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## In Their Own Words: Forgotten Women Pilots of Early Aviation

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# IN THEIR OWN

Forgotten Women  
Pilots of Early Aviation

# Words



**Fred Erisman**

**IN THEIR OWN**  
*Words*

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# IN THEIR OWN

*Forgotten Women  
Pilots of Early Aviation*

*Words*

*Fred Erisman*

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*For*

*Patt and Wendy*

*Keeper of the flame; Inheritor of the torch*



The women who defined the Golden Age of Aviation in the United States:  
Amelia Earhart, Ruth Nichols, and Louise Thaden (l-r) in 1933. COURTESY OF  
SMITHSONIAN NATIONAL AIR AND SPACE MUSEUM (NASM 89-21979)



*Once in the air a machine will go as well with a woman at the steering wheel, as with a man. Machinery knows no sex.*

— RUTH LAW, 1916



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I have had other moments of good fortune as well. When Howard Carter broke through the final wall and first peered into Tutankhamen's tomb, he's said to have gasped, "Wonderful things!" His awe is understandable, but it pales alongside mine when I first experienced the resources of the National Air and Space Museum and the Library of Congress. Both are extraordinary sites. At NASM, the aeronautical "wonderful things" on display were only the surface of a much greater wealth of material. My year there as the Charles A. Lindbergh Chair of Aerospace History was for me the equivalent of Howard Carter's excavations. With access to the NASM research library, the NASM Archives, and the assets of the other Smithsonian museums, I was able to explore primary sources from the popular and aviation journalism of the times as well as technical and trade sources virtually unobtainable elsewhere.

This is where I discovered the riches of women's aviation in the United States. Amelia Earhart I knew of, of course, and Jackie Cochran I recalled from her days of setting records in military jets. But there was more—much more. I was able to roam about in the Blanche Stuart Scott Collection and the Louise McPhetridge Thaden archive, hearing the authentic voices of both women. At the Library of Congress, the Marjorie Claire Stinson Papers enriched my understanding of Marjorie's life while giving additional insights into sister Katherine Stinson's life and career. Here, as well, access to the primary sources of newspapers and magazines helped me to flesh out the milieu of the women fliers and their times.

The staff at NASM was no less a resource than its research and archival holdings. I received particular help and encouragement from Dominick A. Pisano, now curator emeritus, and curators John Anderson, Dorothy Cochrane, and Russell Lee. Curator Dik Daso, no longer with NASM, also offered advice and guidance. I am grateful to them all, friends as well as colleagues.

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*Fred Erisman*  
*Fort Worth, Texas*  
*September 2020*

# Introduction: The Aviation Age Takes Shape

**I**N A REVIEW OF Anne Morrow Lindbergh's *Listen! The Wind* (1938), *New Yorker* critic Clifton Fadiman quipped that "so far the experience of flight has produced many books and little literature."<sup>1</sup> His charge may well be valid, but he misses a larger, crucial point. For every Anne Lindbergh or Antoine de Saint-Exupéry, for every Ernest Gann or Richard Bach, there have been dozens of less gifted individuals pouring out their thoughts and feelings about flight. They have been, without exception, pilots, and they have been, without exception, enthusiastic about the flying experience. They frequently wrote for the aviation press, but they also wrote for the general public, striving to convey the excitement, liberation, and even exaltation they found in the exercise of flight. Here is where one finds the contribution that Fadiman so readily casts aside.

Most of the pilots who wrote of their lives in aviation were not concerned with artistry. They were amateur or journeyman authors, less interested in shaping and polishing their phrases than they were in celebrating a topic about which they were passionate. They were impelled by their experiences to argue the case for aviation, awakening the American public to the progressive possibilities of the enterprise and talking of ways in which it might go on to shape their worlds (and those of the future) for the better. A notable number of these writers were women.

Despite Amelia Earhart's de facto standing as the personification of American women in aviation during the 1930s, she was but one member of the era's closely knit community of women pilots. Many of these women, well-known in the profession and widely publicized in the press of the time, have been studied individually, but they are largely overlooked in popular histories of the decade. Still more crucial is that Earhart and her contemporaries were only the most recent of a long line of women

pilots whose lives and activities extended back to the earliest days of aviation. Many of these women, including Earhart, wrote of the complementary qualities of aviation and women's causes, recording their activities throughout the emergence and maturing of America's air age.

They wrote of their times and their experiences, and over forty-plus years of technological evolution they evinced a singular consistency of experience. Aviation, they discovered, was an experience that spoke to them as *women*, and offered at least the possibility of greater opportunity and equality for their gender. Their writings form a long, sustained text that documents the maturing of the airplane and aviation *and* sheds considerable light upon the complex relationship between capable, ambitious women and the larger American society. That text is the focus of this book.

One segment of the American aviation world is omitted here—the African American flying community. From Bessie Coleman in the years after World War I through Willa Brown in the 1930s, the Tuskegee Airmen of World War II, and astronauts Guy Bluford, Mae Jemison, and Jeanette J. Epps in the 1990s and after, there has been a significant African American presence in aviation. Until recently, however, that presence was obscured by social convention and prejudice. Racial segregation in the United States prior to the 1960s extended to writings by and about African American fliers, creating a widespread national ignorance of their presence and contributions.<sup>2</sup>

A case in point is that of Bessie Coleman (1892–1926), the first African American woman to earn a pilot's license. Unable to find a flying school in the United States that would admit her, she went to France and won her license in ten months. She returned to the United States in 1921, planning to take part in air shows and other flight exhibitions.<sup>3</sup> She flew actively until her death in 1926, yet her work was reported almost exclusively by the African American press, including the *Chicago Defender* and the *Pittsburgh Courier*. Newspaper indexes for the period between 1921 and 1927 indicate that she was mentioned twice in the *New York Tribune*, once in the *New York Times*, and not at all in other national journals ranging from the *Atlanta Constitution* and the *Boston Globe* to the *Chicago Tribune*, the *Cincinnati Enquirer*, and the *Los Angeles Times*. Moreover, apart from interviews in the African American press, she left behind no significant written materials.

Despite the limitations she faced, Coleman saw herself as speaking out for women as much as her activist white contemporaries, *and* for African American women and African American women in aviation as well. Talking with a reporter for the *Chicago Defender* shortly after her return from France, she observed that she took up flying “because I knew we had no aviators, neither men nor women, and I knew the Race needed to be represented along this most important line, so I thought it my duty to risk my life to learn aviating and to encourage flying among men *and women* of the Race who are so far behind.” There was, however, more to her determination than just



race and gender pride. Like her contemporaries, she saw flying as distinctively elevating and liberating: "I shall never be satisfied until we have men of the Race who can fly. Do you know *you have never lived until you have flown?*"<sup>4</sup> The enterprise of flight offered much that was denied her by the larger society, but her significance must be assessed by means other than her writings.

Women, be they White or Black, have been a part of the American aeronautical scene almost from its beginnings. From the earliest days of aviation through the onset of the 1940s, women fliers were actively engaged in advancing the aeronautical experience. Lilian Todd won public recognition in 1909 for her aircraft designs and her efforts to educate the public about aviation. Bessica Raiche, a practicing physician, joined with her husband in designing and building aircraft and in 1910 was formally recognized as the first American woman to make a solo flight. Blanche Stuart Scott, known as the first woman to make a transcontinental trip in an automobile (1910), flew first, but authorities generally agree that her takeoff was inadvertent, whereas Raiche's was planned and deliberate. Scott did, however, fly briefly with the Curtiss Exhibition Company and in 1912 proclaimed, "Automobiles are back numbers; it's a biplane I want now." None of the three won a flying license or wrote of her achievements, but all stand as female pioneers in the history of American aviation.<sup>5</sup>

These women and others notwithstanding, men dominated the field at the beginning and continued to dominate it throughout the succeeding decades. The Wright Brothers first flew in 1903, then dropped into temporary obscurity. But public interest continued to grow. By 1909 mechanical flight had already begun to take on a mystical aura: "A prayer for 'the wings of the dove' has anticipated the aeroplane by many centuries," one reporter wrote. "Actual testimony as to the long-coveted sensation is now for the first time available, and we have the assurance that our hopes are fully realized." Even as late as 1910, however, there was widespread skepticism about the reality of flight. As Orville Wright himself at one point observed, "Flight was generally looked upon as an impossibility . . . , and scarcely anyone believed in it until he had actually seen it with his own eyes."<sup>6</sup> Manufacturers, promoters, and local boosters, however, soon recognized the publicity value of the "flying machine," and the formal meets came into being.

