosevelt Field to McKeesport, Pennsylvania proved a difficult task under ideal circumstances. The timed nature of the race forced pilots to fly at an extremely low altitude. This method of flying referred to as "jumping the hedges" worked well over the Midwestern plains.[8] But flying over any mountainous terrain increased the risks of an accident. The unique nature of the Allegheny Mountains only compounded the dangers. The abundance of ore located deep in the mountains of Pennsylvania often muddled compass readings, confusing even the most adept cross-country pilot. Dense air pollution rising over the city of Pittsburgh offered yet another impediment to the first leg of the competition. These risks aside, the Class "B" participants soon disappeared into a "bank of cirrus clouds" gently hanging over the New York City skyline.[9] Shortly after the final plane departed from Roosevelt Field, a new series of conflicting weather reports reached Clarke and his colleagues. The treacherous "pea soup fog" that blanketed the east coast for nearly two days still remained heavy over the mountains of Pennsylvania. Clarke immediately postponed the departure of the final class of transcontinental races and turned his attention towards finding the missing fliers. Clarke, failing to conceal his

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[8] "Leaves to Test Aurora Entry in Plane Race," *Aurora (IL) Beacon-News,* August 30, 1928.

[9] "Planes Held Here Get Away," *New York Times,* September 9, 1928.

"concern for the racers," boarded his own plane and helplessly searched the foggy skies. A short time later he returned empty handed. Typically a flight from New York City to Pittsburgh took just under two hours to complete. No reports would reach Roosevelt Field concerning the missing pilots for over three hours.[10]

John Livingston, President of the Aurora, Illinois-based Midwest Airways Company, piloted the sixth plane to depart New York that foggy September morning. Born in Cedar Falls, Iowa, Livingston moved to the bustling city of Aurora a few months prior to the transcontinental air races. Already an experienced cross-country pilot and airplane executive, Livingston quickly garnered a sterling reputation in Aurora's business community. Newspaper articles printed before his arrival referred to Livingston as "one of the most widely known distributors of planes in the country." Midwest Airways also provided "a substantial new industry and...very profitable venture" to local investors. [11] Excitement surrounding the company's move increased during the summer once it was discovered that Livingston would be bringing a fleet of Ryan monoplanes, "the same...used by Col. Lindbergh," with him to his new

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[10]"Hazardous Flight in Fog," *New York Times,* September 9, 1928, 26:4.

[11] Local Airport Subleased to Monmouth Firm," *Aurora (IL) Beacon-News,* June 27, 1928.

airfield.[12] The local press, undoubtedly eager to offer any news of the community's newest enterprise, published numerous accounts of the services provided by Livingston. Airplane sales and repair, a flying school, and an air taxi service available in "almost a moment's notice" adorned headlines and radio advertisements throughout the month of August. Even stories of turbulent flights in the WACO "sport type" aircraft, sold by Midwest Airways, garnered the most positive of reviews. WACO aircrafts offered adventurous passengers "more thrills...as it rides the 'air bumps' like a soap bubble."[13] But it wasn't until rumors of his involvement in the Transcontinental Air Races surfaced that Livingston assumed the role of local celebrity. Public references to him as a "super airplane salesman" were soon eclipsed by the tagline greatest "crack cross-country pilot in America."[14] Comparisons to Lindbergh, subtly suggested throughout the summer, became more apparent when the Aurora Chamber of Commerce offered to sponsor Livingston's aircraft if christened "The Spirit of Aurora" or perhaps "Miss Aurora."[15] Livingston,

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[12] "New Airfield to be Opened on August 10," *Aurora (IL) Beacon-News*, August 1, 1928.

[13] "Aurora Airport 'Mother Field' for Big Company," *Aurora (IL) Beacon-News*, August 10, 1928.

[14] "Aurora Entry in National Air Cross Country," *Aurora (IL) Beacon-News*, August 16, 1928.

[15] Ibid.

suggesting that "advanced ballyhoo...may jinx his efforts," politely denied all offers of sponsorship.[16]

Lost in the fog over Western Pennsylvania Livingston cursed the inaccurate weather reports and his malfunctioning compass. A detailed map provided by race officials proved useless as Livingston, forced to a lower altitude in order to avoid the fog, needed his full attention to dodge bridges over the Monongahela River. Flying like a "drunken man reeling and staggering in an irregular hallway" the river bed offered a sense of direction for Livingston and his frightened passenger, a journalist for the Aurora daily newspaper. Referring to the experience days later Livingston spoke of an ethereal "third passenger" and aided by a "real piece of good luck."[17] Despite these hazards and his limited knowledge of the area Livingston finished the first day of competition safely and with more than a half-an-hour lead. Fortunately only two planes required forced landings. One aircraft slowly struck the ground "nose on and turned over" the other landed with his "ship on fire at an emergency airfield." Neither pilot was injured.

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[16] Aurora Plane to Compete in National Race," *Aurora (IL) Beacon-News,* August 21, 1928.

[17] "Flying Champ Arrives Homes, Thrills Crowd," *Aurora (IL) Beacon-News*, September 26, 1928. "Livingston is Sparing Motor for Final Laps," *Aurora (IL) Beacon-News*, September 10, 1928.

Upon hearing of Livingston's success over Pennsylvania, the Aurora press wasted little time promoting the feats of their newfound native son. In an interview by the *Aurora Beacon-News* an unnamed 'delighted businessman' (almost assuredly a member of the Chamber of Commerce and investor in Midwest Airways) exalted Livingston's actions:

> To one who has a drop of red blood in his veins, and willing to let old age and the infirmities of mankind admit that fact, one cannot but thrill at the exploits of that Auroran...Periling the dangers of the fog clad course between New York and Pittsburgh, with a dash and abandon...John landed in the Bettis Field...twenty minutes ahead of his nearest rival. Supreme navigation, coupled with a faith in his WACO plane not far from the supreme, he landed at his destination by the grace of Lindberghian luck...his landing made by the combination of supreme skill and the luck which guides the skilled in all endeavors of mankind. Before people read the Sunday papers he will be off and away at over 140 miles per hour, for his next station, and well on his way to glory and fame...not only to himself...but to Aurora and the Chamber of Commerce which brought him to the city.[18]

Striking a decidedly more conciliatory tone the final paragraph of the statement outlines how the city would respond if John allowed his early lead to slip. "If he fails, thru the chances he faces so immediately, there is glory enough for all, and time to say 'Thanks John; good luck and God bless your pathway."[19]

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[18] "Backers Acclaim the Livingston Flying Courage," *Aurora (IL) Beacon-News,* September 9, 1928.

[19] Ibid.

Throughout the twentieth century countless numbers of dime store novels, cinematic features, and historical descriptions focused on the topic of aviation. This wide variety of entertainment reflects the diversity of people fascinated by flight. A generation of young children, avid movie-goers, and academics all, from time to time, shifted their attention to the skies and pondered the "miracle of flight."[20] In spite of this enormous wealth of literature and film, historians attempting to organize this information into a usable historiographical account are often left frustrated by the lack of scholarly books and articles on the subject. In the introduction to his book *A Passion for Wings: Aviation and the Western Imagination, 1908-1918,* historian Robert Wohl refers to the history of flight as a "well-furnished but essentially walled-off compartment that most historians...felt no need to visit."[21] But this is not to say that others ignored the earliest days of flight. For years amateur researchers and enthusiasts detailed the lives of aviation's larger-than-life pioneers. Biographies of the Wright Brothers, Charles Lindbergh, and Chuck Yeager fill library shelves. Historical societies celebrate the exciting events of hometown flyers. And, retired military personnel preserved their memories and experiences in writing. While

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[20] Robert Wohl, "Republic of the Air," *Wilson Quarterly* 17, no. 2, (1993): 107.

[21] Robert Wohl, *A Passion for Wings: Aviation and the Western Imagination, 1908-1918* (New Haven, CT: Yale University Press), 1-2.

few can question the motives and technical expertise many of these individuals' possess, the same cannot be said of their historical research and methodology. Historian William M. Leary, in his historiography of aviation published in 1984, admits that many of these books and articles, though delightful to read, are "rarely based on archival research...prone to errors, and without broad perspective."[22]

The second shortcoming of aviation history is the lack of cultural interpretations of the technology. Numerous volumes inventory the early days of flight in the 1920s. Barnstormers, airmail pilots, and World War I flying aces all attract a considerable amount of attention. But the scope of these works focuses primarily on the men and women in the cockpits, not the public-at-large that is watching from the ground. What did they think of the airplane? How would it change an already rapidly modernizing world? Would they be brave enough to travel in an aircraft or is manned flight in the 1920s simply the hobby of wealthy adventurers?

An additional obstacle in retelling aviation's past is introduced in the article "Aviation History in the Wider View," published by historian James R. Hansen. Hansen notes that many scholars regard aviation

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[22] William M. Leary, "Writings on Civil Aviation: The State of the Art," *Aerospace Historian* 31, no. 1 (1984): 16.

research as "a field too full of 'enthusiasm."[23] This enthusiasm inspires buffs to approach the topic of aviation but most of the work compiled by these "well intentioned and often talented individuals...suffers from the lack of professional training in a demanding craft."[24] But this enthusiasm threatens classically trained historians as well. Hansen warns that the practice of submersing oneself deep into the heroics of early flight can cause some historians to "go native." They become part and parcel of the culture they attempt to analyze.[25] Hansen outlines one example of an historian "going native" in an exchange of review articles between aviation historians published in the 1980s. In a review of *Flight in America 1900-1983: From the Wrights to the Astronauts* historian Joseph Corn criticizes his colleague Roger Bilstein for taking the "same uncritical stance toward aerospace endeavors common in books by enthusiasts."[26] In response to this evaluation of his work Bilstein, awarded a Ph.D. in history at Ohio State University, blithely admitted sharing "some affinity" with airplane buffs, after all "we are legion, and

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[23] James R. Hansen, "Aviation History in the Wider View," *Technology and Culture* (July 1989), 647.

[24] Hansen, 647. Quoted in William M. Leary, "Writings on Civil Aviation: The State of the Art," *Aerospace Historian* 31 no. 1 (1984): 16.

[25] Ibid.

[26] Ibid.

the Force is with us."[27] This leads to an important, and hotly debated, topic within the field of aviation history itself. How much value should be placed on narratives penned by buffs and over-enthusiastic historians?

Taken individually, accounts written by aviation enthusiasts often provide little for academics wishing to craft a larger synthesis. Though thoroughly researched and aptly written many writings suffer from the shortcomings associated with amateur biographical and autobiographical accounts. They lack the scope necessary to place their topics within a broader historical context. Some writers spotlight the romantic superhuman elements of flight's early years. Many volumes evoke heavenly connotations and sacred rhetoric to describe their subjects. While religious vocabulary may bolster the anecdote, deeper historical questions remain unaddressed. Complex personalities are deified without analysis and other events are simply overlooked because they cannot be qualified in celestial terms. Therefore history takes a backseat to hagiography and interpretation loses out to folklore. Technical accounts of flight, particularly those penned by retired military personnel and barnstormers offer an invaluable tool to the historian. But many of these writers overindulge in the minute details differentiating one aircraft from another. While this is undoubtedly a key component, looking at the

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[27] Ibid.

development of manned-flight through such a narrow lens ignores other, equally crucial, elements.

This is certainly not to say that all of these accounts lack historical value. For academics like Bilstein the work that these individuals provide offers an enormous amount of information for historians to utilize. The failure of professional historians to fully explore the airplane's past leaves only aviation enthusiasts to relay these early stories. And without the work of these committed devotees "scholars would have a much harder time finding the precise data that flesh out subjects and put major trends and evolutionary developments in focus."[28] But the hard fact remains that following the centennial celebration of the Wright Brothers success at Kitty Hawk, aviation remains a topic "largely ignored by most scholars."[29]

The field of aviation history experienced a dramatic change in the fall of 1998. At Wright State University, in Dayton, Ohio, the National Aerospace Conference convened. Leading academics and prominent members of the National Air and Space Museum and the National Aeronautics and Space Administration met to debate the "Meaning of

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[28] Ibid., 646.

[29] Leary, "Writings on Civil Aviation," 16.

Flight in the 20th Century."[30] The conference would span the next three days and debate three distinct topics: Flight and Public Policy; Flight, Science and Technology; and Flight, Society, and Culture. In his opening remarks Dominick A. Pisano, Curator of the Smithsonian's National Air and Space Museum, described the seminar as an "important step in recognizing the historical importance of flight and its relationship to culture and society." He repeats previous concerns that the historiography of flight lacked the proper analysis of the "assumptions, attitudes, behaviors, myths, and ideologies that underlie the history" of aviation.[31] Attempting to spark such a debate Pisano noted three works in particular that placed the history of aviation within a larger context. One of these is Wohl's *A Passion for Wings*.

The thesis illustrated in Robert Wohl's *A Passion for Wings* occurred to him after the publication of his book on European society and culture in the years prior to the First World War. In this book Wohl recounts a story told by British adventurer T.E. Lawrence, known in Europe and the United States as Lawrence of Arabia. Upon returning to England after his success in the desert, Lawrence soon enlisted as a private in the Royal Air Force. Lawrence viewed this move as "the only

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[30] Dominick A. Pisano, "Flight, Society, and Culture Program Opening Remarks." In *1998 National Aerospace Conference: The Meaning of Flight In the 20th Century* (Dayton, OH: Wright State University, 1999), 6-7.

[31] Ibid.

first-class thing that our generation has to do. Everyone should either take to the air themselves or help it [the cause of aviation] forward." A few years later Wohl returned to this curious comment. Wohl's initial oversight is readily understandable given that when compared to the automobile, the radio, and other technological advancements of the day "the airplane had little or no immediate...impact on the way that most people lived their lives."[32] But this is not to say that aviation did not alter the way many individuals *viewed* the world around them. Wohl contends that the introduction of the airplane unleashed a myriad of emotions among the populace and "gave rise to utopian hopes and gnawing fears.[33]" Hopes of a modern world united by commerce and cultural exchange but fearful of the consequences wrought by imperial rivalries and militarism on a continent slowly plodding towards war. The airplane was symbolic, representing both the best and worst man could offer, in a society situated squarely on the fault lines between traditional Victorian Europe and modernity.

In France, the focal point of Wohl's study, aviation represented a return to cultural and military supremacy on the continent. Longstanding colonial rivalries with Great Britain and more recent armed conflicts with Germany encouraged many in the French military to

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[32] Wohl, *A Passion for Wings*, 1.

[33] Ibid.

rapidly develop any technology that would aid France on or above future battlefields. But this desire to solve the mystery of flight transcended simple military necessity. It also represented the divine. Wohl explores this "compulsion that people felt to transform...the most mechanical of events – the invention and development of the flying machine – into a form of spiritual creation."[34] For many French engineers and enthusiasts of the early twentieth century, continued superiority in the field of manned-flight reflected a return to the glorious days of the monarchy and French cultural dominance of the Western world.

In addition to Wohl's work which aptly describes this interaction between technology and public interpretation, Peter Fritzsche employs a similar nationalistic approach in his work *A Nation of Fliers: German Aviation and the Popular Imagination.* Unlike the early popularity of flight in France and the United States, German interest in the flying machine did not occur until after 1900 "and then only gradually."[35] It wasn't until after the costly defeat in World War I that the fascination of flight reached the masses. Building upon the foundation of the late German glider pioneer Otto Lilienthal the sport of gliding rapidly grew throughout Germany. Aviation not only enabled freedom from the restraints of

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[34] Wohl, A Passion for Wings, 2-3.

[35] Peter Fritzsche, *A Nation of Fliers: German Aviation and the Popular Imagination* (Cambridge, MA: Harvard University Press, 1992), 17.

gravity it promised independence from the harsh restrictions imposed by Germany's European rivals in the Treaty of Versailles. The glider, and the subsequent development of the *Graf Zeppelin*, also represented Germany's embrace of the modern world. For many German airplane engineers "the precision and power of the engine, the sophisticated instrumentation in the cockpit, and the durable yet light-weight streamlined metal frame all described the vast potential of a second industrial revolution."[36] In other words, the continued development of the airplane not only relied on technological change but demanded a shifting interpretation by the population as well.

These grandiose ideas continued to flourish in the interwar years and were soon adopted by the growing Nationalist Socialist Party. The Nazis rapidly associated the heroic images of early glider pilots and World War I flying aces to the reemergence of the German state. Shortly after the political victory of the Nazi Party the newly founded Air Ministry coordinated the efforts of local aviation clubs, universities, and the national military. This movement, while upsetting some that viewed flight as an apolitical field, advocated the "Nationalist Socialist ideology of self-sacrificing and tough-minded nationalism."[37] But the link between aviation development and the rise of German patriotism did not end

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[36] Ibid., 4-5.

[37] Ibid., 191.

there. Like their French rivals, many within the German political establishment saw the airplane as an opportunity to return to world prominence.

Taking a much lighter tone in *The Winged Gospel: America's Romance with Aviation,* historian Joseph Corn addresses popular reaction to flight in the United States. Originally published in 1983, *The Winged Gospel* describes the American reaction to the airplane as the "history of a love affair."[38] Throughout the first quarter of the twentieth century spectators from around the country consumed all things aviation. Headlines, dominated by the actions of larger-than-life politicians, sports figures, and organized criminals, shared space with the most mundane of flying events. Local aviators delivering mail, competing in air races, and spectacular aerial weddings all found their way into local and national newspapers. Magazine editors assigned writers to explore flying events and to write about the heroic exploits of aviators. New periodicals were published to take advantage of the rapidly growing audience that demanded more information about the burgeoning technology. Americans referred to themselves as being "airminded" a term defined by Corn as one possessing an "enthusiasm for airplanes, believing in their potential to better human life, and support aviation

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[38] Joseph Corn, *The Winged Gospel: America's Romance with Aviation,* 2nd ed. (Baltimore, MD: Johns Hopkins University Press, 2001), xiii.

development."[39] Other contemporary observers utilized spiritual rhetoric when pondering the miracle of flight. Corn tells the story of struggling airlines and airplane manufacturers prophesying a future with an "airplane in every garage." Barnstormers, World War I flying aces, and early aviation executives all attempted to spread "airmindedness" throughout the country. Ironically, while this excitement led many to avidly read newspapers and attend aerial circuses in large numbers these depictions of the "intrepid birdman" and his aircraft discouraged many in the general public to experience flight first hand. Aerial exhibitions, cross-country flights, even allowing women, the perceived "weaker vessel," to fly could not convince consumers to utilize flight in their daily lives. "Fear not fare" proved to be the greater obstacle to overcome.[40] Corn's romantic depiction of the relationship between aviation and the general public overlooks one underlying tension of the age. How should the airplane be used?

In the article "The Greatest Show Not on Earth: The Confrontation between Utility and Entertainment in Aviation", Dominick A. Pisano targets this crucial question. Beginning his analysis with the ballooning era in the 18th and 19th centuries, Pisano outlines aviation's evolution from the aristocratic "sport of kings" to the routine transportation of

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[39] Ibid., 12.

[40] Ibid., 74.

passengers and cargo. This marked transition did not simply occur due to improvements in technology but also "grew out of circumstances that reflect American society and its goals, purposes, and prejudices."[41] Throughout the first few decades of the 20th century, arguments surrounding utility and entertainment in aviation ebbed and flowed. By the outbreak of the Great War in Europe, aviation enthusiasts on both sides of the Atlantic scrambled to discover any possible advantage the airplane might provide in war. Utility was job one. But in the years following World War I the role of aviation was once again called into question. The United States Congress slashed wartime aviation budgets while the military auctioned off scores of surplus planes. Trained pilots, returning home from years of service, frequently purchased these aircraft and profited by selling rides to curious bystanders. Thus the era of the barnstormer dawned.

Removing aviation from the context of time and placing it within the context of the American frontier, historian David T. Courtwright compares the sky with other pioneer environments in his book *Sky as Frontier: Adventure, Aviation, and Empire,* published in 2005. In this volume Courtwright expands the scope of aviation history. Rather than

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[41] Dominick A. Pisano, "The Greatest Show Not on Earth: The Confrontation between Utility and Entertainment in Aviation," *The Airplane in American Culture*, ed. Dominick A. Pisano (Ann Arbor, MI: University of Michigan Press, 2003), 39.

looking at aviation's past as though it unfolded independently of other historical events Courtwright chooses to compare the earliest days of manned flight with various other frontiers. Broadly defined, a frontier is a "shifting zone of interaction between indigenous and non-indigenous populations." [42] While no man lived beyond the unyielding grasp of gravity it has long been a desire for humankind to temporarily visit the rarefied air usually reserved for birds, insects, and celestial beings. Type-II frontiers are defined as rough, rugged areas "most often in grazing country...their economies revolving around ranching, mining, lumbering, and other forms of extraction."[43] Superficial comparisons between the exploration of the American West and flights earliest days appear to offer little common ground. But a deeper analysis reveals striking similarities.

Gold rush boom towns, lumber camps, and other frontier cultures frequently attracted large numbers of young unmarried men often outnumbering their female counterparts by a count of ten to one. Frontier cultures overlooked social pedigree relying instead on the values and skills of the individual. And no other place in the country was as deadly. Lawless unsettled regions experienced violent crimes in much

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[42] David T. Courtwright, *Sky as Frontier: Adventure, Aviation, and Empire* (College Station, TX: Texas A&M University Press, 2005), 8.

[43] Ibid., 9.

higher rates than those in the east and the inherent dangers of mining and extracting lumber offered death in numerous forms. But time offered a remedy to many of these dangers. Growing populations meant the gradual stabilization of frontier societies as law enforcement and medical specialists moved into the area. Population growth also inspired the development of bureaucratic institutions. Governments soon evolved in California and the Dakotas offering a greater degree of safety to workers and residents of these newly founded states. Increased safety led to social changes as women in far greater numbers than previous generations moved to frontier lands effectively equalizing the disproportionate population of men. For those boom towns that survived the end result was clear. The Wild West now consisted of stable populations living in a governed area very similar to other states in the civilized east. The frontier was no more. Utilizing this approach, Courtwright aptly recreates the pioneer world of aviation in the early 1900s and "shows how commercial and military imperatives destroyed it by routinizing it."[44]

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[44] Ibid., iv.

Courtwright points to the "continuing tension between commerce and adventure."[45] Pisano focuses on "the confrontation between utility and entertainment." And Wohl speaks of the "utopian hopes and gnawing fears" inspired by manned flight. All of these interpretations reveal that the airplane and its development relied on improvements in technology. But they also depended upon the general public's interpretation of the airplane's reliability, safety, and utility. Was the airplane a productive instrument of the modern age? Or was it simply the pastime of barnstormers and wealthy entrepreneurs brandishing a death wish? These questions have no easy answer. But the 1928 National Air Races and Aeronautical Exposition may provide additional insight to discover their answers.

In 1928 the field of aviation faced a crossroads. The success of Charles Lindbergh and his historic flight across the Atlantic in May of 1927 established the overall reliability of the airplane and suggested a remarkable leap forward in flight. Improvements in technology and design allowed vast oceans to be crossed in hours instead of days. The world had, in a matter of only 33 ½ hours, grown smaller. But this was not just a dramatic change in technology. It also presented a marked transition in the public's view of the world. Corn deftly summarizes

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[45] Tom D. Crouch, review of Sky *as Frontier: Adventure, Aviation, and Empire,* by David T. Courtwright. *The Journal of American History* 92, no. 3 (Dec 2005), 1030.

these events in the United States as a "love affair." Though some American critics warned of a future dominated by military aircraft raining down bombs on helpless civilians, few domestic media outlets focused on this horrific possibility. Whether comforted by two oceans and relative peace with neighboring nations or a simple naiveté the same conflict that existed in Europe surrounding aviation and its potentially violent outcomes did not enter into American mainstream debate. This is not to imply that these events occurred free of conflict, however. For many people in the United States during the 1920s, the airplane represented a technological victory over the power of gravity. But the victory did not come without costs. Dozens of endurance flights, inspired by the success of Lindbergh, met with tragic ends killing numerous pilots, passengers, and spectators. These grisly events, graphically portrayed in the press, led some people to believe the costs far outweighed the benefits.

By placing this debate within the context of the late 1920s is it possible to determine that the development of aviation reflected the growing cultural divergence of the decade? Could the field of aviation represent one outlet in this "troubled intersection" between modernity and tradition in a rapidly changing society? While not as divisive as other pressing issues of the time, such as prohibition, immigration restriction, or the dispute surrounding Darwinism and creationism, did

the airplane nevertheless force Americans into one of two lines of thought? With one line grounded squarely in traditional American values and the other eagerly embracing the modern world? Those people choosing sides in this debate closely mirrored other cultural conflicts of the era. Younger Americans, prone to the ballyhoo of the "roaring twenties", interpreted the airplane as man's continued dominance over nature through science, engineering, and the triumph of human spirit. Others were not so optimistic. Previous generations, raised in the wake of the Civil War, saw aviation as proof of man's arrogance. The thought that modern science and technology offered little in comparison to the belief that if God intended for man to fly, wouldn't he have given him wings?

Though perhaps not apparent at the time, the 1928 National Air Races and Aeronautical Exposition bridged this epochal debate. In the months after Lindbergh's flight to Paris, numerous attempts to recreate his victory failed, often with catastrophic results. These failures sparked deliberation around the country. For those supporting the continued development of aviation the question became: How can we encourage the safe development of manned flight? Government regulation appeared to be the most logical answer. But without broad popular support, would the government intervene into a reckless endeavor fueled by brash, young pilots. Furthermore government bureaucracies and the creation of

regulatory agencies moved at a glacial pace. The organizers of the 1928 National Air Races hoped to legitimize aviation as a safe and practical tool of modern American life. A successful event would prove the safety of flight and encourage continued private investment and government regulation assuring its survival.

Most aviation history ignores the underlying tension between the interpretation of the airplane as a dangerous stunt machine and its other characterization as simply a machine with great commercial potential. The "routinizing" of aviation did not occur until government regulation was introduced in the latter 1930s. This development suggests that the acceptance of air travel by the general public closely mirrored the society in which it evolved. Dangerous aeronautic stunts and cross-country flights symbolize the excitement associated with the "roaring twenties" while gradual regulation of flight unfolds during the more structured era of the 1930s, culminating in Roosevelt's New Deal and the years prior to World War II. The beginning of this shift appears to be the summer of 1928 when the National Air Races took place and John Livingston briefly captured national attention with his impressive victory in the Class "B" races, which is why this thesis will focus on it. It was a period that Lindbergh himself referred to when he wrote in August 1928, "America has found her wings, but she must yet learn to use them, this period of

adjustment should be approached with caution."[46] The specific issue to be addressed in this thesis is: Was the summer of 1928, specifically the 1928 Air Tour, a pivotal point in aviation history when Americans shifted their view of aviation from one of thrilling yet horrifying spectacle to one of safe, even mundane public transportation?

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[46] Charles Lindbergh, "Lindbergh Writes of Aviation's Advance" *New York Times*, August 26, 1928.

CHAPTER 2

PERIOD OF ADJUSTMENT

Technological advancements, from the development of the radio, to the telephone, and the light bulb, attracted popular curiosity and rapidly entered the everyday lives of many people. Renowned inventors of the late 19th and early 20th centuries frequently achieved varying degrees of notoriety for their talents. Thomas Alva Edison, christened the "Wizard of Menlo Park" for his New Jersey laboratory, captivated the nation with his prolific ability and Yankee ingenuity. While Edison's status remains secure in the pages of world history, the overall acceptance of his inventions did not rest upon his personality. Edison's light bulb illuminated homes and dark city streets. Little more evidence of its usefulness was required. The same cannot be said, however, of the flying machine. From the dawn of aviation's experimental age to the end of the 1920s, numerous spectators swarmed to open farm fields and makeshift landing strips in the hope of seeing an airplane in flight. But witnesses also desired to see, up close and personal, the pilot whose skill made flight possible. The man in the cockpit proved as important to aviation's popular acceptance as the reliability of the machine itself.

As the events of the 1928 Transcontinental Air Races unfolded, organizers and supporters advocated that the races would nurture a

"growing public faith" in the airplane.[1] But few newspaper columns and magazine articles focused on the specific technology required to fly. Instead most media coverage centered on the flamboyant personas of pilots and the reckless feats they attempted. For commentators who believed irresponsible men performing foolhardy stunts constrained aviation's development, regulation provided the only viable answer. If aviation was to survive its infancy and become an integral part of modern society, these commentators said, only a select group of men should participate in its maturation. These men must possess skill, grit, and determination. They must possess the "right stuff."

* * *

In the weeks and months prior to John Livingston's involvement in the 1928 Transcontinental Air Races, local press reports and interviews focused on the business skills of Aurora's newest resident. Chairman of the Aviation Committee in the Chamber of Commerce, L.S. Stephens, outlined the history of Midwest Airways in a Chamber meeting covered by the local press. Originally organized in 1922 as the Curtis-Iowa Company and capitalized by 200 investors at $18,000, the "general aviation" business faced months of economic turmoil. Worthless capital stock, a fleet consisting of only one "badly damaged J-N plane," and over

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[1] Editorial, "Declining Hazards of Flight" *Waterloo (IA) Evening Courier*, September 13, 1928.