The nation's first public—and publicized—aviation meet, the First in America Aviation Meet (the "Dominguez Meet"), took place 10–20 January 1910 at Dominguez Field outside Los Angeles, California, and set the pattern. The Wrights were noteworthy for their absence, and Glenn Curtiss, who had gained fame in 1909 by winning the Gordon Bennett Aviation Cup at the first international air meet, held in Rheims, France, was arguably the most prominent of the domestic participants. Curtiss and Charles F. Willard flew Curtiss-built machines, Louis Paulhan from France operated a Blériot monoplane, and Roy Knabenshue and Lincoln Beachey from the United

States (who would soon graduate to heavier-than-aircraft) flew dirigibles. *Outing Magazine* captured the spirit of the occasion in an article published three months afterward, noting that “the American public . . . was hungry to put to ocular proof the much-discussed flying machines.” What they saw, the article continued, was an “exhibit of man’s ingenuity and his ability to cleave the atmosphere unscathed.”<sup>7</sup> It was a remarkable introduction for the American public.

The nation’s second major air meet, the Harvard-Boston Aero Meet, held 3–13 September 1910, was the first substantial presentation to be held in the East and was acclaimed by *Scientific American* as “the most important [meeting] thus far held in the United States.” Much of its prominence came from the presence of several notable European aviators in addition to American participants. Pilots from France and Austria expressed interest, while entrants from England included the experimenters Cecil Grahame-White and A. V. Roe. A display advertisement in the *New York Times*, touting “the World’s Most Famous Bird-Men,” listed Curtiss, Wright, Willard, Johnstone, Grahame-White, and Roe among a list of “Kings of the Air”<sup>8</sup>

Their importance notwithstanding, the Dominguez and Harvard meets paled in comparison with the Belmont International Aviation Tournament (the “Belmont Meet”), held 22–30 October 1910. This competition was sponsored by the Aero Club of America, a national organization established in 1905 for the promotion and advancement of aviation, and was planned from the outset as an international competition. Events conformed to rules laid down by the *Fédération Aéronautique Internationale* (FAI), the multinational organization overseeing early flight, opening the door to the establishing of official world records. One event, the race for the Gordon Bennett International Cup, an annual competition since 1906, held particular international appeal; ever since Glenn Curtiss won the event in Rheims, France, in 1909, beating French favorite Louis Blériot, patriotic sentiment to keep the Bennett Cup in the United States had run high.<sup>9</sup>

The Belmont Meet offered competitors prizes and profit shares estimated to total \$200,000, and individual cash awards were lavish.<sup>10</sup> Daily events rewarded speed, altitude, distance, and endurance, and a special prize of \$10,000 was reserved for the flier who made the fastest circuit from the field to the Statue of Liberty and back. Seven fliers, including Alfred Leblanc and Edmond Audemars, represented France; for the most part they flew Blériot monoplanes, although Audemars at times flew in a tiny Demoiselle sport craft designed by the Brazilian-born Alberto Santos-Dumont. Three pilots represented the United Kingdom: Cecil Grahame-White, flying a French-designed Farman biplane, and two compatriots. American entrants included Walter Brookins and Arch Hoxsey, flying Wright machines; John Moisant, in a Blériot monoplane; and Eugene Ely and C. F. Willard, in Curtiss biplanes. Glenn Curtiss himself gave demonstration flights, as did Wilbur and Orville Wright, but none of the three competed

actively. The meet garnered national coverage and achieved what *Aircraft* magazine called “a lasting place in American aeronautic history.”<sup>11</sup>

Professional exhibition teams reinforced the aviation excitement engendered by the meets. The Wright and Curtiss organizations, sensing a profitable opportunity offering other opportunities for “ocular proof,” quickly moved to show off their machines. The Wright Exhibition Company, launched in June 1910, included Walter Brookins, Roy Knabenshue, Arch Hoxsey, and Ralph Johnstone. The Curtiss Exhibition Company, making its debut in September 1910, numbered Lincoln Beachey, Augustus Post, Eugene Ely, Charles K. Hamilton, and Charles F. Willard among its pilots. The third team, the Moisant International Aviators, was organized by John Moisant, who won prominence with his flight from Paris to London in August 1910. Featuring Charles K. Hamilton and French star Roland Garros, the group began shows in November 1910 and subsequently added two female members, John Moisant’s sister, Matilde, and journalist Harriet Quimby. For the next two years all three teams crisscrossed the country, introducing community after community to the wonders of flight.<sup>12</sup>

Not until 1927, however, did flight capture the wholehearted attention of the American people. Another male, Charles A. Lindbergh, was the agent. Until 1927 aviation activities had for the most part been limited to visionaries, enthusiasts, and a few risk-taking entrepreneurs. Lindbergh’s transatlantic flight in May 1927 electrified the public and launched a new perception of aviators in general. Lindbergh’s relative youth (he was twenty-five), his modesty in the face of publicity, his Midwestern origins, and the genuine achievement of his flight made him the “face” of American aviation. Overnight he became the archetypal “All-American Hero,” and in the burst of national pride that followed his flight the public suddenly and passionately embraced the ongoing marvels of aviation technology, the first stirrings of commercial aviation, and the mystical, liberating appeal of the airplane—elements that offered the possibility of a new and revolutionary world.<sup>13</sup>

Lindbergh fueled these feelings in two series of essays on aviation published in the *New York Times* in 1928–1929 and syndicated nationally. In them he made clear his intention to proselyte for aviation, saying, “Please regard me as a medium for having concentrated attention upon the subject of transatlantic flying in particular and aviation in general.” He concluded by reaffirming his faith in the prominence of American aviation, stating, “I am convinced that aviation will soon take its place among the big activities of the United States.”<sup>14</sup> For the American public he was *the* face and voice of national aviation.

For all the prominence that men enjoyed in the years before and after Lindbergh’s flight, women were also a vigorous part of aviation, adding their faces and voices as parts of the aviation community. Harriet Quimby was the first American woman to win a pilot’s license (1911) and the first woman to fly the English Channel (1912). She

became an instant celebrity, using her position as a feature writer for *Leslie's Illustrated Weekly* to offer a dozen or more essays recording her flight training and her flying career throughout 1911–1912. In a move that set a model for subsequent women writers on aviation, she also pointedly expressed her convictions about the appropriateness of aviation as an undertaking for women.