$5000 in unpaid bills greeted Livingston after he assumed the role of owner in 1924. Under Livingston's leadership, the newly restructured Midwest Airways Corporation entered aviation sales by acquiring the exclusive franchise rights to sell WACO planes starting in 1927 at its airfields in Waterloo, Iowa and Monmouth, Illinois.[2] The timing couldn't have been better. By 1927 many companies outside the field of aeronautics viewed aviation as an aid to modern business. In that year over thirty corporations, including Standard Oil and Ford Motor Company, utilized the airplane to shuttle parts and executives around the country.[3] National aviation sales rose from $21 million in 1927 to over $71 million by the end of 1929.[4]

For Livingston this national increase in aviation sales proved invaluable to a company on the verge of bankruptcy. In its first year of sales, Midwest Airways sold forty aircraft and by the middle of 1928 the company had repaid all previous debts. When Midwest Airways showed a modest value of $30,000 and the potential for increased profits in the future, Livingston sought larger facilities and greater economic ties to Chicago. Hoping to place Aurora "on the air map," civic leaders offered

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[2] "Local Airport Subleased to Monmouth Firm" *Aurora (IL) Beacon-News*, June 27, 1928.

[3] Tom Crouch, *Wings: A History of Aviation From Kites to the Space Age* (New York: W.W. Norton & Company, 2003), 296.

[4]Ibid., 268.

Livingston a three year lease on a section of city-owned farmland adjacent to the community airfield. In return Midwest Airways would move its corporate headquarters from Monmouth to a hangar in Aurora planned for construction as soon as "the barley crop has been harvested." Livingston balked at the offer because of his unwillingness to invest company money in the new hangar. The Chamber of Commerce, perhaps motivated by the fear of losing a prosperous business in a "substantial new industry," agreed to the formation of an independent, "private institution" intent on financing a healthy portion of the hangar's construction. As a result, the Aurora Aviation Field Trust was born. The Field Trust immediately invested $5000 in the new hangar and promised an additional $7000 as soon as additional financiers could be found.

Throughout his address to the chamber, Stephens, one of five original shareholders in the Field Trust, assured local residents and potential investors that the purchase of subscriptions "may prove [to be] a very profitable venture." Stephens further praised Livingston's abilities as a "sound manager, salesman, and sales executive."[5] R.G. Cooper, President of the Chamber of Commerce, echoed this sentiment the following day when greeting the local press. "In Mr. Livingston and his company the Chamber of Commerce has found the leading man in

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[5] "Local Airport Subleased to Monmouth Firm" *Aurora (IL) Beacon-News*, June 27, 1928.

aviation sales and operation...and is sure he will give Aurora ...a real and complete aviation service."[6]

Compare this interpretation of Livingston, the sound businessman regarded "by every conservative...airport manager in the country as a skilled but cautious pilot," to the Livingston of the air races.[7] For local investors, the Aurora press, and presumably many of its readers, Livingston experienced a baptism of sorts over the mountains of Pennsylvania. Skill, training, and preparation, though still part of the equation, acquiesced to the loftier characteristics of "supreme skill" and "Lindberghian luck." A few days after the air races several Aurora businesses sponsored a full-page letter in the local newspaper congratulating Livingston on his performance. Though celebrating his "great professional enterprise" and praising the accuracy of his journey these issues remained almost secondary topics. The fascination rested within Livingston's courage and "straight-for-the-goal-instinct." And when the topic of skill was raised, it quickly succumbed to a higher power. "We are proud of your skill—a skill that is the gift of the gods."[8] Livingston's exploits certainly elevated him to brief national prominence,

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[6] "Huge Hangar is Being Built at Aviation Field" *Aurora (IL) Beacon-News*, July 10, 1928.

[7] "Aurora Entry in National Air Cross Country" *Aurora (IL) Beacon-News*, August 16, 1928.

[8] "To John Livingston," *Aurora (IL) Beacon-News*, October 3, 1928.

but what did they do for the current status of aviation? Or even Midwest Airways? Did more people trust the airplane's safety due to this event? Or did Livingston's "gift of the gods" discourage new pilots and passengers that lacked the right stuff? This act of literary transubstantiation, changing from man to "intrepid birdman," further highlights the conflict between the traditional interpretation of flight as spiritual undertaking and a modern view of transportation and utility. It reveals an important but suppressed ongoing debate. What keeps an airplane aloft? Is it the skill of the pilot? The design of the plane? Or is it some form of arcane magic?

In *Something for Nothing: Luck in America*, historian Jackson Lears addresses the mercurial and "conflicting attitudes toward luck" in the United States. Throughout America's history two dissenting yet equally cherished narratives evolved. One version draws the framework for the "speculative confidence man." This individual proceeds in the game of life focused solely on risk and the potential benefits of the big win. Fate alone intervenes to determine his success or failure. During the bull markets of the 1920s, this character relished the arbitrary speculation of Florida real estate and playing the stock market. The other narrative portrays the "disciplined, self-made man." This person attributed success to dedication, hard work, and the cooperation of an "implicitly Protestant" guiding hand. A *real* businessman scoffed at amateur

brokers trading land deeds and stocks haphazardly. Aspiring executives like him refused to believe that Carnegies, Morgans, and Rockefellers acquired their vast wealth utilizing unscrupulous means. These men instead relied upon their profound business knowledge and god-given talents to rise to the pantheon of American capitalism. Initial observation suggests that these two accounts of the American character remain mutually exclusive. Lears is quick to point out, however, that "cultures of chance and cultures of control are ideals that overlap and intermingle. They rarely exist in pure form." [9]

Historians addressing the 1920s economic boom frequently conjure contradictory images of speculators and businessmen converging in board rooms and on trading floors. However, Wall Street was not the only arena in which this conflict between chance and control intersected. It also occurred in the hearts and minds of everyday Americans when they assessed, consciously or unconsciously, the nature of aviation and its value to themselves and their society. This assessment seems to be a natural step in the cultural adoption of a new technology. In Europe, as described by Robert Wohl, it was a symbiotic relationship in which many people viewed the "most mechanical of events" --the invention of the

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[9] Jackson Lears, *Something for Nothing: Luck in America* (New York: Viking, 2003), 2.

airplane-- as a "form of spiritual creation." [10] Joseph Corn, in *The Winged Gospel* outlines how the American public's fascination with the technology of flight revealed itself in the form of religious or supernatural terminology. Some Pilots reported that flight amazingly "improved their eyesight." Conversely, other pilots framed their exploits, not in religious terms, but rather in precise, scientific ways. Journalists commented on the "intensity of gaze and penetrating vision of aviators" and suggested that aviation promised the next evolutionary step to some kind of new "air type".[11]

This drastic change in the perception of pilots and aviation in general promised to reshape the future of transportation and economic development. Businesses could conduct trade across oceans and continents. Passengers could travel around the world in hours not weeks. Furthermore, according to *Detroit News* cartoonist Burt Thomas in his image entitled "The Caste System," the impact of aviation on society involved more than simple changes to business and transportation. This new type of birdman threatened traditional notions of time, space, and social order. Pedestrians and motorists, mere

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[10] Robert Wohl, *A Passion for Wings: Aviation and the Western Imagination, 1908-1918* (New Haven, CT: Yale University Press), 1-2.

[11] Joseph Corn, *The Winged Gospel: America's Romance with Aviation*, 2nd ed. (Baltimore, MD: Johns Hopkins University Press, 2001), 39.

"earthworms" bound by gravity, possessed little hope of competing in a modern world against their more advanced flying brethren.

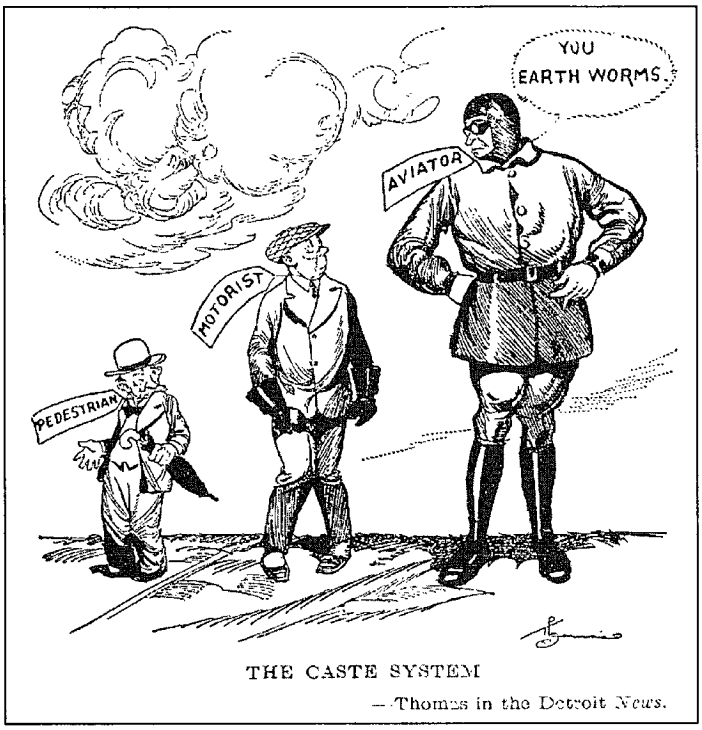

Figure 1. "The Caste System" [12]

This notion of a fundamental difference between superior 'flying types' and common men was widely accepted throughout the 1920s. And with the help of early writers and aviation enthusiasts, it long outlived the first generation of aerial pioneers, flying aces, and

[12] Burt Thomas, "The Caste System," *Detroit News* reprinted in *The Literary Digest* July 9, 1927.

barnstormers and persisted into the second half of the twentieth century. Decades after the aviation industry established itself as the safest form of mass transportation available, airplane buffs continued to accentuate the contradiction by writing volumes about early pilots "flying their flimsy machines through the air like...colorful butterflies...laughing at death." [13] Readers learned of World War I flying aces like Frenchman Georges Guynemer who was transformed from a sickly mechanic nicknamed "Mademoiselle"by his peers to a "cool and fearless flier" over the battlefields of Europe.[14] Even timeworn pilots, fortunate to survive the most dangerous era of aviation, subtly reflected this disconnect in the popular adage; "There are old pilots and there are bold pilots, but there are no old, bold pilots." Initial observation would assume the speaker implies that reckless behavior results in tragedy. However, this self-serving motto, boisterously proclaimed by older pilots, has another meaning. It suggests that survivors of aviation's early years possessed something that their fallen comrades lacked. Indeed, it was the same quality that comic artists, reporters, and everyday people had been talking about for decades. Essayist Tom Wolfe would later describe this mysterious unknown as the "right stuff."

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[13] Don Dwiggins, *The Barnstormers: Flying Daredevils of the Roaring Twenties* (Blue Ridge Summit, PA: TAB Books Inc., 1981), 5.

[14]Gene Gurney, *Flying Aces of World War I* (New York: Scholastic Book Services, 1965), 24-28.

Originally published in 1979, *The Right Stuff* probed the psyche of America's pioneer jet pilots and astronauts in the 1950s and 1960s. Specifically focused on the United States' first manned spaceflight program, Project Mercury, Wolfe pondered what could possibly encourage a man "to sit on top of an enormous Roman candle...and wait for someone to light the fuse?"[15] The obvious answer for Wolfe was courage. But suprisingly, few astronauts acknowledged the question. In fact, most of these men, including John Glenn and Alan Sheppard wasted little effort on exploring the issue. They flew planes. But for Wolfe, the answer required further observation. Training for Project Mercury, which ran from 1959 through 1963, resulted in the death of dozens of prospective astronauts. Scores more failed the rigorous training regimen and washed-out. But what were these unlucky candidates lacking? For those that possessed the *right stuff*, the answer was obvious, manhood.

Survivors were stronger, more advanced men than those who perished or washed out. Participants of Project Mercury did not speak in these terms, of course. Instead they made statements such as, "a man should have the ability to go up in a hurtling piece of machinery and put his hide on the line and then have the moxie, the reflexes, the experience, the coolness, to pull it back in the last yawning moment –

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[15] Tom Wolfe, *The Right Stuff* (New York: Bantam Books, 1979), xiii.

and then go up again *the next day.*"[16] The *right stuff* defied rational thinking and therefore could not be disected and analyzed. It simply was. Wolfe explains that the refusal of test pilots and astronauts to openly discuss the masculine nature of this elevated state led to the popular belief that it could only be found in "superstitious and even mystical" sources. "There was something ancient [and] primordial" about this stuff, regardless of the "rational age one might think he lived...A man either had it or he didn't. There was no such thing as having *most* of it."[17] This same lucid approach also applied to aerial mishaps. For pilots hoping to join the ranks of NASA's elite space program, technology could not be blamed for failure. There were "no *accidents* and no fatal flaws in the machines; there are only pilots with the wrong stuff."[18]

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From its barnstorming roots to the *Apollo 11* moon landing in 1969 to the heroic efforts of Chesley "Sully" Sullenberger and the "miracle on the Hudson" in 2009, the history of aviation reflects this intimate relationship between the right stuff and the wrong stuff, the earthworms and the intrepid birdmen, or, to put it in Lears's terms, the cultures of luck and control. Today, as millions of passengers prepare to fly on a

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[16] Wolfe, *The Right Stuff*, 17.

[17] Ibid., 21.

[18] Ibid., 25.

daily basis, the discord is largely resolved. Standardization and control have convinced millions of passengers a day of its safety. But during the 1928 National Air Races and Aeronautical Exposition the public remained uncertain. Coordinators of the event hoped to counter prevailing attitudes that flying was a perilous endeavor. Lindbergh's flight the previous year offered compelling evidence of the airplane's reliability but a series of disastrous transoceanic flights and other well documented failures threatened to undermine any lasting impact. The late summer of 1928 unfolded as not only a watershed moment in the industry but as a crucial time in the public's overall acceptance of the men who piloted them successfully.