Several women pilots made notable contributions as fliers in the World War I era. They also spoke out for women's greater engagement in military and commercial flying. Ruth Law made a name for herself as a record-setting pilot and operator of her own traveling air show and wrote widely to make her case for women's place in the air. Her articles in *Outlook*, *Air Travel*, and *Flying* supported the war effort and argued for an expanded women's role in the conduct of World War I. The air show favorites Katherine and Marjorie Stinson published articles in *Aerial Age Weekly*, *Aero Digest*, and *Liberty Magazine*. Both won commissions as United States Air Mail pilots (although neither flew as a scheduled professional); Katherine gained national prominence making publicity flights for Liberty Loans and the Red Cross while Marjorie trained male pilots for the Royal Canadian Flying Corps.<sup>15</sup>

The women who followed these pioneers in the years after Lindbergh's flight were as diverse a group as their predecessors. The Kansas-born Earhart, who came to fame in 1928 when she flew the Atlantic as a passenger, was a dropout from Columbia University and the daughter of a middle-ranking railroad official. Ruth Nichols was a New Yorker, a Wellesley graduate, and the debutante daughter of a member of New York society's "400." Louise Thaden, a native of a small Arkansas town, attended the University of Arkansas for three years, then took a sales position with the J. H. Turner Coal Company of Wichita, Kansas. Anne Morrow, a Smith graduate anticipating a sheltered and cosseted life as aesthete and writer, had her world turned upside down when she married Charles Lindbergh and joined him in flying endeavors. These individuals had only three things in common: they were women, they flew, and they wrote of aviation.

With the exception of Anne Morrow Lindbergh and, possibly, Earhart, these women were not artists. Their writing was pragmatic and practical; sales to magazines and newspapers helped to fund their flying endeavors and the exposure helped to publicize them to potential backers. Aware of the power of print and as comfortable with a typewriter as they were with their aircraft, they did not limit themselves to topics aeronautical. They turned to print to speak of matters that moved them deeply—aviation, of course, but women's place in and contribution to daily American life as well. In their writings they spoke as articulately and as explicitly for women's causes as they did for aviation, capitalizing on their distinctiveness as pilots to speak out for the future of women.

Earhart wrote three books and was a frequent contributor to *Cosmopolitan* and other general-interest periodicals. Ruth Nichols, holder of records for altitude, speed, and distance, contributed to *Ladies' Home Journal* and *American Magazine*, became

women's editor of the *Sportsman Pilot*, a journal for affluent enthusiasts, and published an autobiography, *Wings for Life* (1957). Louise Thaden, winner of the first National Women's Air Derby (the "Powder Puff Derby" of 1929), holder of a record for in-flight refueling, and the first woman to win the Bendix Trophy (1936), contributed to *Aero Digest*, *Sportsman Pilot*, *Western Flying*, and similar publications, and briefly served as women's editor for the widely circulated *Popular Aviation*. Her autobiography, *High, Wide, and Frightened*, appeared in 1938.

The linking of women's concerns and aviation in print reached its most "literary" statement in the years leading up to World War II, as Anne Morrow Lindbergh brought an artist's eye to the adventure of flight. Her first books, *North to the Orient* (1935) and *Listen! The Wind* (1938), grew out of her experiences during global survey flights her husband, Charles, made to explore possible commercial routes. These flights took the Lindberghs to China and Japan via a Great Circle route (1931) and on a circum-Atlantic flight in 1933 via Greenland, Portugal, Africa, and Brazil.

Though accepting a secondary role in her books (she served as radio operator and navigator on the flights rather than as a pilot), Anne Lindbergh had legitimate flying credentials, earning a conventional pilot's license and becoming the first American woman to win a glider pilot's license. The only one of the women flier/writers not professionally engaged in aviation, she embraced the undertaking as a medium to illuminate an ongoing process of self-discovery, writing of how her awakening was stimulated and enhanced by aviation as an enterprise and flying as a metaphor.

The prevailing spirit among women fliers and potential fliers in the post-Lindbergh period is evident in a brief series of articles by Margery Brown, a recreational flier who had been, she said, "inspired by Lindbergh's Atlantic flight" to learn to fly.<sup>16</sup> Her articles in *Popular Aviation*, *Pictorial Review*, and other periodicals between 1929 and mid-1930 were overtly directed toward the benefits of flying to women—concise statements of how the discipline, self-reliance, and decisiveness deriving from the aviation experience would bolster women's self-esteem and confirm their capabilities beyond the stereotypical. In these articles she expressed and reinforced themes common to all of the women pilots' writings, whatever their era, addressing her works to the individual woman who might want to fly.

Brown's "Woman's Influence on Aviation" (1929), appearing in *Popular Aviation*, a magazine for recreational pilots and flying enthusiasts, contended that "the time is coming when women pilots will be nearly as common as women automobile drivers are, now." When they took to the air, she continued, women would find "spontaneity and joyousness" that would free them from "the same old unprofitable, egocentric ideas, emotions and desires that many of them cherish on the ground." She addressed male prejudice toward women fliers in "What Men Flyers Think of Women Pilots" (1929), again writing in *Popular Aviation*, arguing that men's attitudes were of little

consequence compared with the benefits to women of flight: “If you are thinking that flying will develop character . . . ; will give you an increasingly wider outlook; discipline you, and destroy vanity and pride . . . , why—FLY!” She developed this theme in “The Moral Aspect of Aviation” (1929), listing personal benefits that flying would carry for women, including “self-control, discipline, attentiveness, alertness and persistence.”<sup>17</sup>

The most expansive statement of her views, however, came in “Flying Is Changing Women” (1930) in the *Pictorial Review*, one of the principal women’s magazines of the time. There she proclaimed that “women are seeking freedom. Freedom in the skies!” For her, she continued, “flying is a symbol of freedom,” and “every woman who overcomes a limitation has gained a measure of freedom, not alone for herself, but for her sex. A victory for one woman is a victory for all.” The experience of flying will open a door to “a new dimension” that awakens participants to “hitherto unrealized beauty, not only of the earth and sky, but of the spirit.”<sup>18</sup> Through flight, women may well attain a degree of personal liberation hitherto unavailable to them.

Women will gain more than freedom from flight. Airplanes and the act of flying, Brown says, “will bring about an amazing change in the relations which have existed in the past between men and women.” This will be possible because airplanes and the act of flying “suggest human thought breaking away from a limited and sordid basis; rising into an atmosphere of greater purity and freedom. . . . [O]ne senses a mystical meaning beyond . . . the mechanical triumph.” In that atmosphere, Brown concludes, women will be freed from “the so-called inherent feminine weaknesses: emotionalism, instability, indecision, and dependence on the male sex.” Indeed, she continues, “a woman who can find fulfilment in the skies will never again need to live her life in some man’s spare moments.”<sup>19</sup> She, like Earhart and her contemporaries, saw flight as a way of breaking gender barriers and stimulating profound personal and social change.

Each of the women pilots considered here, like Brown, was a product of her time. Each responded by speaking to issues surrounding the developing technology and applications of aviation of the time and her encounter with the enterprise. Each demonstrated her capability by flying one or another of the most advanced aircraft available—the Blériot Model XI, the Lockheed Vega and Electra, the Beechcraft C17 Staggerwing, and others. Each spoke of the importance to the larger American society of national “air-mindedness,” a theme reaching its apex during the so-called Golden Age of American Aviation, when flight held an almost religious appeal for the American public.<sup>20</sup>

Each spoke, finally, of the part that women might—and should—play both in advancing aviation and in extending women’s roles in contemporary American society. None, save Lindbergh in her later years, overtly identified herself as a suffragist or feminist or allied herself with the activist factions of the women’s movement. Nevertheless, they regularly and consistently used aviation to address matters pertaining to women’s role

and potential in American life. They chose to go their own ways, embracing women's causes as they had embraced aviation—out of an interest in a new, promising, and exciting field of endeavor. They were not artists, but their story is a fresh and revealing record of American society's evolving attitude toward women and its embracing of a new technology during the first decades of the twentieth century.