In the almost year and a half that had passed since Lindbergh piloted *The Spirit of St. Louis* triumphantly across the Atlantic, both man and machine secured their place in American folklore. An estimated crowd of 150,000 gathered in Paris anxiously awaiting Lindbergh's arrival. After touching down, pilot and plane alike were quickly ushered away from the throngs of people vying for a closer glimpse.[19] Millions of letters, including those written by presidents, prime ministers, and religious leaders, poured in to the young flier congratulating and praising his courage. In a special session of Congress, legislative leaders bestowed to Lindbergh the Congressional Medal of Honor, an accolade

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[19] A. Scott Berg, *Lindbergh* (New York: Berkley Books, 1998), 5.

previously reserved for military personnel.[20] But Lindbergh's fame exceeded Congressional recognition and dignitary praise. "Lucky Lindy" evolved into a birdman for the masses and greatly impacted popular culture. By the spring of 1929, the copyright office at the Library of Congress registered more than 300 songs about his accomplishments.[21] Aspiring poets attempted to capture their emotions in prose and more than a dozen narratives were published before Lindbergh's return from Europe. Biographer A. Scott Berg observes that "no American had been so instantly mythologized" with each tale "meant to inspire youth and capitalize on patriotism."[22] His return to the United States only heightened this understanding. The era of the 1920s was the age of celebrity. Movie stars, professional athletes, and flamboyant members of society dominated headlines usually reserved for politicians and world leaders. His national notoriety notwithstanding, Lindbergh avoided the vulgar trappings of fame and focused instead on the advancement of aviation. By eschewing self promotion he appealed to an older generation of Americans that firmly believed they were witnessing the country's moral and spiritual decline all around them. His inherent

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[20] Ibid., 171-173.

[21] Tom Crouch, *Wings: A History of Aviation From Kites to the Space Age* (New York: W.W. Norton & Company, 2003), 254.

[22] Ibid., 151.

modesty, bordering on shyness, personified Lindbergh as a "distinctly American hero...a living, breathing answer to flappers,...prizefighters, [and] to F. Scott Fitzgerald's liquor soaked playboys."[23] Political cartoonist Milton Halladay of the *Providence* (RI) *Journal* viewed Lindbergh's refusal to accept movie offers and other profitable ventures as his "second great feat." Burt Thomas depicted the astonished patrons of a smoke-filled pool hall learning of Lindbergh's refusal to "smoke, drink, dance, or bet on the horses." Over the next three months Lindbergh flew over 22,000 miles visiting 82 cities and every state in the union. An estimated thirty million spectators, one quarter of nation's population, eagerly listened to his 147 speeches designed to promote "airmindedness," a contemporaneous term defined as "having [an] enthusiasm for airplanes, believing in their potential to better human life, and supporting aviation development."[24] It appears that the exhibitions succeeded. Aircraft production in the United States doubled from 1927 to 1928 and continued through the economic crash the following year.[25]

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[23] A. Bowdoin Van Riper, *Imagining Flight: Aviation and Popular Culture* (College Station, TX: Texas A&M University Press, 2004), 46-48.

[24]Joseph Corn, *The Winged Gospel: America's Romance with Aviation*, 2nd ed. (Baltimore, MD: Johns Hopkins University Press, 2001), 12.

[25] Crouch, *Wings*, 261-262, 269 (sales chart).

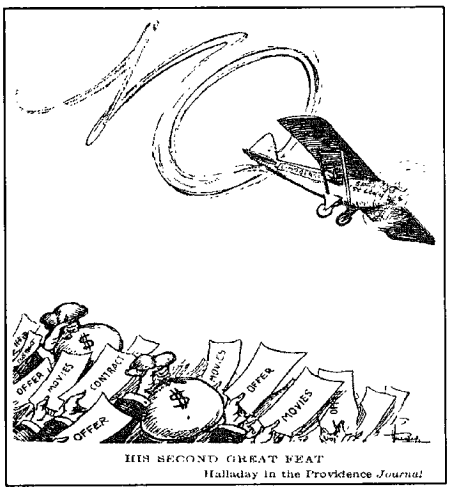

Figure 2. "His Second Great Feat" [26]

Figure 3. "Pool-Room Comment" [27]

[26] Milton Halladay, "His Second Great Feat," *Providence (RI) Journal* reprinted in *The Literary Digest*, July 9, 1927.

[27] Burt Thomas, "Pool-Room Comment," *Detroit News* reprinted in *The Literary Digest*, July 9, 1927.

Some contemporary writers recognized the growing divergence between the man and the intrepid birdman. *Popular Aviation* published its explanation of Lindy's popularity in 1928. "It isn't Lindbergh the person who inspires...so much as [it is] Lindbergh the ideal. They recognize in him qualities they would like to possess – courage, quiet confidence, modesty, and spiritual freedom." But Lindbergh-inspired acts did not always yield positive results. Between May 1927 and March 1928, nine aviators and passengers lost their lives in failed efforts to recreate the Lindbergh voyage.[28] Media outlets covered each tragic event but the stark reality failed to prevent future daredevils from attempting to display their mettle and taking their shot at fame, glory, and money.

Three days after Lindbergh's arrival in Paris, James Dole, president of the Hawaiian Pineapple company, offered a $25,000 prize for the first pilot to fly nonstop from the West Coast to Honolulu. The initial call for pilots met with little fanfare as the nation focused intensely on the Lindbergh phenomenon. As the end of summer approached a number of prospective fliers agreed to participate in the recently labeled Dole Air Races. In mid-August 1927 thirteen planes arrived in Oakland, California, preparing for the "publicity stunt of the century."[29] Similar to

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[28] Crouch, *Wings*, 264

[29] Al Stump, "The Great Airplane Massacre," *True: The Man's Magazine*, December 1958, 38.

previous endurance competitions, there was little organization and scant attention to detail. Charles Kingsford-Smith, an Australian-born pilot touring the United States, happened upon the festivities occurring over Oakland. In an interview with *True* magazine thirty years later, the bombastic Aussie recalled a near midair collision with a fleet of aircraft recklessly circling above the airfield. In an attempt to land, Kingsford-Smith turned his attention to the runway but found what "looked to be 30,000 idiots on a picnic." Hotdog vendors, soft-drink stands, and hundreds of pup tents clogged the runway and neighboring airport grounds. "To land," Kingsford-Smith recalled, "pilots waited for a hole to appear, crabbed down to stalling speed into the packed humanity and jammed on [the] brakes."[30] Though one could dispute the recollections of a cantankerous pilot thirty years after the fact, the same cannot be said of the results. Accidents on the runway cancelled three flights, the Department of Commerce refused to certify two entrants for long-distance travel, and two more aircraft wisely returned shortly after take-off. Only four pilots maintained a heading to Honolulu. Unfortunately only three aircraft found their destination. Three crew members of the *Miss Doran*, including the "flying schoolmarm" Mildred Doran, never

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[30] Ibid., 40.

returned.[31] All told eleven pilots and passengers lost their lives during the Dole Air Races.[32]

The press lauded Art Goebel and Bill Davis on their victorious twenty six hour flight to Honolulu. But most of the national attention rested on the tremendous loss of life. For cartoonist Nelson Harding of the *Brooklyn* (NY) *Eagle* trans-oceanic stunt flying represented the "dragging wing" of airplane travel and threatened to destroy aviation's progress. Painting a more horrific image, The *Montreal Star*, portrayed a scythe-wielding grim reaper striking down an aircraft attempting to cross the mighty Pacific. With many Americans firmly believing it was Lindbergh's "right stuff" that safely navigated him across the Atlantic, the tragedy of the Dole Air Races confirmed their suspicions. Only the best of men could survive such a grueling task. These prevailing sentiments coupled with a series of disastrous flights throughout 1927 and 1928 cast new light on the public debate over aviation. The *New York Times*, always sympathetic to the cause, reported that eighty percent of all airplane related deaths occurred in private planes. Quoting correspondence between bureaucrats in the Commerce Department the article revealed that "flying on *regular* routes and in *government* planes is

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[31] Crouch, *Wings*, 278.

[32] Stump, "The Great Airplane Massacre," 42.

Figure 4. "The Flight Disasters" [33]

Figure 5. "The Dragging Wing" [34]

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[33] Arthur Racey, "The Flight Disasters," *Montreal Star* reprinted in *The Literary Digest*, September 24, 1927.

[34] Nelson Harding, "The Dragging Wing," *Brooklyn (NY) Eagle* reprinted in *The Literary Digest*, September 24, 1927.

as safe as any other form of transportation."[35] The following day the editorial staff appealed for federal licensure stating "fatal accidents in the air will continue and will retard and embarrass commercial aviation."[36]

This very issue attracted the opinions of military personnel, politicians, and artists in an ongoing debate in the magazine *Forum*. Captain Alfred Charles Dewar of the British Royal Navy argued that aviation had no discernible future in the modern world. Restrictions on payload, high financial costs, and safety issues hindered its continued development. Captain Dewar also asserted that the limitations of air travel were already within sight. "Partisans of aviation reply airily that the plane is only in its infancy. Is it? The locomotive took 100 years to develop *but* time moves faster now. Aircraft have seen over twenty years of forced and precocious development, and are probably well within sight of its [sic] zenith."[37] United States Naval flyer and famed polar explorer Commander Richard E. Byrd conceded in his response that air enthusiasts professing an improbable future hurt the industry's advancement. But Byrd faithfully maintained that the safety of flight would be assured when "American business joins hands with American

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[35] "80% of Air Deaths in Private Planes," *New York Times*, April 2, 1928.

[36] "Only Regulated Flying Safe," *New York Times*, April 3, 1928.

[37] A.C. Dewar and R.E. Byrd, "Has Aviation a Future? A Debate Part One: NO" *Forum*, August 1928, 164.

aviation."[38] While the differences of opinion between Dewar and Byrd appear antithetical, their arguments are based on the same question. Can technological advancements, firmly grounded in research and analysis, address the shortcomings of men? For Dewar the time for aviation had quickly come and gone. It was too late. But for Byrd, aviation's brightest days still rested in the future. Not every interpretation of flight however, rested on the theoretical foundation of can men fly? For artist Fitzgerald Harrington the question was should men fly?

Born more than a decade before the Civil War, the eighty-one year old Harrington matured in a vastly different America. Raised in an era before radios and automobiles, Harrington earned a reputation painting panoramic landscapes similar to the Hudson River artists popular in his youth. As president of the American Art Society he likely grew frustrated by the younger generation's apathy towards art. Motion pictures now attracted the lion's share of attention. Modern art and its gross violation of traditional norms and values only heightened this disdain. When granted the opportunity to express his opinions of modern America's newest form of transportation, his animosity was apparent. "I am emphatic in saying that commercial aviation will not prove a success.

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[38] A.C. Dewar and R.E. Byrd "Has Aviation a Future? A Debate Part Two: YES" *Forum*, August 1928, 171.

Over a thousand people have died within a year trying to conquer the elements. One aeroplane was destroyed by a bolt of lightning undoubtedly sent by God to stop the foolish people who are risking their lives to make money." This viewpoint resonated with many older Americans. For them the airplane did not represent a victory of human ingenuity over nature but rather heretical insubordination--man's failure to recognize his proper place. Or as Harrington concluded "if God intended us to fly He would have given us wings." [39]

By the late summer of 1928 the popular press turned its attention to the frightening increase in airplane-related deaths. Many of these articles did not focus on the hallowed topics confronting the validity of aviation as a whole. Instead they focused on other, more worldly, issues, most notably the quality of the men in the cockpits and the airworthiness of the craft they flew. In early August, the *Des Moines Register* acknowledged rising death tolls indicating that aerial fatalities should surpass those of the previous year. In spite of this fact, the article proposed that "standard aircraft operation is becoming safer." The unnamed author demonstrated numerous reasons for this disconnect. The first explanation outlined the use of outdated World War I surplus planes. The J-N, popularly known as the Jenny, offered a cheap and relatively reliable aircraft for aspiring pilots in the years following the

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[39] Ibid., 170.

Great War. More than a decade of use and few mechanical improvements left an aircraft prone to failure at the most inopportune time. A second reason involved an increasing and "uncontrollable foolhardiness among amateur flyers" to perform outlandish stunts beyond the airplane's capacity. The author believed that both of these issues could be remedied if the limited jurisdiction of the Bureau of Aeronautics were expanded to the licensing of both planes and pilots. [40]

The *Chicago Tribune* was less diplomatic. It claimed that a majority of airplanes in the Chicago-area were "potential death-traps" and their pilots "irresponsible men whose incompetence in other endeavors has induced them to seek riches in flying"—in other words, men that lacked the "right stuff." Unregulated barnstormers, the article continues, "are not only a menace to the safety of [those] who foolishly embark in them but they hinder the development of commercial air transport" as well.[41] The growing National Aeronautic Association hoped to overcome precisely these objections.

Originally founded in 1905 as the Aero Club of America, the ACA was the first national organization established to promote the interest of

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[40] Editorial, "Aviation," *Des Moines (IA) Register*, August 12, 1928.

[41] "Too Many Flying Accidents," *The Literary Digest*, October 27, 1928, 17.

aviation as "both a sport and a commercial endeavor"[42] Renamed the National Aeronautic Association (NAA) in 1922, the NAA bestowed all pilots' licenses issued until the Air Commerce Act of 1926 relegated that authority to the federal government. Although it lost its regulatory power, the NAA continued to foster the development of aviation through aerial races.[43] By then, most Americans were familiar with the spectacle of air races. Crowds from all over the country watched local competitions while national newspapers tirelessly covered the events. International competitions, most notably the Schneider Races, attracted airplane manufacturers and military personnel intent on engineering the world's fastest aircraft. The NAA, however, focused its attention on domestic aviation. Events like the heralded Pulitzer Trophy races, sponsored by the Pulitzer family in conjunction with the NAA, captivated audiences and sold thousands of newspapers. After the races successful completion in 1920 and 1921, organizers sought to create an ongoing annual celebration of aviators and their accomplishments. But even the

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[42] National Aerospace Association, "About NAA," National Aerospace Association, http://www.naa.aero/html/aboutNaa/index.cfm?cmsid=93 (accessed July 9, 2009).

[43] Ibid. The current mission statement of the National Aeronautical Association: "The primary mission of NAA is the advancement of the art, sport, and science of aviation and space flight by fostering opportunities to participate fully in aviation activities and by promoting public understanding of the importance of aviation and space flight to the United States." (accessed July 9, 2009).

patronage of the Pulitzers could not remedy the precarious financial situation surrounding the competition. Three additional meets, all lauded by the press and the aviation community, failed to earn enough revenue to warrant the Pulitzers continued involvement. For two more years, the NAA labored to keep the event solvent, holding smaller, scaled-back competitions in Philadelphia and Spokane, Washington. However, by the late summer of 1928 the aviation industry remained in a state of arrested development. Although airplane manufacturing and sales rose steadily in the wake of Lindbergh's national tour, memories of the Dole Air Races and other catastrophes remained in the headlines. Aviation needed a new look. And the Pulitzer Trophy races, renamed the National Air Races after 1925, needed a new face. Clifford Henderson hoped to provide both.