# I

## Harriet Quimby: Birdwomen Gain a Voice, 1910–1912

TWO EVENTS FRAME Harriet Quimby's emergence and brief reign as America's premier woman aviator. One is the Belmont International Aviation Tournament (the "Belmont Meet") of October 1910, where she first began to consider learning to fly. The other is the Boston Aviation Meet of July 1912, where she died. Although her actual flying career occupied only eleven of the twenty-one designated months, between these events she set a precedent, set a record, demonstrated American flying here and abroad, and wrote persuasively of all that aviation might mean for the American nation and American women. A staff writer and dramatic critic for *Leslie's Illustrated Weekly*, Quimby was at the time of the Belmont Meet a seasoned and versatile reporter with more than one hundred articles to her credit, all showing her knack for vivid, lucid exposition and a significant level of social consciousness. Her dark good looks and often unconventional dress only helped to accelerate her growing visibility in New York's social circles, and, not surprisingly, women's issues and activities of the time figured in many of her offerings.

For all its emphasis on the new and exciting enterprise of aviation, opening day at the Belmont Meet was as much a showcase for New York's social elite as it was for the twenty-five aeronautical celebrities who were to fly. The latter came from France, England, and the United States; their audience came from New York City and its environs, although organizers had arranged for special trains for enthusiasts from Boston, Chicago, and St. Louis. The fog and rain of the October day notwithstanding, society notables were out in force. Box seats housed the Astor, Drexel, Havemeyer, Vanderbilt, and Whitney parties, while members of the New York Yacht Club enjoyed a substantial picnic in the parking area before taking their seats.<sup>1</sup> There was interest in



the aeronautical achievements of the meet, to be sure, but reports left little doubt that it was also a social event of note.

Quimby's presence at the Belmont Meet was sparked as much by her interest in technological progress as it was in her reporter's sense of the newsworthiness of the socialites attending. Three previous articles in *Leslie's*, the first as early as 1904, had dealt with the automobile, speaking particularly of its appeal to women; she would follow them with a fourth, "Women Automobile Enthusiasts," in January of 1911. A fifth piece, published in August 1909 and predating her trip to Belmont, directly took up matters of flight. In "A Japanese Aeronaut to Startle the World" she wrote of a Japanese investigator whose studies of birds in flight had led him to a theory of aeronautics somewhat at odds with prevailing theories. Her explanation of relatively complex aeronautical points was clear and deftly geared to a lay audience. She intelligibly addressed the difficulties of three-axis control (i.e., roll, pitch, and yaw, or, rotation around longitudinal, side-to-side, and vertical axes, respectively) and concluded that "lack of proper steering apparatus" was a continuing problem for designers and pilots alike.<sup>2</sup> What she saw at the Belmont Meet would capture her interest, lead her to a pilot's license, make her an outspoken advocate for aviation and for women, and have a significant influence upon her subsequent life and career.

Quimby was born in 1875 in rural Michigan, but soon moved with her family to California. She progressed through local schools, and, in 1900, began her journalistic career in San Francisco as a freelance writer. She also became an active member of the San Francisco social and theatrical scene, joining the circle of individualists associated with the San Francisco Bohemian Club. There she crossed paths with such figures as Ambrose Bierce, Jack London, and Joaquin Miller and developed a taste for unconventional behavior; she is said to have posed nude for photographer Arnold Genthe, the portrait hanging in the Bohemian Club until destroyed in the 1906 earthquake. In early 1903 she moved to New York, once again working as a freelance writer, then joined the staff of *Leslie's Illustrated Weekly*. She remained with *Leslie's* for the remainder of her career, first as a feature writer, then as resident drama critic, and ultimately as aviation editor.<sup>3</sup>

She brought a degree of exoticism to *Leslie's* offerings, writing frequently of her experiences within the minority communities of Manhattan, calling attention to their cuisines and social customs. With the magazine's backing, she traveled widely, filing articles about her experiences in Egypt, Italy, Cuba, and the West Indies. *Leslie's* frequently accompanied these articles with a photograph of the author, making her face familiar to the magazine's readers. She took part, as well, in D. W. Griffith's Biograph Company, then operating out of New York. She contributed seven screenplays for productions during 1911 and 1912, and in at least one of the resulting films, *Fisher Folks* (1911), she played a bit part as an extra.<sup>4</sup>

Quimby was inspired to take flying lessons by a conversation with John Moisant on the final day of the Belmont Meet. Flying was for her, at the time, merely a new and exciting experience to be explored; she had come to the meet out of curiosity but did not start extensive writing of aviation until she herself became a participant. Her motives, she said later, were not “to be the first American woman to fly just to make myself conspicuous. I just wanted to be the first, that’s all, and I am honestly and frankly delighted.” She began her lessons at the Moisant Aviation School at Hempstead Plains, Long Island, in May 1911 and won her flying license from the *Fédération Aéronautique Internationale* (FAI) in August 1911. She was the first American woman (and the second woman worldwide) to be so licensed; her friend and flight school classmate, John Moisant’s sister Matilde, became the second. Her association with Matilde and John’s brother Alfred not surprisingly led Quimby to the fledgling Moisant International Aviators exhibition team. She and Matilde joined the team as regular participants soon after their licensing in 1911, flying with the group in Mexico and elsewhere.<sup>5</sup>

Although the equipment used by the various demonstration teams varied, the performances were largely similar. Pilots needed to do little more than fly circuits or figure eights around the field to mesmerize an audience, for the sight of a “flying machine” doing simple maneuvers in midair was wonder enough for the spectators. A certain crowd-pleaser was the volplane, in which the pilot, reaching cruising altitude, would shut off the engine and glide the unpowered aircraft to a landing before the grandstand. It was a dangerous maneuver for the wire-and-fabric machines and never failed to awe the audience; when carried out by a woman pilot, it was doubly impressive. Elizabeth Hiatt Gregory (1872–1955), one of the earliest women journalists to specialize in aviation, described the event as an “eye-aching, heart-breaking, nerve-racking watch for the intrepid navigator’s return. No one knows whether he will come gliding down to receive plaudits and congratulations, or come plunging to destruction. Such a flight is an exploit which plays hard on the nerves and the heart even of those who have become callous from familiarity with risky adventure.” Crashes were commonplace, and critics of the shows claimed that many audiences attended primarily to see fatalities.<sup>6</sup> While the airplanes were the real stars, each team had its celebrities. Quimby soon became one of these, her purple satin flying suit and hour-glass figure as much a part of her distinctiveness as her flying skills, and she began to give independent exhibitions at events in the greater New York area when not flying with the Moisant team.<sup>7</sup>

One such event, the Nassau Boulevard Aerodrome International Aviation Meet (“Nassau Meet”), held 23 September–1 October 1911, was one of the earliest to headline women fliers, and its competitors were noteworthy. An advertisement in *Fly* magazine (which billed itself “The National Aeronautic Monthly”) touted “30 of the



Publicity postcard featuring Harriet Quimby, her purple flying suit, and her Blériot XI. Original in color. COURTESY OF SMITHSONIAN NATIONAL AIR AND SPACE MUSEUM (NASM 72-10099)

greatest aviators” who were to participate, listing Quimby, Hélène Dutrieu, Matilde Moisant, and Blanche Scott alongside Claude Grahame-White, T. O. M. Sopwith, Lincoln Beachey, Eugene Ely, and others. Matilde had set a world’s altitude record for women just prior to the meet, while Dutrieu, a professional cyclist, was working as a test pilot for the Clément-Bayard Company of France. She won international notice with an epic flight from Blankenberge, Belgium, to Bruges and back in August of 1910, setting records for distance, duration, and altitude achieved with a passenger. Dutrieu’s celebrity notwithstanding, by contest’s end Quimby had won a cross-country race for women and accumulated a prize purse of \$600—the largest won by any of the women participants.<sup>8</sup>

The high point of Quimby's aviation career came on 16 April 1912, when she became the first woman to fly alone across the English Channel. Supported by *Leslie's* and using a monoplane borrowed from the Blériot works in France, she flew from Dover, England, to Hardelot, France, completing the flight in just over half an hour. Her achievement attracted some notice but was largely overshadowed by news of the two-days-earlier sinking of the ocean liner *Titanic* in the North Atlantic. Only in later weeks was there any substantial acknowledgment of her achievement, and that appeared primarily in *Leslie's* and aviation trade journals.

Her fame, however, was short-lived. In June 1912 she was invited to take part in the next month's Boston Aviation Meet at Squantum, Massachusetts. While making a practice flight on the evening of 1 July, she lost control of her aircraft and was thrown from the cockpit. She and her passenger, William A. P. Willard, fell to their deaths—a disaster witnessed by two other emerging women pilots, Blanche Scott and Ruth Law. Her death received front-page coverage across the nation, ironically attracting more attention than her flight across the Channel.<sup>9</sup>

The airplane Quimby was using at the time of her death was a two-seated Blériot XI-2, one of the first passenger-carrying models to emerge from the Blériot works. Although the single-seated Blériot XI was “the most significant and influential . . . aircraft design of the era” and “the first genuinely successful tractor [i.e., having the engine in front, pulling the aircraft] monoplane,” it was a cranky aircraft requiring constant attention from its pilot. The Model XI-2, with a longer fuselage (twenty-seven feet) and wider wingspan (thirty-four feet) than the single-seat XI, was among the most popular of the Blériot models but retained all the quirks of the Model XI while adding a few of its own. It was notorious for pitch instability, tending toward a nose-heaviness notably at odds with the tail-heaviness of the standard Model XI. Pilots flying the XI-2 after flying the XI “had a difficult time making the transition,”<sup>10</sup> and accounts of the Quimby incident attributed the accident to mechanical failings of the aircraft rather than to Quimby's being a woman.

As a woman journalist, Quimby rode the crest of two burgeoning movements in American life. She benefitted, first of all, from feminists' pressure for greater civil rights for women and from the burgeoning public acceptance of the “New Woman.” Although she consistently denied being an overt feminist, her very denials suggested a tacit awareness of and identification with the movement. At one point she laughingly told an interviewer that she was being pressed by activists to name her airplane the Pankhurst or the Catt, alluding to Emmeline Pankhurst, the militant leader of the British suffrage movement, and Carrie Chapman Catt, a former president of the National American Woman Suffrage Association. Quimby declined to do so but said that were she to take the step she perhaps would name her craft the Catt because “of how purely feminine a monoplane can be when it wants to.”<sup>11</sup>

Despite her diffidence on the topic in this interview, she gave clear indications of her views toward feminism in talking with other interviewers. In a conversation with Ethel Lloyd Patterson published during the Nassau Meet, Quimby spelled out why she believed women were well-suited for flight. First, “successful aviation is a combination of sanity and instinct. . . . When you think of the generations women have relied on instinct rather than reason you will see for yourself that they have practically had their training for aviation.” Second, a more practical point, “women are more careful than men,” making them less likely to embark on foolhardy or dangerous excursions. Then, tying her opinions to a still larger concern, she concluded that whether the pilot was male or female, mastery of the air would be “a proof of human progress.” Through the agency of aviation, men and women alike would contribute to the larger improvement of humankind.<sup>12</sup>

If Quimby denied any overt affiliation with feminist causes, her interviewers still used their opportunities to imply her sympathies toward feminism. In two major interviews, one published in August 1911, preceding the Nassau Meet, and the other in December 1911, two months after its closing, both written by women interviewers, Quimby was repeatedly and pointedly hailed as a Californian and a Westerner (“real cross-my-heart Western,” one remarked). At the time of the interviews, women enjoyed the vote in only five states, all of them west of the Mississippi. Concurrently, an ultimately successful campaign for suffrage was going on in California, a state described by the biographer of Charlotte Perkins Gilman as “an ideal training ground for rebels . . . , a vital center of contemporary protest thought, [and] a relatively supportive community for radicals and nonconformists.” One of the interviewers elsewhere spoke of Californians’ having “grit—the good, California sort, that starts right in to ‘get somewhere’—and does it,” a comment as applicable to the feminists as to Quimby herself.<sup>13</sup> All of the allusions pointedly referenced individualism and nonconformity, while the larger identification of Quimby with the milieu of California and the West tacitly reinforced her association with the region’s progressive leanings.

The identification is important for another reason as well, for it is one of the first linkings of the mystique of the Western frontier with the more modern frontier of flight. The West, in American mythology, has long been considered an area of freedom, a place where the limitations of society are lifted and the individual is free to develop according to his or her abilities. The Western hero, in addition, embodied in such fictional characters as James Fenimore Cooper’s frontiersman Natty Bumppo (introduced in 1823) and Owen Wister’s eponymous Virginian (appearing in *The Virginian* of 1902), had already become a model for a distinctively American individualism. Not surprisingly, the Western myth and the Western hero were readily embraced by the aviation community. In this version of the frontier hypothesis, pilots were as touched by the frontier of the air as Bumppo and the Virginian were by the physical frontier

and reflected the same qualities of courage, integrity, and principle. The supposed influence would come to play a more important role as aircraft technology matured.<sup>14</sup>

However oblique her public statements regarding feminism might be, Quimby herself, single, urban, and self-supporting, was an overt exemplar of the New Woman. The most visible—and positive—expression of the liberated woman of the times, the New Woman made her presence known in dress, attitude, and activities throughout American society. In 1914, the social critic Randolph Bourne summed up the New Woman as having “an amazing combination of wisdom and youthfulness, of humor and ability, and innocence and self-reliance. . . . They are of course all self-supporting and independent, and they enjoy the adventure of life.”<sup>15</sup> This definition, although written two years after Quimby’s death, deftly characterized her. Though she never spoke explicitly of the issues, her every action, from her writing to her flying, from her exotic purple flying suit to the pictorial posters and postcards she created, proclaimed her identity as a person independent in thought and self-determining in action. She was indeed a New Woman.

The second movement benefitting Quimby was the changing face of American journalism, as Joseph Pulitzer and William Randolph Hearst turned the newspaper into a medium as much concerned with the creation of news as the reporting of it. One trademark of evolving journalistic fashions was the appearance of the “stunt” story, which became almost the exclusive preserve of women reporters. In its most general form, the stunt story involved a reporter’s taking part in some unusual or perilous activity, then writing at length about her experiences. The genre gained its first prominence through the work of Elizabeth Cochrane, better known as Nellie Bly, who in 1889 won acclaim by beating the record of Jules Verne’s fictional Phileas Fogg, who circumnavigated the world in eighty days.<sup>16</sup>

Bly subsequently made the stunt story more than just a staged theatrical event. Her accounts “exulted in the concrete specifics of one individual’s experience and scorned the relative abstraction of disinterested observation,” a description that could just as easily refer to the writings of Harriet Quimby. Quimby wrote almost exclusively first-person accounts for *Leslie’s*, and, if hers were not strictly stunt stories, they certainly gained prominence through the genre’s vogue. She chronicled her observations and experiences exploring the ethnic enclaves of New York City, looking into the treatment of women in the workplace, making hundred-mile-an-hour dashes in a racing car, or, ultimately, winning a pilot’s license and flying her own airplane. She became as much a celebrity writer as Bly, with her individual *persona* central to the unfolding of the topic at hand.<sup>17</sup>

Quimby was assisted in her endeavors by the singular nature of *Leslie’s*. Established as *Frank Leslie’s Illustrated Newspaper* in 1855 by Henry Carter, who took the working name Frank Leslie, the magazine pioneered the extensive use of illustrations as part

of its approach to news coverage. By the time Quimby joined the magazine's staff, it had become consistently if mildly progressive in its editorial policies—"expansionist, [Theodore] Rooseveltian, [and] anti-Bryan." With its opposition to the Democrats' embracing of William Jennings Bryan and his conservative politics, its modest progressivism, and its wide accessibility, *Leslie's* was an apposite outlet for Quimby's aeronautical writings. Its audience could reasonably be assumed to be broadly open to progressive issues, and its circulation of nearly four hundred thousand at the time of her association with it gave those writings significant exposure.<sup>18</sup>