Born in Lennox, Iowa, Clifford William Henderson moved to San Francisco, California in his early teens. An ambulance driver and member of the Air Corps during World War I, Henderson returned to the United States and purchased a surplus 'jenny' aircraft. Enamored with flight before the war, Henderson planned the U.S. Army's worldwide aviation tour from Santa Monica in 1924. He also promoted local air shows throughout California, for which he earned the reputation of a skilled organizer and "master of ballyhoo." In 1928, Henderson was hired by the National Air Races to bolster the upcoming competition in Los

Angeles. Henderson would hold this position for next twelve years.[44] While it remains unclear how well orchestrated the National Air Races were under Henderson's guidance, newspapers across the nation praised the upcoming festivities. The announcement of John Livingston's participation in the event prompted the *Aurora Beacon-News* to report "the National Air Races are sponsored by the National Aeronautic Association as an answer to the haphazard and wildcat ocean flights which the association frowns upon as detrimental to the best interests of aviation."[45] The editorial staff for the *New York Times* shared this positive appraisal of the event stating that "comparisons made with...last year will undoubtedly show faster and safer planes, a marked advance in designing and manufacturing and the greater participation of competent pilots."[46]

One fascinating feature of the 1928 National Air Races was its well-planned simplicity. Class "A" and "B" participants departed from New York City on a series of short flights across the nation. These individual

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[44] Angela Day, "Inventory to the Clifford Henderson Collection of the National Air Races, 1928-1936," Purdue University Libraries, Special Collections, October 2007, 4-5. Available online at http://www.lib.purdue.edu/spcol/fa/pdf/hendersonar.pdf.

[45] "Aurora Entry in National Air Cross Country" *Aurora (IL) Beacon-News*, August 16, 1928.

[46] Editorial, "The Air Show in Los Angeles," *New York Times*, September 11, 1928, 26.

flights, rarely longer than 250 miles each, hoped to demonstrate the overall reliability of the aircraft. Endurance flights similar to those of Lindbergh and the Dole racers attracted far greater publicity but they also increased the likelihood of a fatal mishap. Shorter flights limited the risk. They also helped flyers prepare better for the upcoming journey. Modest flights assured that participants would not cover so great a geographic area that they flew over frigid mountain ranges and sweltering deserts on the same flight.[47] Pilots were given detailed maps of each location including secondary landing fields in case of an emergency. The selection of cities also played an important role. With the exception of New York City and Los Angeles, the race's first and final destinations, large cities were generally avoided. Bypassing metropolitan areas like Chicago and Dallas reduced aerial traffic and as a result the possibility of racers colliding with previously scheduled flights. The cities selected also suggested the future burgeoning hubs of aviation. Oklahoma City, St. Louis, and even Wichita, Kansas each possessed a flourishing aviation industry eager for national attention and perhaps a permanent spot in any future transcontinental air route. In addition, the cities selected provided spectators, conceivably overlooked by the organizers of Lindbergh's tour, an opportunity to see airplanes up close

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[47] "Livingston is Sparing Motor for Final Laps," *Aurora (IL) Beacon*-News, September 10, 1928.

and personal. Mines Field in Los Angeles followed a similar approach. Curious bystanders were invited to observe exhibition tents arranged by aviation companies and manufacturers from around the country. Although primarily intending to sell their wares, exhibitors demystified the airplane by displaying and explaining its fundamental parts. The state of aviation received a further boost independent of the air races when a meeting of insurance company executives in Chicago addressed the topic of insuring airminded customers. Actuaries, those "emotionless individuals who take nobody's word for anything," studied the "cold statistics" of licensed flight in rigorously inspected planes and suggested that within two years major insurance companies would underwrite airplane passengers.[48]

The greatest coup for the proponents of the air show came from the pen of Charles Lindbergh. Two weeks before the National Air Races the *New York Times* editorial staff reported that Lindbergh would write a series of weekly essays concerning the "progress and present status of aviation." Careful to avoid the boisterous optimism of other enthusiasts the article assured its readers "while an idealist, [Lindbergh] is thoroughly practical." Rather than focus on his previous exploits and the daring side of flight, editors promised that Lindbergh's accounts

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[48] Editorial, "Safety is Vital," *Des Moines (IA) Register*, September 12, 1928. Editorial, "Declining Hazards of Flight" *Des Moines (IA) Register*, September 13, 1928.

would enlighten readers on "every phase of aviation."[49] In his introductory salvo, published on August 26, 1928, Lindbergh proclaimed "America has found her wings [and] awakened to the realization that she can fly."[50] But beyond this sentimental opening the story strikes a more reserved tone. Paying heed to the "patient observation" of aerial pioneers, Lindbergh affirms that "there is no greater romance" than the story of aviation's development. Retelling Otto Lilienthal's discovery that cambered wings produce lift in early gliders and the triumphant flight over the English Channel by Frenchman Louis Bleriot, Lindbergh reminded his readers that the days of early aviation were marked by experimentation. However, he no longer thought the airplane belonged in the category of experimental machine. Commuter services, air mail delivery, and the military's use during World War I provided ample evidence of its successful application in daily modern life. The problem rested not in the technology but rather its use. While some commentators argued that recent catastrophes added to the existing knowledge and limits of the airplane. Lindbergh disagreed. These flights and their organizers "have dimmed...the less spectacular achievements of men who began this evolution by patient experiments." Interestingly,

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[49] Editorial, "Lindbergh on Aviation," *New York Times*, August 26, 1928.

[50] Charles Lindbergh, "Lindbergh Writes of Aviation's Advance" *New York Times*, Aug 26, 1928.

nowhere in the article does he call for the immediate cessation of events like the Dole Air Races. In an argument perhaps too subtle for the contemporary reader, Lindbergh asks not that these races be prevented but rather that they not be held in the spirit of experimentation. Echoing his opening statement, Lindbergh remarks that "America has found her wings," and acquired the knowledge to make flight possible. But the nation "must yet learn [how or when] to use them," to ensure the safety of pilots, passengers, and the industry as a whole. For Lindbergh the late summer of 1928 was a critical "period of adjustment." A time when the American people must stop interpreting the airplane as an instrument of reckless entertainment and instead view it as an important component of modern life. Closing his initial column, Lindbergh warned his readers that this transitional era "should be approached with caution."[51]

But 1928 was not an era of caution. Nor was it an age based firmly in the "patient observation" outlined by "Lucky Lindy." It was an age of speed and the apprehension surrounding its lasting impact. For some commentators speed represented the "soul of modern life."[52] Automobiles and airplanes replaced horse-drawn vehicles and, perhaps,

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[51] Ibid.

[52] "Speed Thrills 60,000 as Fair Crowds Watch" *Des Moines Register*, August 25, 1928.

even one day the mighty locomotive. Cities, the physical representation of modernity, bustled with immigrants and young people providing new ideas and interpretations of life in the 1920s. To what extent could speed change modern society? It already produced a smaller world where people, products, and news stories rapidly travelled across international borders and vast oceans. Could this new culture of speed replace the major religions of the world? Some were not so sure. After a tragic automobile accident in Monza, Italy at the Grand Prix of Europe killed the driver, nineteen spectators, and injured more than twenty others the "semi-official" Vatican newspaper the *Osservatore Romano* chastised the "sporting folly" that "possesses modern youth."[53] Critical of a generation "no longer content to arrive but...to arrive quickly" the paper laments the "new religion of speed" and wonders if it won't one day replace the "ancient Christian religion." But the criticism went beyond the participants in ill-fated speeding events. It also criticized the public piggishly consuming these spectacles. Thousands of fans, the article continues, feverishly chanting "Kill him! Kill him!" at the conclusion of the Dempsey-Tunney fight two years earlier resembled a scene "worthy of a pagan arena."[54]

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[53] "Vatican Organ Protests New Religion of Speed Deplores Cries of 'Kill Him!' at Bouts Here," *New York Times*, September 13, 1928.

[54] Ibid.

For people like "Roman candle promoter" Clifford Henderson, the mundane features of aviation only attracted so much attention. There needed to be an element of daring risk to counter the rationale of safety and control. While organizers of the transcontinental races prepared for an event free from the unexpected, Henderson hoped to attract a greater number of spectators through death defying feats and never-before-seen stunts. Mines Field readied for an opening event of 300 aircraft "flying in formation" piloted by members of the Army, Navy, Marine Corps, and "flanked by scores of civilian ships." Parachute jumpers and private aerial circuses swarmed to the West Coast equipped to thrill crowds and sell airplane rides. The National Air Races would be the "greatest aerial exhibition in the history of aeronautics."[55]

In the days that followed the foggy first leg of the Class "B" competition, the transcontinental air races settled into a routine of uneventful landings and departures. Minor setbacks and mechanical difficulties forced some contenders out of the race but a decided lack of catastrophic accidents shortened newspaper coverage. The timed nature of the event also led to confusing published results announcing any flier who first landed in a city as the race's prohibitive favorite. City papers, including the *Aurora Beacon-News*, continued to summarize the day-to-

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[55] "Los Angeles Opens Big Air Festival," *Des Moines (IA) Register,* September 9, 1928.

day events of local pilots. Livingston and his journey to Los Angeles dominated headlines in Aurora, but most of these stories focused on the first day of competition not the events of Terre Haute, St. Louis, and other cities on the route.

Lacking enough copy from the race itself, national dailies turned their attention to the extraordinary personalities on tour. Class "A" participant Tex Rankin, the "flying cowboy," attracted widespread notoriety for his orange aircraft blazoned with the number "13." Journalists enthusiastically assembled around the "grizzled sun-burned" pilot curious about his choice of number. Rankin delighted reporters with his gregarious reply, "you ain't seen nothing yet." He then introduced his co-pilot – a black cat. "This cat," the pilot boasted "is named Jinx. He has 150 hours in the air and always rides just in front of me. He crosses my path half-a-dozen times in a flight."[56] Such was the public's fascination with Rankin and his feline co-pilot that the *New York Times* published a photo of the strange duo on the front page of its Sunday "Picture Section."[57] Papers around the nation bemoaned Jinx's unexplained disappearance the following day in Kansas City and few

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[56] "Rowland Holds Lead as 27 Racing Planes Reach Kansas City" *New York Times*, September 7, 1928. "Rowland First to Reach Goal in Air Derby" *Chicago Tribune*, September 11, 1928.

[57] "Picture Section" *New York Times*, September 9, 1928.

failed to note Rankin's ensuing bad luck when a stalled motor forced him down near Midland, Texas. [58]

While the relatively serene start to the 1928 National Air Races still commanded the majority of popular attention, a number of aviation accidents around the United States momentarily grabbed headlines. The United States Air Mail service experienced the worst accident in its brief history when seven people died in Pocatello, Idaho on September 4. Less than one week later, five different crashes on the same day killed ten more. And on the eve of the Transcontinental Air Tour three people, including a six year old boy, perished in the timbered swamplands of western Massachusetts. None of these unfortunate events garnered national attention for much longer than a day. A rapidly changing news cycle replaced names, towns, and body counts with fresh names, towns, and body counts making it easy to forget them shortly after they were read. The particularly devastating events in western Massachusetts, however, proved different. Not solely due of the inherent tragedy of a young boy losing his life, but rather the palpable desperation and enormous expectations placed on the aircraft itself by Joseph Briotta. To him the airplane did not represent a modern means of conveyance. Rather, it granted him one final opportunity to cure his son.

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[58] "Black Cat is Stolen" *Des Moines (IA) Register*, September 8, 1928. "Racing Pilots Rest After Day of Flying" *Des Moines (IA) Register*, September 9, 1928.

In the early evening of Friday September 7, 1928, twelve hours before the Class "A" and "B" races scheduled departure, the Briotta family car rolled to a stop outside Randall Airport near Agawam, Massachusetts. Edward Mazer exited the car from his passenger-side seat and walked to the nearest hangar in search of Charles Potholm. Mazer and Potholm exchanged pleasantries and after a few moments of conversation they returned to the automobile. Joseph Briotta had his hands full. The father of six, Joseph attempted to corral his eager teenaged son, Michael, while tending to his three year old daughter Antoinette and youngest son Luke. Born six years earlier Luke Briotta was, in the parlance of the time, "deaf and dumb." While this vague diagnosis fails to reveal the nature or severity of Luke's condition, his father firmly believed that his son could be cured. Charles Potholm however was not a licensed physician. This particular lack of credentials did not discourage Joseph. He was not looking for a doctor. It's possible he was searching for a second incarnation of Agawam's most famous former resident, the now legendary Anne Sullivan. Thirty years earlier, Sullivan helped to transform Helen Keller from a deaf and blind youngster to an inspirational figure known around the world. At only twenty eight years old, Potholm lacked Sullivan's pedagogical skills but he did indeed exhibit the talents of a miracle worker. Charles Potholm could fly.

Shortly after six a.m. the two-seater Eagle Rock aircraft roared to life. Potholm prepared for a series of spectacular dives intended to "suddenly frighten" his young passenger, Luke, into regaining "control of his vocal cords."[59] Luke sat in the rear seat of the plane on Mazer's lap. His father, required on the ground to care for his other children, shouted over the din "if this cures Luke, they'll put his picture in the paper." [60] While this bold regimen combining modern technology with the mystical elements of curing the mute appears fruitless, it was not entirely without precedent. Two months earlier the mother of an eleven-year-old boy in Queens reported her son's "hearing [was] partly restored" after a "variety of loops, nose dives, barrel rolls, and other stunts."[61] Lt. H.B. Clarke, manager of the Roosevelt Field Flying School and assistant starter for the Transcontinental Air Tour, ambivalently suggested that while stunt flying for the deaf does very little, he did "believe in some instances the differences in air pressure at high altitudes" could provide relief. Doubtlessly fueled by desperation more than medical fact, Joseph Briotta watched as Charles Potholm, Edward Mazer, and his son taxied to the end of the runway and took off.

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[59] "Three Die in Agawam Plane Crash" *Springfield (MA) Union*, September 8, 1928.

[60] Ibid.

[61] "Flight Aids Boys Hearing" *New York Times*, July 30, 1928.

Though accounts of the event vary greatly, most witnesses agreed that the earliest moments of the flight appeared routine. After reaching an altitude of 2000 feet, Potholm started his dive and performed a "perfectly executed looped-the-loop."[62] Soon after the initial dive, startled spectators watched in horror as the plane failed to recover from its hurried descent. In a cloud of splinters and torn canvass the starboard wing ruptured forcing the second wing back against the fuselage. With its engine "roaring at full blast" the airplane struck the ground at an almost vertical angle in a stand of trees adjacent to the airfield.[63] Joseph, "stunned for the moment," started off for the wreckage.[64] Swampy terrain prevented emergency vehicles from approaching the scene as people feverishly dug through the mud in the slim hopes of finding survivors. Thirty minutes later rescuers pulled the tattered little body of Luke Briotta from the crash site. It would be another hour before the remains of Potholm and Mazer could be recovered.[65]

Not surprisingly this heartbreaking accident dominated headlines throughout New England. Daily newspapers in neighboring Springfield

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[62] "Wing 'Exploded' in Mid-air, as Plane Fell, Says Witness," *Springfield (MA) Union*, September 8, 1928.

[63] Ibid.

[64] "3 Die in Agawam Plane Crash," *Springfield (MA) Union*, September 8, 1928.

[65] Ibid.

dedicated their entire front page to the tragedy. Eye witnesses and local gossips embellished the events as the story rapidly evolved. Explanations for the crash ranged from an exploding gas tank to a panic-stricken Luke grabbing the control stick and forcing the aircraft down. Local resident and pilot Lloyd Wright Bell offered the most convincing depiction of the crash. Bell reasoned that the initial problem resulted from the enormous change in air pressure on the top of each wing. The explosion witnesses heard, therefore, was not the consequence of an exploding gas tank but the sound of canvass-covered wings bursting. The lack of fire damage and the relatively undamaged gas tanks recovery strongly support Bell's assumptions. These facts did not prevent continued speculation on behalf of local residents. Was the root cause of accident a failure of the machine? Or the pilot? Or, perhaps even, the failure of a father too chicken-hearted to join his son in flight?

Days following the crash, local newspapers continued to cover the aftermath—particularly the feelings of area natives. Residents mourned Edward Mazer, the twenty-one year old, who apparently introduced the therapeutic benefits of stunt flying to Briotta. J.A. Hearn, Vice-President of Massachusetts Airways Corporation and the boss of Charles Potholm, hesitated "to criticize a dead man" despite the fact he "distinctly

disobeyed orders in stunting with passengers."[66] Even as witnesses claimed Joseph Briotta knew "stunt flying was prohibited" and "insisted" that the flight continue, local residents avoided criticizing the grieving father.[67] Three days later the editorial staff at the *Springfield Union* warned of the dangers inherent in performing maneuvers "in a machine not built for 'stunting.'" The column lamented the "doubly unfortunate" loss of life and fleeting "public confidence in the safety...of aviation" not the judgment of Briotta, Mazer, or Potholm. The question of flight as a potential panacea barely gets mentioned at all. While labeled as a "dubious practice," editors hesitated to condemn the procedure entirely noting that it "must be left to individual judgment."[68]

Outside of western Massachusetts, the event garnered brief national attention. The Associated Press exaggerated the mishap unfolding in front of hundreds of spectators hoping to witness a cure for the young boy's condition. Avoiding additional superlatives, the AP summarized Potholm's experience as a licensed transport pilot and the "father's" request to perform stunts in spite of regulations. But the

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[66] "Pilot Disobeyed Orders, Declares Airways Officer," *Springfield (MA) Union*, September 8, 1928.

[67] "3 Die in Agawam Plane Crash," *Springfield (MA) Union*, September 8, 1928.

[68] Editorial, "The Agawam Tragedy," *Springfield (MA) Union* September 10, 1928.

article chooses not to name Briotta specifically and avoids placing blame for the accident on anything beyond a "crumpling wing" and a "sharp explosion."[69] The United Press International likewise addresses Potholm as a licensed pilot, however this particular account states he "tried stunt flying for the first time" and after completing the first loop "failed to recover." Once again Briotta escapes criticism and only justifies brief attention.[70] This is not the case in *The New York Times*. Though relegated to the back pages of the Saturday edition, editors arranged the article with numerous sensational headlines including "Plane Aflame in Midair" and "Father...Refused to Go Up With Boy." Potholm's expertise as a pilot remained pertinent to the story but the failure of Briotta to board with his son attracted ire in New York. Mazer, largely ignored in other national reports, offered to join the boy "after the father refused an invitation." Contrary to reports in Springfield indicating that Mazer encouraged Briotta and perhaps even Potholm to participate, the *New York Times* version fails to mention Mazer arrived at the airfield with the Briotta family. Mazer is quietly assumed to be a brave volunteer

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[69] Associated Press, "Plane Accident Kills Three in Massachusetts," *Des Moines (IA) Register*, September 8, 1928.

[70] United Press International, "Loop to Restore Hearing Kills 3," *Waterloo (IA) Evening Courier*, September 8, 1928.

compensating for the father's cowardice.[71] The desire of the local and national media to assign responsibility for the accident clearly shows that *someone* or *something* warranted blame. An untrained pilot, a cowardly father, or an airplane ill-suited for stunting all attracted the public's attention. Although less than one week later the Chief Medical Officer of the Army Air Corps stated that engine noise and rapid changes in air pressure "caused and aggravated" deafness, it remains unclear how much credence the public placed in this diagnosis. For many naïve landlubbers the airplane still afforded hope to the afflicted.

National focus on this series of unfortunate accidents waned in the excitement surrounding the final two days of the transcontinental races. Livingston, still far ahead in elapsed time, warned interested journalists in El Paso, Texas of the existing dangers in the competition. Sweltering desert flights over Arizona threatened engines already taxed by hundreds of miles in the air. Furthermore, the final leg of the tour, from Yuma, Arizona to Mines Field, involved a brief but dangerous hop over the "rarified air" of the Rocky Mountains.[72] Cautiously, Livingston navigated the southwestern terrain, worrying many in Aurora that his once insurmountable lead would slip. E. E. Ballough and his seventy-three

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[71] "Three Die in Flight to Cure Dumb Boy" *New York Times* September 8, 1928.

[72] "Untitled Article" *Aurora-Beacon News* September 11, 1928.

year old co-pilot benefactor, Charles P. Dickinson, provided additional drama. Ballough, reported as the winning pilot in Oklahoma City, El Paso, and Yuma, hoped to overtake Livingston with an aggressive approach over Arizona and southern California. The strategy backfired. Flying at high speeds in grueling conditions destroyed his engine "raining valves and rocker arms as he [Ballough] cleared the last mountain peak." Not to be outdone by mechanical failure, Dickinson, the "millionaire Chicago seed merchant" and nation's oldest licensed pilot ordered a new engine to be delivered to Ballough from Los Angeles. In an overnight "force of mechanics," Ballough successfully installed the new $6,000 power plant and continued to his final destination the following morning.[73] Ballough arrived in Los Angeles on Wednesday September, 12 at 8:54 in the morning, less than one minute before Livingston's arrival.[74]

The late summer / early fall of 1928 was not without its news stories. Investors heralded the meteoric rise of stocks on Wall Street. Al Capone and other notorious gangsters, empowered by Prohibition, brazenly fought for control of the nation's illicit liquor trade. And New Yorkers rejoiced as Babe Ruth and Lou Gehrig led the Yankees to their

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[73] "Livingston Wires: -- 'I Win'" *Aurora Beacon-News*, September 13, 1928.

[74] "Aurora Flyer Lands in San Diego" *Aurora Beacon-News*, September 12, 1928.

second consecutive World Series title. The debate over aviation, and its lasting value to American society, shared these headlines. Not even an approaching presidential election could completely overshadow the conversation. The abundance of scheduled air mail routes around the nation and Lindbergh's trans-Atlantic flight the year before provided ample evidence for the integrity of aviation technology. But doubts about flight remained. Many of these doubts, veiled in the rhetoric of safety and reliability, instead focused on the charisma and emotional makeup of the pilots in the cockpit. For many people interested in aviation, the same questions about its future resurfaced. Was the airplane safe for the common man? Did prospective passengers require some form of advanced birdman qualities? What about the cataclysmic failures of the Dole Air Races and other widely publicized accidents? What did these mishaps do for the future of aviation? The 1928 National Air Races and Aeronautical Exposition hoped to address these concerns. As the transcontinental racers converged on the festivities at Mines Field in Los Angeles, it appeared the careful planning and preparation paid off. Fifty-three entrants successfully navigated from Long Island to Los Angeles with no serious accidents or fatalities. Emergency landings did occur and some participants were forced to withdraw from the competition due to mechanical difficulties. But, as one commentator suggested, "nothing else has indicated since Lindbergh flew to Paris, the advance of aviation

in this country."[75] In spite of this resounding success, flyers completing their five day journey across the nation, soon discovered the majority of spectators more interested in the drama unfolding at Mines Field. Parachutists, wing-walkers, and aerial circus acts monopolized the first week of competition. And perhaps no feat garnered more regard than the exploits of John Williams, Bert Woodring, and William Cornelius, better known to the anxious crowds as the United States Army acrobatic flight squad, *The Three Musketeers*. These men captivated audiences, not with conservative feats of aviation, but rather dangerous choreographed stunts unfolding mere feet above the over-flowing grandstands. These men certainly exhibited the right stuff.

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[75] Lauren D. Lyman, "Air Races Prove Planes' Fitness" *New York Times* September 16, 1928.

CHAPTER 3

MEN, WOMEN, AND THE RISE OF REGULATION

Throughout the summer of 1928, newspapers enthusiastically covered the events of the National Air Races and Aeronautical Exposition. Cities along the tour carefully prepared for the event, hoping to acquire a role in any permanent national air route established in the future. And commentators, like freelance journalist Russell Owen, praised aviation's recent development and promised even better results than the previous year's cross-country race to Spokane, Washington. For Owen, the primary reasons for this inevitable improvement rested in the "cleaner design and construction" of aircraft and the "increasing number of engines" utilized by the more than seventy entrants. "Airplane races," Owen argued, "are not contests of pilots so much as they are tests of the endurance of the engine."[1] But for many casual observers of the National Air Races, nothing could be further from the truth. Aeronautic jargon and technical advancements paled in comparison to the larger-than-life birdmen that harnessed the awesome power of the flying machine. Charles Lindbergh, not his aircraft *The Spirit of St. Louis*, garnered lasting national acclaim. And while most Americans could

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[1] Russell Owen, "Improved Planes Entered in Derby," *New York Times*, September 2, 1928.

easily recall the name of Lindbergh's airplane, few outside the industry cared which company manufactured it.

One cannot dismiss Owen's assertion about the importance of technical knowledge. After all, technology allowed the mechanical act of flying to occur in the first place. But in 1928, the technology of flight was largely accepted. Flying was a reality. Doubts remained, however, about the human qualities one needed to survive an aerial adventure. Longstanding beliefs about the intrepid birdman persisted. And as the events of the National Air Races unfolded, other, equally important social changes occurred that made the *idea* of flight plausible for potential customers. American business played an important role, but not in the manner many advocates of aviation expected. Some commercial operations acquired public trust, and as a result growing profits, by marketing the flying experience in a different way. Notable contributions by women pilots also influenced the public. By questioning the longstanding birdman stereotype, women presented a fresh interpretation of the skills required to fly safely. Another key component of this social transformation included regulation. Although government involvement in the control and management of flight proceeded slowly, other organizations, including the officials of the National Air Races, established guidelines for safer flying. These new rules hoped to exclude reckless pilots and isolate the negative publicity their mishaps inspired.

These social changes, in conjunction with growing technological development, would help to reshape the public's understanding of aviation for generations to come.

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In September 1928, as the events of the National Air Races took place, a "Washington, D.C. dealer in automobiles" decided to purchase a new aircraft and charge passengers for brief flights over the nation's capital.[2] This practice, widely known around the country as barnstorming, was neither original nor particularly innovative. The term barnstorming, initially used in theater circles in the 19th century, referred to pastoral acting troupes that followed westward expansion, performing their craft in barns before small paying crowds. But by the end of World War I, barnstorming pertained to the rapidly growing body of itinerant pilots circling the nation in secondhand airplanes selling rides and performing aerial stunts. These nomadic pilots toured the countryside in single-engined aircraft "flying for pure sport and entertainment with little...remuneration, no rules or regulations, and more than a hint of danger."[3] But unlike his predecessors who thrived

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[2] Editorial, "Barnstorming De Luxe" *New York Times*, December 26, 1928.

[3] Dominick A. Pisano, "The Greatest Show Not on Earth: The Confrontation between Utility and Entertainment in Aviation," in *The*

on risk and marketed the adventure as such, this unnamed entrepreneur advertised his flights as sight-seeing tours, not death-defying feats. Observing the city from an entirely different angle replaced the act of flying as the primary spectacle. Company organizers frowned on the popular name "gypsy flying" and instead dubbed their service "barnstorming de luxe." Tri-motored planes, capable of carrying up to twelve passengers, replaced older, less reliable aircraft while business levers, including "salaries, insurance, [and] depreciation," were all carefully recorded to ensure maximum profitability. In the first month of operation, over four thousand customers paid $5 each for the experience, encouraging the company's growth from Michigan's Upper Peninsula to the Florida panhandle. The *New York Times* editorial staff, commenting on the company's success, praised this "minor capitalist" and his flawless safety record. "Patrons," the article continues, "can see for themselves that the machine is inspected at all hours [even] while flying is going on." And while editorialists lamented the company's high prices, the writers agreed that "'barnstorming de luxe' is helping to make the average man [more] air-minded."[4]

Airplane in American Culture, ed. Dominick A. Pisano (Ann Arbor, MI: University of Michigan Press, 2003), 51.

[4] Editorial, "Barnstorming De Luxe" *New York Times*, December 26, 1928.

Air-minded individuals, those who possessed an "enthusiasm for flight" and supported its continued development, had other reasons for optimism.[5] One involved the growing number of women interested in aviation. In the weeks preceding John Livingston's involvement in the 1928 National Air Races, the *Aurora Beacon-News* published a series entitled "Street Comment." In this particular column, "several persons at random" were asked the question "How would you like to go on the cross country air race that starts September 6?" Alice Hollering, designated vaguely as a "student," responded enthusiastically. "I'd like to. I know I would get a huge thrill out of it. It must be dangerous, but I believe if I had a good, reliable, and fairly careful pilot to drive the ship, I wouldn't be scared."[6] But not every woman fascinated by aviation wished to inertly sit in the passenger seat. Many women wanted to experience it firsthand.

The first generation of female pilots emerged in the years prior to World War I. In 1911 Harriet Quimby, the most celebrated aviatrix of her day, received the first international pilot's license issued to an American woman. The following year, Quimby successfully navigated the English Channel, another first for women. Unfortunately, aviation in this era

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[5] Joseph Corn, *The Winged Gospel: America's Romance with Aviation*, 2nd ed. (Baltimore, MD: Johns Hopkins University Press, 2001), 12.

[6] "Street Comment" *Aurora (IL) Beacon-News*, August 29, 1928.

proved fatal for many pilots, regardless of gender, and Quimby lost her life in a tragic airplane accident during an aerial exhibition outside of Boston in 1912. But Quimby was not the only woman to achieve notoriety in an airplane. Names like Bessica Raiche, credited by some as the first woman to fly solo, and Ruth Law, brief holder of the American long-distance flying record, inspired subsequent generations to fly.[7] The motives for many American women enthralled by flight differed little from their male counterparts. Aviation offered the pilot freedom. Freedom from gravity. Freedom from the worries of the temporal world. Freedom from social constraints. These romantic notions of aviation appealed to many pilots. But for some women, no other "activity symbolized the freedom and power which was lacking" in their daily lives.[8] For American women, the airplane foreshadowed a not-so-distant future in which longstanding social mores would collapse allowing men *and* women to stand on equal footing. The first, and possibly most often overlooked, social custom jeopardized by women and their increased presence in the cockpit centered on the wardrobes of female aviators.