Quimby's interest in aviation became public knowledge in May 1911 when the *New York Times*, hearing rumors of a veiled, trousered woman student at the Moisant Aviation School, sent a reporter to investigate. The resulting story identified the mystery figure as "Miss Harriet Quimby, a young magazine editor of Manhattan." It made much of her wearing men's clothing but went on to quote her at length as she talked of her desire to fly. Quimby made no conscious effort either to downplay or to accentuate her gender and talked freely with the reporter about her efforts. "I took up the sport just because I thought I should enjoy the sensation," she said, and "thought it would be nice to be the first American woman to win a pilot's license." She assured the writer that "there is no more risk in an aeroplane than in a high speed automobile and a lot more fun." She then added that in "the air lanes, where there are neither speed laws nor traffic policemen," she found a freedom not found on the ground, and ended her comments with a nod to national pride: "There are already several French women aviators. Why shouldn't we have some good American women air pilots?"<sup>19</sup> All of these themes were to recur in her aviation writings.

Those writings comprise thirteen articles: eleven published in *Leslie's*, one in the *New York World*, and one in the nationally circulated women's magazine *Good Housekeeping*. Viewed as a group, they are of three types. The first of these is a simple how-I-did-it story, "How I Won My Aviator's License," published 24 August 1911, exulting, as did Bly's stories, in "the concrete specifics of one individual's experience." The article explicitly lays out the requirements for a flying license established by the FAI: two flights over a minimum distance, "an uninterrupted series of figure eights," a flight reaching an altitude of over fifty meters, and a landing within a maximum radius from a designated point. It then relates the specifics of Quimby's qualifying flight—its initial delay by fog, her eagerness to start, the relative ease of completing the stipulated maneuvers, and her determination to finish the trial. She presents the process in matter-of-fact fashion, and her comment upon landing—"Well, I guess I get that license"—tacitly says, "If I can fly, anyone can fly."<sup>20</sup>

Quimby's second group of writings on aviation is made up of a cluster of straightforwardly practical and expository pieces. These are six articles examining and explaining various facets of the aviation experience, ranging from an acknowledgment of

the dangers of aviation to speculations as to the possible military and commercial applications of the airplane. All of these she explicitly links to modernity and progress, opening her essay "Exploring Air Lanes" (22 June 1911) with the ringing statement, "The twentieth-century problem is how to conquer the air." She then goes on to describe some of the atmospheric challenges that confront the airplane and the aviator: unseen turbulence, frigid temperatures at altitude, and the difficulty of overcoming high winds. Yet, in keeping with her commitment to the certainty of technological progress, after listing these problems, Quimby lists mechanisms being developed to overcome them. Advances in meteorology make predicting upper-air winds more reliable; technical advances will address the problem of cold; and new designs and new engines will subdue the wind. She quotes France's Roland Garros with respect to the latter: "If one's machine is fast enough and is properly designed and built so that it is strong enough to stand high speed, no wind can bother the aviator."<sup>21</sup>

The second piece in this group, published in August 1911, forthrightly addresses the dangers of flight, with Quimby remarking that the principal lesson of the air meets is that "the aviator think more of his safety and less of public acclaim." Yes, she says, aviation is dangerous. But so is swimming across Niagara, "skating where the ice is thin, bicycling, motor-cycling, motor-driving, and a lot of other things in which we constantly indulge." These activities, she says, are dangerous only if the person engaging in them is irresponsible. Detailing several well-publicized crashes, she points out that in virtually every instance, "the fatality has been shown to be due to reckless flying, over-confidence or pure neglect in inspecting the machine before it left the ground." Overcome these human failings, she says, realize that the aviator must "consider his surroundings and the condition of the machine which must serve him," and the time will come "when we shall find the means of transportation by bird-like flights as safe and satisfactory as transportation by steamship or locomotive and with still greater speed."<sup>22</sup> When common sense and common care prevail, flight will become a commonplace.

Quimby returns to this theme in her next essay, "In the World of the People Who Fly," published in the *Leslie's* issue of 18 January 1912. She opens with a statement of her commitment to progress, this time linking it with the need for individual responsibility among would-be pilots. "None is more interested in a genuine attempt to promote the science of flying than I am," she said, "and no one will be found more willing to encourage my colleagues who seriously undertake the solution of a new aero problem." Despite her recognition of the power of publicity, however, she had no patience with publicity-seeking "stunt" pilots, "over-night heroes" whose prominence came as much from "the lively imagination of a wide-awake press agent" as from any desire to advance the state of aviation. Their antics detracted from the dignity of flight.<sup>23</sup>

Many experimenters, she notes, were seeking more efficient ways of controlling the airplane. The Wrights had achieved in-flight stability and maneuverability by physically



twisting (i.e., warping) the outermost parts of the entire wing. Quimby, recognizing that warping would become difficult if not impossible as new materials come into use, called for stabilizers that would take over the task of maneuvering the craft. In this she anticipates the incorporation of ailerons, freestanding control surfaces initially suspended between the aircraft's wings, into aircraft designs. The aileron principle had been invented in France by Robert Esnault-Pelterie in 1904 and by 1908 was being advocated by Alexander Graham Bell, Glenn Curtiss, and other experimenters. More advanced controls, she agrees, are important; however, a more pressing need is a lighter, more powerful engine that will increase speed and enable the airplane to cut through turbulent wind currents. Not until both of these matters are solved will the airplane and aviation become truly practical, but she makes clear the certainty of their being settled. Aviation and technological progress go hand in hand.<sup>24</sup>

As aeronautical technology evolves, Quimby asserts, the time will come when aircraft will take a place in the national scene and become a contributing part of the larger national economy. To help achieve this end, she calls for an "aerial highway marked with frequent landing stations" that will cross the nation. With such a flight way, "the matter of crossing the continent with mail or with a passenger would be entirely feasible." When inventors turn their attention to these matters, the airplane will become "important for commercial and other practical purposes." In her comments Quimby was prescient but premature. The national flight way she called for would not come about for another decade, appearing in 1923 as a system of electric beacons spotted across the country as route markers for airmail pilots.<sup>25</sup>

Despite its title, "With the Intrepid Flyers" (1 February 1912), Quimby's fourth informational article is a compendium of events and developments, bringing readers up to date concerning recent advances. She touches upon her flights with the Moisant group in Mexico City, reflects upon "the relative merits of the biplane and the monoplane" (she favors the monoplane), and remarks on the development of an American military air force, which by year's end will possess twenty craft. Civil aviation, too, comes in for mention, as she reports on the development in France of "a limousine monoplane" for the luxury trade, and a new record for carrying passengers—twelve passengers carried a distance of twelve thousand yards. The world is, she concludes, on the eve of regular, practical commercial air transport.<sup>26</sup>

She continues her reflections on practical matters of flight in "New Things in the Aviation World" (6 June 1912), questioning the value of air racing as a means of perfecting the airplane and calling once again for the awakening of American national pride in flight. Noting that the principal advances in aircraft technology are coming from France, she points to America's dereliction: "We are far behind other nations in the interest we are taking in this latest scientific development, which lends itself so easily to those who delight in out-of-door sport. . . . It is not the American manufacturers

who are lagging in the competition of nations for supremacy of the air. It seems to be the citizens who are at fault." The United States, she goes on to say, is universally recognized as "the birthplace of the aeroplane." It behooves the nation, therefore, to become the leader in aeronautical progress.<sup>27</sup>

She ends her analysis with an overt appeal to patriotic pride: "America, more than any other nation, should forge ahead and stand in the front ranks . . . , instead of lagging behind and of being the last of the large nations interested in flying science." That progress should be in both military and civil aviation, yet both are handicapped by a "woeful lack of public interest and support."<sup>28</sup> Despite the popularity of the air shows throughout the country, a program of dedicated national support for aviation development was not yet forthcoming. Mechanical, heavier-than-air flight was still widely thought of as no more than a novelty, an oddity that might or might not have staying power or practical applications.

Her condemnation of a "lack of public interest" leads to her final piece for *Leslie's* in this category, "Flyers and Flying" (27 June 1912). Here she gives commonsense advice on how to learn to fly and speculates about what employment possibilities might be for a woman licensed as a pilot. A course of study at an aviation school will run "from \$250 to \$500," not counting breakage fees charged for damage to the aircraft and the cost of living near the aerodrome. The student, moreover, should decide upon the type of craft, biplane or monoplane, he or she proposes to fly. While Quimby herself flew the more modern monoplane, each type has its merits. The biplane, with its two wings placed one above the other, offers greater lift and stability; the monoplane, with a single wing, offers greater maneuverability and reduced drag. The choice "is entirely a matter of preference." Once licensed, the aviator can perhaps find work flying as a salaried employee, as a member of a demonstration team, or possibly as a pilot testing new machines as they come from the factory. The chances of making a living through flying, she acknowledges, are as yet scant, but "there is no reason why a woman flyer could not do this work if she so chooses."<sup>29</sup>

For Quimby, women's taking part in aviation is no more extraordinary than their participation in other fields of endeavor. She herself is an independent, self-supporting person, and, for all the cultural restrictions still imposed upon women, she sees other, comparable women about her in the workplace. She considers aviation to be an enterprise as open and accessible to women as other activities, and she is clearly persuaded that interested women are more than up to the task. If a person is able and willing to devote her time and money to the gaining of aeronautical skills, those skills and their associated benefits will come. To reach this level of independence and self-direction requires only determination on the part of the individual.

Quimby's final category of articles takes up her achievements *as a woman*. Here she explicitly raises the issue of gender roles and cultural stereotyping, looking ahead

to what other women might—and may yet—do in the realm of aviation. Her inaugural article, a two-part essay published in *Leslie's* under the running title “How a Woman Learns to Fly,” establishes her desire and efforts to establish aviation as an enterprise suited to women, women’s interests, and women’s needs. The first installment, published on 25 May 1911, while she was still taking instruction, challenges feminine stereotypes in its opening sentences: “Americans are called an inquisitive race. I am satisfied that this is true. I am also satisfied that curiosity is not confined to the women.” She reports having received numerous letters, the majority of them from women, seeking information on learning to fly. While acknowledging that her own lessons are still in the early stages, she does, she says, “feel qualified to tell a beginner how she must dress and what she must do if she expects to be a flyer.”<sup>30</sup> With these words proclaiming herself an interpreter of aviation for women, she sets out to explain its requirements.

From the outset, she insists that the would-be woman pilot must slough conventional attitudes. Dress comes first, for conventional women’s attire is clearly unsuited to flight. Aircraft engines tended to spew oil (the rotary engines of the time were lubricated with castor oil, spraying it widely and creating uncomfortable results within and without for pilot and passengers); a flapping skirt could become tangled in the support and control wires; the wearer’s feet and legs must be free to work the aircraft’s steering mechanism (“the steering on a monoplane is not done by a wheel guided by the hand, as in an automobile”). A would-be woman pilot must be ready and willing to exchange her day-to-day wear for clothes more suited to the circumstances. Indeed, for Quimby flying togs are as much an expression of independence as a practical concession. The woman aspiring to be an aviator must “first of all . . . abandon skirts and don a knickerbocker uniform.” So practical and so distinctive is this outfit that she believed it would become “the aviation costume for women in this country, if not for all the world.” Quietly but deliberately, she makes aviation’s clothing requirements a worldwide step forward for women everywhere.<sup>31</sup>

Quimby followed her own recommendations. Unable to find suitable garb in New York City, she had a custom garment designed, a one-piece, hooded pantsuit of satin backed by wool that, with the opening of a few buttons, “can be converted instantly into a conventional-appearing walking skirt.”<sup>32</sup> This outfit, a woolen union suit covered with dazzling purple satin, served her in a variety of ways. It was, as she says, a practical piece of flying attire that could readily be adapted to conventional needs. It was also, however, a convenient trademark for her and her flying endeavors. Quimby was an attractive, personable woman, and she had no qualms about exploiting her feminine exoticism. The formfitting flying suit accentuated her trim figure, while its unusual color ensured she was noticed. She was going to miss no opportunity to call attention to herself and to her achievements as a pilot, and she recognized the sales value of presenting herself as an independent, alluring woman.

She next cautions her feminine readers that they must be prepared for the noise and vibration of the aircraft engine, but expresses confidence that a modern woman would take them in stride. One who “has run a motor cycle or an automobile successfully” will find these no surprise. Then there is the actual experience of the lessons. The Moisant school, using the French model of tutelage, gave the student a series of brief lessons: how to manipulate the ignition, how to hold the craft steady as it taxied, how to warp the wings to achieve steady flight, and how to deal with common emergencies. These lessons, taking only a few minutes each day, could extend the student’s time at the school over several weeks, but only after the rudiments were mastered was the student allowed to take a craft into the air.<sup>33</sup>

The final requirement is self-confidence. The aspiring woman pilot cannot let herself be held back by prevailing social and domestic stereotypes. Just as in learning to swim, she writes, the pilot-to-be must have “confidence and the knowledge that you can do it.” The woman who is independent enough to accept these needs and practices will find the actual experience of learning well within the scope of her abilities. Quimby, moreover, takes for granted that her readers are accustomed to operating an automobile. When actual flight time comes, she continues, the student will find that flying “feels like riding in a high-powered automobile, minus bumping over the rough roads.”<sup>34</sup> The woman who would fly must possess dress, determination, and confidence—all of which can be subsumed into the mindset of the progressive, forward-looking woman of the time. Quimby’s purple flying suit became emblematic of all three qualities.

The second installment of “How a Woman Learns to Fly,” published as Quimby’s third aviation-related article in the 17 August 1911 issue, continues and expands upon these themes. Now a licensed pilot, she once again summarizes flight school practices and her own experiences in the training craft, but now uses the occasion to emphasize the larger concerns established in the earlier essay. She speaks, for example, of the necessity of “patience and stick-to-itiveness.” Women who drive automobiles must also possess these qualities, but that does not guarantee they will readily become pilots. Nonetheless, she continues, “one who has easily learned how to drive an automobile and to pilot it with a clear head through congested traffic will undoubtedly find his [*sic*] experience an aid in learning to fly.” Quimby here links a practice familiar to women (driving an automobile) to an unfamiliar one (flying an airplane), using the analogy to bolster her convictions about the other—that is, her certainty that the majority of women are capable of mastering the airplane.<sup>35</sup>

That feminine focus becomes overt in her account of flying the English Channel, for she states explicitly that she thought of the exploit as one that would attract notice because it was done by a woman. The idea, she says, came to her while flying in Mexico, when “an ambition to be the first woman aviator to cross the English Channel alone entered my mind.” With the support of *Leslie’s* and additional backing from the London

*Mirror*, she traveled to France, borrowed an airplane from the Blériot works, had it shipped to England, and prepared for her flight. It would be a flight of many firsts for her and, implicitly, for womankind: “For the first time I was to fly a Blériot monoplane. For the first time I was to fly by compass. For the first time I was to make a journey across the water. For the first time I was to fly on the other side of the Atlantic.”<sup>36</sup>

The flight itself was complicated by cold and fog, but she landed on the beach at Hadelot, France, without incident. Her arrival created a stir of excitement among the residents of the area, who trooped to her airplane and offered her congratulations, food, and restorative hot tea. She was also greeted by photographers and a newsreel team from the *Mirror*, who, to her great satisfaction, recorded the excitement of her arrival. She claimed a bit of diffidence over the filming, but, tellingly, added that the recording of the scene “means that they will give it to the public.” No stranger to publicity and a journalist herself, Quimby understood the newsworthiness of what she had done. Knowing that it would be seen by women *and* men worldwide, she returned to Paris “a very tired but a very happy woman.”<sup>37</sup> She had done something that no other woman, anywhere in the world, had accomplished, and she was pleased with her achievement.