In her article "Racing Bodies: Dress and Pioneer Women Aviators and Racing Drivers," historian Barbra Burman investigates the role this

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[7] Wendy Boase, *The Sky's the Limit: Women Pioneers in Aviation* (MacMillan Publishing Co., Inc., 1979), 18-19.

[8] Corn, *The Winged Gospel*, 73.

group of women played in the destruction of traditional notions of fashion and utility. Though focused primarily on the phenomenon in British culture, the "interaction and competition...between Britain, France, and the United States" inspired similar changes in each nation.[9] Although the number of women aviators and race car drivers in the early 20th century accounted for a miniscule fraction of the overall population, "it was a significant one, which reached a large number of people through attendance at races and events and by its coverage in the press and popular fiction."[10] Flying an open-cockpit aircraft exposed pilot and passenger alike to the harsh elements. Even in pristine weather conditions, traveling at high speeds left aviators vulnerable to wind, dust, and other aerial debris. Men protected themselves from these dangers with the use of flight suits, leather helmets, and goggles. But how was a woman to protect herself from these same hazards? In one of Wilbur Wright's inaugural public flights outside of Le Mans, France in the late summer of 1908, a few fortunate individuals joined the famous aviator in a series of brief public flying demonstrations. One of these lucky passengers was Mrs. Hart O. Berg. Dressed in the fashions of her day, Mrs. Berg struggled to board the Wright flyer while wearing an ankle-

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[9] Barbara Burman, "Racing Bodies: Dress and Pioneer Women Aviators and Racing Drivers," *Women's History Review* 9, no. 2 (2000): 303.

[10] Ibid., 305.

length dress and an extravagantly feathered hat. To ensure that everything stayed in its proper place, Mrs. Berg was forced to tie her hat firmly to her head with a length of cloth while her legs were securely bound together with twine.[11]

Women hoping to pilot their own planes could ill afford the dangers and inconveniences of flying in such a manner. As a result, clothing traditionally worn by men, needed to be adapted for a woman's use. For Burman, this transformation broke with traditional concepts of fashionable dress which often associated a man's attire with "seriousness, power, authority and action, and linked [women's fashion] with frivolity, helplessness, compliance, and inaction."[12] The use of the typically male wardrobe by female aviators addressed the issues of comfort and safety required by women in flight. But another dilemma incited by this change involved the blurring of gender distinctions. Women wearing full-bodied flight suits, leather helmets, and goggles were often indistinguishable from men and threatened to "erode the differences between female and male appearance and would require the crossing of long-established borders."[13]

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[11] Robert Wohl, *A Passion for Wings: Aviation and the Western Imagination, 1908-1918* (New Haven, CT: Yale University Press), 35.

[12]Burman, *Racing Bodies*, 305.

[13] Ibid., 307.

The introduction of women pilots, coupled with this blurring of gender distinctions, portended vast changes in the realm of aviation. In his book *Sky as Frontier: Adventure, Aviation, and Empire,* historian David T. Courtwright argues that the sky itself is a frontier similar to that of western gold rush towns in the mid 19th century. These societies, classified as type-II frontiers, initially attracted young, unmarried, male workers in ratios of "eight or nine men to every woman." But as these cultures evolved, women became more prevalent. Subsequent generations of men "married...and created a society that was more balanced, family-centered, and stable." [14] The introduction of women pilots in the early years of aviation did not necessarily indicate that the taming of the aerial frontier would immediately follow. Initial attempts of women to enter aviation's mainstream in the first quarter of the twentieth century frequently met with resistance. Industry jobs, already in short supply, rarely went to women and, at the height of World War I, qualified women were denied permission to join the greatly understaffed flying corps of the United States Army. But by the end of the 1920s women found new opportunities "which stemmed mainly from the peculiar needs of the aeronautical industry [in] a time of transition."[15]

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[14] David T. Courtwright, *Sky as Frontier: Adventure, Aviation, and Empire* (College Station, TX: Texas A&M University Press, 2005), 9-10.

[15]Corn, *The Winged Gospel*, 73.

By 1928, aviation executives recognized a fundamental problem in its public perception. The widely accepted view of the daring birdman pilot, crucial to the industry's development a few years earlier, now hindered its continued growth. Aspiring pilots, eager to mirror the feats of earlier flyers, commonly participated in aerial stunts intent on gaining national fame. Failure oftentimes proved fatal and tarnished the image of aviation. But success also had its drawbacks. If the pilot survived his endeavor, onlookers assumed he possessed the proper traits, all of them perceived as masculine, to ensure his survival. Therefore success did not breed confidence in the machine but rather a faith in the man. In the early 1920s, most women interested in aviation learned to fly in relative anonymity. Barnstormers and aerial circuses occasionally employed women as wing-walkers or parachute jumpers but rarely for their flying skills. Throughout the 1920s and 1930s licensed women aviators constituted less than one-thirtieth of all registered pilots. As the national spotlight on these women intensified, airline executives adopted a new approach. By promoting the image of a woman in the cockpit, flight appeared less dangerous, and as a result, made flying "thinkable" for the public.[16]

Utilizing the likeness of women as a foil for the birdman stereotype quickly transformed the nature of aerial competitions. The 1928

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[16]Corn, *The Winged Gospel*, 71-72.

National Air Races listed no women among its official participants. It remains unclear if any rules, explicit or otherwise, prevented their participation. But within a few years most aerial contests allowed male and female pilots to compete in the same events. The 1936 Bendix Trophy Air Races traced a similar route between New York City and Los Angeles as the National Air Races. Three of the top five finishing times were posted by women pilots, including first and second place. Not every facet of aviation, however, was so egalitarian. In spite of women's ability to compete, and often outperform, men during aerial races, their role within the industry remained circumscribed. Some of the most well known female pilots of the day, including Louise Thaden, Blanche Noyes, and Amelia Earhart, sold airplanes. For Thaden, the reason for this was simple, "nothing impresses the safety of aviation on the public quite so much as to see a woman flying an airplane." If a woman can do it, she continued, "the public thinks it must be duck soup for men."[17]

Privately, many women aviators disapproved of circulating this message. Voluntarily assuming the role of "weaker vessel" undoubtedly angered many female pilots in the age of suffrage and feminism. But women's liberation commonly acquiesced to the greater cause of aviation. Not all women believed in the equality of the sexes in the air. Ruth Nichols, frequent air race competitor and able pilot, deemed women

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[17] Ibid., 75.

"better suited" in promoting "safe and sane" flying while encouraging men to avoid "the spectacular." Regardless of their personal opinions, women pilots generally accepted this responsibility and publically performed the "housekeeping functions" of aviation.[18]

As aviation evolved and the public's perception of flight changed, so too did the function of women. In 1930, United Airlines employed its first stewardesses. Originally hired after completing nurse's training, these women assured United passengers of a safe flying experience. But the presence of nurses onboard added to the trepidation of many commuters. The mere presence of nurses suggested a possibility that something *may* occur. Young, attractive, "professional women" skilled in the art of "domestic services" fared better at allaying the fears of nervous passengers more than nurse practitioners. The strategy adopted by United Airlines, and emulated by other aviation companies, differed little from the use of women pilots in the 1920s and 1930s. Early in aviation's development, women pilots helped to convince the public that typically masculine qualities associated with aviation were not required to fly. Years later, as the majority of people accepted the safety of flight, women

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[18] Ibid., 80-81.

once again, played an important role. This time by domesticating the flying experience and making the skies friendly for all.[19]

Another key development in the gradual acceptance of the airplane resulted from an increased public demand for regulation. For many followers of aviation, the greatest threat posed to the industry originated from within the cockpit. Pilots without proper training, or ignoring their instructors, repeatedly took to the skies in search of adventure. Their feats gained local and sometimes national notoriety but the accidents caused by their behavior often resulted in the deaths of pilots, passengers, and innocent bystanders on the ground. Editorialists around the nation lamented the "foolhardy and useless enterprise" of stunt flying while others called upon Congress to outlaw the practice.[20] One commentator, writing for the *New York Times*, accepted that aviation possessed certain "latent dangers" that could never be removed. Pilots routinely encountered risk and at times mishaps were unavoidable. But, he wrote, the cause of these accidents, even when well-trained pilots were involved, rarely occurred due to mechanical failure. The pilot almost always was to blame. Given the inherent danger of aviation, irresponsible pilots threatened public safety and, he thought, should be

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[19] Ibid., 88-90.

[20] "Counting the Cost of Stunt Flying," *The Literary Digest*, September 3, 1927.

prosecuted. After all, "to gamble with other people's lives," the article concluded, "is as criminal in the air as it is anywhere." [21]

Other advocates of regulation proposed stricter qualifications for licensure. In the fall of 1928, Assistant Secretary of Commerce for Aeronautics William P. MacCracken reported over 16,000 certified pilots in the United States. These numbers were all the more impressive considering that the aeronautics branch of the Commerce Department had been created only two years earlier. MacCracken impressed government officials with these reports. The German Undersecretary of Aviation scarcely concealed his shock as the United States rapidly placed itself "far ahead of the...world in commercial [aviation] development." However, a deeper analysis of these statistics, appearing in a report by Dr. L. H. Bauer of the Air Regulations Division for the Department of Commerce, suggest a fundamental flaw. The 16,008 certifications granted, an average of 25 a day for two years, resulted from only 19,021 applications. A success rate of over eighty-four percent. Furthermore, of those that failed, 2688 qualified for possible "re-certification" at a later date, only 345 applicants failed the examination and "were held in suspense." Dr. Bauer explained the results as a consequence of the

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[21] T. J. C. Martyn, "'Fool Flying' Takes a Grim Toll," *New York Times*, October 7, 1928.

"slight lowering of standards for the student pilot."[22] Another troubling issue surrounding licensure involved the absence of specialized certifications. Aspiring commercial aviators were not required additional education differentiating them from the casual hobby flyer. The relative ease in obtaining a pilot's license did not rest solely on the desires of MacCracken or the Department of Commerce hoping to inflate their statistics. Private flying schools commonly misled their students informing them that employment in the field of aviation would immediately follow graduation.

As manager of Roosevelt Field in Long Island, Lt. H. B. Clarke had many responsibilities. Along with the daily routine of operating one of the nation's largest airfields, Clarke also arranged the opening event of the 1928 National Air Races. His role as Assistant Race Starter required the organized departure of more than seventy aircraft on their way to Mines Field in Los Angeles. In addition to these duties, Lt. Clarke was also a flight instructor. According to advertisements in most of the city's daily newspapers, the Roosevelt Field Flying School, offered prospective students a "complete course of flying instruction under the supervision of capable and experienced pilots." Under Clarke's tutelage, novice aviators could expect their first solo flight after only ten hours of instruction. And for those interested in more excitement, courses were also available in

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[22] "16,008 Air Pilots Certified to Fly," *New York Times*, October 21, 1928.

"cross-country flying and acrobatics." At $30 an hour, not every airminded New Yorker could afford the luxury of flight school. But for those seeking employment, comparatively few obstacles stood between an inadequately trained pilot and a job in the aviation industry.[23]

Citing the "natural desire of youth" to participate in "one of the few remaining fields of constant adventure," Charles Lindbergh clearly understood the attraction of aviation. In spite of his optimism, however, he called for a greater standardization of the industry in a series of articles published throughout the summer and fall of 1928. While addressing the topic of flying schools, he warned his readers of "unscrupulous" businessmen eager to "obtain money by offering quick and easy courses" for accreditation. An ambitious student could learn the basics of flying in a relatively short period of time but few young pilots had "the necessary qualifications or the time to acquire the skills essential" for commercial employment. Fledgling pilots may be allowed to fly solo after a few hours of instruction, but few companies would trust their aircraft and cargo to an inexperienced pilot when "it [could] all be wrecked in a minute." The average transport pilot, Lindbergh continued, required at least 500 hours of flying experience with most of those hours compiled in the military. "Aviation has no difficulty in gaining [new]

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[23] "Learn to Fly," advertisement, *New York Times*, September 9, 1929. Many of these advertisements flanked articles covering aviation, including those written by Charles Lindbergh.

recruits," Lindbergh observed, but the fact remained that for employment it required an abundance of specialized training costing no less than $500. Careful to avoid the impression of America's skies filled with poorly trained pilots, Lindbergh made sure to note that aviation is an "industry with very high requirements" and if future pilots hoped to obtain employment in the field, "the haphazard flying of a few years ago" must be avoided. [24]

Though covering a wide variety of topics ranging from the design of safer planes to the institution of a transcontinental air route, most of Lindbergh's writings shared a common theme. An increased emphasis on technology and the minimization of the human element. While focused on the issue of long-distance flying, Lindbergh harshly criticized aviators wishing to cross the ocean simply to "satisfy their own desires." In a rare moment of frustration, he sharply declared "if a pilot talks of advancing aviation and by careless preparation...jeopardizes his life and...those with him, he deserves censure." Lindbergh rationalized this obvious contradiction with his own meteoric rise to prominence by analyzing his motives and contrasting them with later pilots. When the "Lone Eagle" departed New York City on his historic flight to Paris, nobody was sure if the airplane could withstand such a journey. But

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[24] Charles Lindbergh, "Growing Industry of Aviation Offers a Fine Future to Youth," *New York Times*, September 16, 1928.

almost two years later, few knowledgeable pilots doubted the reliability of the airplane. "If a pilot fails," in a flight now, Lindbergh reasoned, "he harms aviation, and if he succeeds he merely proves...what has been done can be done again."[25]

Lindbergh did not demand, however, for an end to all trans-oceanic flights. For those pilots nobly "trying to advance the cause of aviation," ocean flying remained useful. Long-distance navigation, particularly that above vast expanses of water, was difficult under ideal circumstances. The lack of any stationary reference point complicated the art of maintaining a constant altitude. Pilots struggled with the natural impulse to fly at an upward angle to avoid crashing into the water. As the plane's altitude increased, oxygen levels decreased, suffocating engine and pilot alike. Current methods of navigation differed little from the archaic practices of early naval explorers and many aircraft exhausted their fuel supplies before reaching a safe destination. The utilization of new flying instruments, including the directional radio beam and capacity altimeter, lessened this reliance on human instinct and diminished the chances of pilot error. Flying by instruments only, known to experienced aviators as flying blind, required great self-control. Pilots oftentimes fought the overwhelming desire to fly by instinct, a

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[25] Charles Lindbergh, "Multi-Motored Planes are Urged for Flights Over the Ocean," *New York Times*, October 7, 1928.

decision that frequently proved fatal. Pilots of the future, Lindbergh maintained, will "have to be [men] of greater experience and training...as flying becomes...more of a science and less a form of acrobatics."[26]

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In 1928 the field of aviation faced a crossroads. And nowhere in the country was this crossroads more evident than at the National Air Races and Aeronautical Exposition. As dozens of transcontinental racers converged on Los Angeles in an exhibition of flight's reliability, Mines Field celebrated the spectacle of aviation. The Exposition's opening event, a "formation flight" of one hundred ships flown by military and civilian pilots, attracted thousands of spectators. Awestruck observers witnessed a "series of stunts, banks, sharp turns, and spirals" performed by aviator Al Wilson in his faithfully restored 1910 Curtiss flyer. The famed acrobatic team, the Navy's *Three Sea Hawks*, "looped, flew on their backs and barrel-rolled...close above the heads of the crowd." Not to be outdone, the Army's flying unit, the *Three Musketeers*, executed a number of death-defying stunts so close "their wings appeared to

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[26] Charles Lindbergh, "Instruments That Guide Pilots Through Darkness or Fog," *New York Times*, September 30, 1928.

touch."[27] But not all of these events focused on the extraordinary. Over two hundred aeronautical companies promoted their goods in vast exhibition halls. One of these products displayed, the aptly-named "Flying Pickle," garnered widespread attention.

The recent trend of aerial fatalities across the nation roused public criticism. Newspaper columnists, aviation executives, and some local legislators demanded a greater emphasis on safe and reliable flight. Hoping to accomplish that goal, California Institute of Technology professor, A.A. Merrill unveiled the "fool proof" plane. Dubbed the "Flying Pickle" for its unusual oval construction, Merrill proposed his "radically" designed bi-plane could take-off and land without the need of pilot control. Merle Kelly, the aircraft's test pilot, admitted he had to "unlearn" some skills required in conventional aviation but determined the plane's simplicity made it "ideal...for an amateur." By removing the possibility of human error, Merrill anticipated growing interest in his design, and as a result, successful commercial development.[28]

While Merrill introduced his "fool-proof" plane to scores of casual observers, thousands of people clamored outside the exhibition hall to watch real life birdmen brazenly perform aerial stunts. Weather delays

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[27] "Los Angeles Opens National Air Meet," *New York Times*, September 9, 1928.

[28]"Novel Fool-Proof Plane Devised," *New York Times*, September 16, 1928.

in the transcontinental air races postponed their arrival in Los Angeles. As a result, the *Three Musketeers* were called upon to entertain an impatient crowd. Founded the previous summer, the U.S. Army's acrobatic team, the *Three Musketeers*, originally formed to "demonstrate air tactics for the edification of congressional leaders, military personnel...and the general public." The squadron debuted in 1927 at the National Air Races in Spokane, Washington. Despite the performances of better known aviators, the *Three Musketeers* wowed audiences with "phenomenal loops in unison" performed within a few feet of the roaring crowds.[29] A couple of months later, the U.S. Navy introduced their own unit of stunt flyers, the *Three Sea Hawks*. And thus, a healthy rivalry was born. Anxious to best their Navy counterparts, the *Three Musketeers* opened their act with a well-choreographed series of formation stunts. A few moments later, two of the pilots, Bert Woodring and William Cornelius, broke formation and climbed to a higher altitude preparing for an "outside loop." John Williams remained below to entertain the crowd. During a low-level pass directly in front of the grandstands, Williams inverted his aircraft, flying the entire length of the airfield upside down. With the engine deprived of precious fuel, witnesses reported hearing the engine cut out. Williams

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[29] Merle C. Olmstead, "The Three Musketeers," *Journal of the American Aviation Historical Society*, Fall 1977, 217-218.

managed to roll his plane over but failed to restart the engine. His airplane crashed at the end of runway. Although the accident did not appear particularly devastating, Williams died of his injuries at a nearby hospital.[30]

Reaction to Williams' death stunned the national press. Most columnists mourned the passing of one of the "army's most brilliant and daring aviators."[31] But others questioned why military regulations requiring service pilots to stunt at one thousand feet were suspended for the National Air Races. One journalist admonished race organizers for creating an atmosphere in Los Angeles that focused more on the "skill and courage of service pilots" and less on the "demonstration" of aerial technology. [32] Sharing many of these concerns, the Aeronautical Chamber of Commerce challenged race officials and demanded new regulations. The next day, the California Race Association proposed and adopted new standards for aerial exhibitions. These guidelines, although rather ambiguous, "strongly recommended" that military personnel at

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[30] Ibid., 222.

[31] "Livingston Still Ahead in Time of Flight, Is Belief," *Waterloo (IA) Evening Courier*, September 11, 1928.

[32] "Williams Dies After Crash," *New York Times*, September 12, 1928.

the National Air Races not perform at an altitude less than three hundred feet, "and at no time directly over the grandstands."[33]

Williams' death cast a long shadow over the events of Mines Field. The following day the *Three Sea Hawks* opened their routine by dropping red, white, and blue flowers over the crash site. The *Three Musketeers* continued with their previously scheduled exhibition, with Lt. Earnest Lawson replacing the deceased aviator. Press coverage described the show as similar to their earlier efforts only this time "they stayed much higher."[34] The somber atmosphere of the crowd lifted, however, as rumors circulated throughout Los Angeles of Charles Lindbergh's arrival. Originally due at Mines Field for "famous flyer day" on Thursday September 13, Lindbergh surprised patrons by arriving two days earlier. While the reasons for his early appearance are unclear, Lindbergh certainly understood the damage bad publicity arising from the crash could inflict on aviation. Regardless of his motives, Lindbergh agreed to replace Williams, and for the duration of the National Air Races, became one of the famous *Three Musketeers.* [35]

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[33] Ibid.

[34] Ibid.

[35] "Los Angeles Opens Big Air Festival," *Des Moines (IA) Register*, September 9, 1928. "Rowland First of 22 to Finish Air Derby; Navy has Sky Circus," *New York Times*, September 11, 1928.

Lindbergh's inaugural flight with the Army stunt team attracted a multitude of fans. Over 70,000 spectators, twice the number of earlier exhibitions, packed the grandstands to see the famed flyer in action. Lacking previous experience with Woodring and Cornelius, Lindbergh's first flight with the *Three Musketeers* remained cautious. But as their confidence grew, the events increased in complexity. By the final day of the exposition, crowds stared in amazement as the flying team executed a series of "daring stunts" including "sandwich formations" and an expertly timed collection of dives "giving the impression of a triple collision."[36]

While spectators roared their approval of the exhibition, few, if any, envisioned the epochal transition occurring in aviation. Lindbergh's final appearance with the *Three Musketeers*, contained a number of exhilarating acts that remain "features of today's aerobatic shows."[37] The routine remained dangerous. But within the confines of budding regulation, the risk to pilot and spectator was reduced. In 1928 a majority of Americans accepted the airplane as an integral part of modern life. But who could safely use the airplane? Barnstormers introduced aviation to the masses and the lasting image of the intrepid

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[36] Olmstead, *The Three Musketeers*, 222. "Sea Hawks Win Plane Race at Air Exposition," *Des Moines (IA) Register*, September 17, 1928.

[37] Olmstead, *The Three Musketeers*, 222.

birdman pilot convinced many that certain masculine attributes were required to survive the flying experience. The promotion of women aviators challenged these assumptions as many women achieved widespread notoriety for their flying skills. Many people came to believe that some masculine qualities were not a prerequisite of flight. Furthermore, they began to think that other masculine qualities—those that cause pilots to take foolish risks that caused accidents—should be restrained. Regulation became the answer.

CONCLUSION

LOCAL LINDBERGH

Overshadowed by Charles Lindbergh's performance with the *Three Musketeers*, the intercontinental racers arrived at Mines Filed to comparatively little fanfare. The timed nature of the event did little to capture the attention of the crowd as hundreds of individual flights needed tabulation before a winner could be determined. Some media outlets, misunderstanding the rules of the race, reported the first flyer to land as the champion. In spite of this confusion, John Livingston confidently notified Aurora of his success. In a telegram sent to his associates at Midwest Airways Company shortly after his arrival, he succinctly wrote, "I win. Details later."[1] Livingston's apparent victory in the National Air Races inspired immediate jubilation in Aurora. As prominent city residents prepared an extravagant homecoming festival, the local media praised the Chamber of Commerce for luring the young pilot and his business to the area. "No better industry could be obtained," one editorialist wrote. "It is not only [an industry] due for great growth. It will employ skilled help at high wages."[2] Other enterprising citizens boldly predicted Livingston's "nationwide

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[1] "Livingston Wires:--'I Win,'" *Aurora (IL) Beacon-News*, September 13, 1928.

[2] Editorial, "A National Winner," *Aurora (IL) Beacon-News*, September 14, 1928.

prominence" would provide a "stimulant to local business conditions."[3] But a majority of popular interest remained focused on Livingston.

Throughout the summer of 1928, Aurorans intently followed the Livingston saga. From his role as local pilot to his accomplishments at the National Air Races, Livingston quickly gained the reputation as a local Lindbergh. Early attempts on behalf of the city to sponsor his aircraft and christen it "The Spirit of Aurora" were politely declined.[4] But this did not stop the comparisons between Livingston and the world's most famous aviator. Livingston's dangerous journey over the foggy mountains of Pennsylvania on the first day of competition drew comparisons to Lindbergh for his "sixth sense" of direction and ability to chart a course "thru fog and storm."[5] This high praise intensified after Livingston was officially declared winner of the Class "B" National Air Races. In a time of 22 hours 50 minutes, Livingston outpaced all entries in both classes and brought home almost $13,000 in prize money. His charming smile and pleasant disposition encouraged the local press to

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[3] "Street Comment," *Aurora (IL) Beacon-News*, September 13, 1928.

[4] "Aurora Entry in National Air Cross Country," *Aurora (IL) Beacon-News,* August 16, 1928.

[5] "Livingston Wires:--'I Win,'" *Aurora (IL) Beacon-News*, September 13, 1928.

cheer his "Lindberghian modesty."[6] But times had changed; and there could only be *one* Charles Lindbergh.

Unfortunately for many residents of Aurora, these changes went largely unnoticed. Livingston returned home to a hero's welcome as hundreds of spectators clamored to hear the pilot speak. And he did not disappoint. Climbing into his aircraft, Livingston performed an "exhibition of stunting" that included "every trick known to expert pilots and many which have no name." After completing his show with a "250 mile an hour dive and a perpendicular climb...like a skyrocket," Livingston stepped up to the podium and humbly stated, "we flyers do not talk. That was my speech up there." Livingston regaled another crowd at the Aurora Elk's Club with "the most thrilling stories...ever heard." Popular topics included the events over the mountains of Pennsylvania as Livingston "dodged bridges" along the Monongahela riverbed in search of his landing site. He attributed his survival and that of an unnamed reporter to the presence of a "third passenger" guiding him through the fog.[7]

Livingston's daring exploits convinced many within the city of his lasting national celebrity. Although his widespread notoriety faded

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[6] "Aurora Flyer Lands in San Diego," *Aurora (IL) Beacon-News*, September 12, 1928.

[7] "Flying Champ Arrives Home, Thrills Crowd," *Aurora (IL) Beacon-News*, September 25, 1928.

quickly after the National Air Races, locals continued to describe his feats as Lindberghian. City boosters undoubtedly believed that Livingston might one day join the ranks of Lindbergh, and as a result, lift the spirits—and the prosperity—of Aurora as the "Lone Eagle" had done for St. Louis. In a full-page advertisement sponsored by the Aurora Chamber of Commerce the grandiose notions of the city were revealed:

> LIVINGSTON—We Like You
> --We are proud of your new national record—a record of world significance.
> --We are proud of your courage which gives wings to your ambition.
> --We are proud of your skill—a skill that is the gift of the gods.
> --We are with you, and with the cause of aviation for Aurora.
> --MORE FLIGHTS to you!
> --MORE HEIGHTS to you![8]

Residents of the town of Aurora were too busy creating their version of the Lindberghian dream to take notice of the fact that their world had changed. The ingredients of Lindbergh's fame and success were—and could only have been—products of an earlier era whose time had passed, an era wrapped in the awe and mystery of flight and an innocence that confused foolishness and bravado. The new era of flight had arrived, replacing daring with safety and entertainment with the more perfunctory task of transporting everyday mortals from one place to another.

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[8] "To John Livingston," *Aurora (IL) Beacon-News*, October 3, 1928.

Livingston struggled, as most aviators of his generation did, with the transition to the "prosaic role of flying passengers." Midwest Airways experienced a dramatic surge in business as dozens of local residents requested flying tours of nearby Chicago.[9] But Aurora offered little for a pilot with aspirations of excitement and adventure. The barnstorming days, though not completely gone, had fallen victim to the age of regulation. Pilot logs and flight plans replaced the spontaneity of only a few years ago. Aerial circuses offered one potential option for pilots wishing to relive aviation's golden age. But even the great flying circuses of the 1920s faced increasing standardization. Jessie Woods, a longtime pilot in the wildly popular Flying Aces Air Circus, rankled under the mounting regulations of the 1930s:

> How are you going to perform a wing walking act at 1500 feet?...They [the regulators] had so many rules, just choking us down...Everytime we did something an inspector would run up and jump into the cockpit to check and see what we were doing. They did not want air shows anymore, too sensational. All they wanted then was to educate the people to the safety of flight and encourage the growth of business aviation and the airlines...They put us out of business.[10]

Livingston adapted to these changes better than most of his peers. Although he would remain president of Midwest Airways, Livingston

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[9] "Livingston to Do Flying at Local Airport," *Aurora (IL) Beacon-News*, September 30, 1928.

[10] Thomas E. Lowe. "The Flying Aces Air Circus," *American Aviation Historical Society Journal*, Summer 1977, 120.

relinquished his day-to-day responsibilities to accept a position at WACO Aircraft Company in Troy, Ohio. His role as test pilot allowed him to experience the thrills and excitement of aviation within the modern context of safe and reliable flight. The following summer, as an employee of WACO, Livingston once again found himself in the national spotlight after his victory in the fifth annual Ford Reliability Air Tour. An air race "emphasizing and demonstrating the reliability and safety of commercial air transportation."[11]

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[11] Timothy J. O'Callaghan, *The Aviation Legacy of Henry & Edsel Ford* (Ann Arbor, MI: Proctor Publications), 84.

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