Quimby’s final works concerning flying, both explicitly directed toward women, appeared posthumously. A brief piece in the magazine section of the *New York World*, “We Girls Who Fly and What We’re Afraid Of,” dealt humorously with the superstitions professed by several women fliers. Quimby herself spoke with tongue in cheek of the malign influences of her paperweight, a brass representation of the elephant-headed Asian god, Ganesha. Although Ganesha was considered by many to be a bringer of good luck, Quimby attributed a string of misfortunes to his influence and one day ritually beheaded him in the *World’s* engraving room. After the decapitation, she noted, things went “splendidly” — an ironic observation made only days before her death.<sup>38</sup> She wrote the article as a lighthearted account of her and her colleagues’ personal quirks, but, invoking Matilde Moisant, Hélène Dutrieu, the “Baroness” Raymonde de Laroche, Jeanne Harvieu, and Edith Mazee, she established the growing involvement of women in aviation and all that they had accomplished.

Moisant held an altitude record. Dutrieu had piloted “Sommer and Farman biplanes and even essayed the dangerous Demoiselle, which only Roland Garros and Edmond Audemars [had] flown successfully.” De Laroche was the first woman to earn a pilot’s license and held world’s records for “duration, distance and speed.” Harvieu was “one of the leading speed flyers among women,” and Mazee flew “a most dangerous monoplane, to the consternation of army officers.”<sup>39</sup> Her subjects might embrace this superstition or that, but each, *as a woman*, made a genuine mark in flying. They were notable figures in the world of women’s aviation, and Quimby’s relating of their superstitions, stressing their idiosyncrasies, made them seem more human and approachable than their celebrity status would permit.

Quimby's final work sums up all that she had written previously. Published in the nationally circulated women's magazine *Good Housekeeping* two months after her death, it lifts aviation from the milieu of celebrities and daredevils and presents it to a national audience of American women. Her opening sentence makes this clear: "Any woman with sufficient self-confidence and a cool head could fly across the English Channel as easily as I did." In fact, she continues, "within a few months, perhaps weeks, some other woman probably will make the same flight, or even achieve some greater undertaking." Aviation has, however, far more to offer women than spectacular stunts. "More a matter of personality than of sex . . . , flying is a fine, dignified sport for women, healthful and stimulating to the mind, and there is no reason to be afraid so long as one is careful."<sup>40</sup>

From this beginning she returns to themes she introduced in earlier writings. First, as she had written a year before, success in aviation requires care and conscientiousness. "Only a cautious person, man or woman, should fly. I never mount my machine until every wire and screw has been tested. I have never had an accident in the air." Flying, moreover, had yet to develop as a full-fledged mercantile undertaking, but its commercial possibilities "should open up a fruitful occupation for women" as they emerge. Possible vocations suitable for women include operating an aerial city-to-city commuter service, conducting small-scale air freight operations, teaching flying, or engaging in aerial photography. Finally, aviation will certainly revolutionize transportation: "with the establishment of fuel supply and landing stations there will be no reason why air lines could not be established for distances of fifty and sixty miles."<sup>41</sup>

Though she does concede that she thinks "women will go in for flying more as a sport than as a profession," and that military aviation will likely be closed to the woman pilot, she makes no secret of her belief that civil aviation is wholly and entirely within the skills of women. It will provide advancement (i.e., the setting of records), it will provide liberating sport (as did the bicycle and the automobile), and, when engaged in commercially, it will let women "realize handsome incomes."<sup>42</sup> A singularly progressive, optimistic summation of her views on flight, the article gains significance by appearing in the columns of *Good Housekeeping*. Flying, Quimby says, is as appropriate an enterprise for women as domesticity, and deserves to be seen in the same light.

In a farewell essay accompanying Quimby's article, the aviation journalist Elizabeth Hiatt Gregory spoke glowingly of the pilot's career and went on to place her story in the larger context of the women pilots now active in the field. France's Raymonde de Laroche may have led the way, Gregory notes, but Quimby was close behind her; thanks to their achievements—and those of other women such as Matilde Moisant—"there is hardly an important country that has not its woman flier. There are twelve in the world who hold brevets [licenses], and as many more are learning to fly." They have done so in an undertaking "regarded as an occupation that belonged exclusively to man," and they have done so despite "repeated rebuffs." Thus, whatever her accomplishments as

a pilot may have been, Quimby's greatest achievement was to open the way to aviation for women: "once given the opportunity, she never asserted her rights with quicker effectiveness in a sphere thought to be reserved for man than she did in aviation. She surmounted the obstacles, went up in the air, handled her machine with a skill that was the envy of her male confrère and came down the idol of the populace."<sup>43</sup> Where one woman has gone others may follow, and Quimby has prepared the way.

Quimby's passion for flight and her determination to convey its pertinence for women contribute to the nation's dawning awareness of flight. She endorses the contention that aviation is a democratic enterprise open to all. In her view, airplanes and aviation are accessible to, and manageable by, any determined person, whether female or male. She identifies issues associated with aircraft ownership—the costs of flying lessons, of purchasing an airplane, and of maintaining it—but demystifies these realities of flying and presents them in economic terms intelligible to virtually any reader. Thus presented, aircraft ownership and flying itself seem as attainable as the owning and operating of an automobile, a circumstance that Quimby takes for granted will be familiar to her women readers. Training and machines are there for the taking, if only the individual has the determination to pursue them.

She understands the cultural potential of the airplane as an everyday machine, one that offers a new realm of liberation. Flying, she maintains, is an enterprise holding great possibilities for women. Like the bicycle and automobile that preceded it, the airplane is a liberating form of recreation that will inevitably broaden the horizons of those women who embrace it. The suffragist Susan B. Anthony, noting the bicycle's influence upon clothing and social conventions, remarked that bicycling "has done more to emancipate women than anything else in the world." The automobile, following close on the bicycle's heels, in its turn contributed its influence, becoming "an important cultural emblem of women's quest for autonomy and independence" that feminists embraced as providing both "transportation and an important sign of their modernity." That the airplane would be the next step in the progression was an obvious conclusion, and Quimby became an ardent advocate of its potential.<sup>44</sup>

In Quimby's opinion, aviation has the potential to be more than merely an exhilarating sport for women. By offering them a range of opportunities for self-supporting employment, aviation will give its female practitioners a singular degree of social and economic self-determination. It is, in short, a potentially powerful source of independence, giving women the opportunity to move from the world of domesticity to the worlds of recreation and commerce in ways previously unavailable to them. Here, two decades and more before Margery Brown's "Flying Is Changing Women," Quimby foresees the potential social effects accruing from the embracing of aviation.

Quimby's presentation of flying as a means of liberation leads directly to her most substantial consideration—her embrace of the fledgling American belief that aviation

would ultimately bring about profound changes in American society. The late 1920s and the decade of the 1930s were marked by a general assumption that once aircraft became generally accessible, the exercise of flight would bring about a singular, near-mystical change in those engaging in the enterprise. Almost from the outset, Americans believed that, in time, “everybody would fly.” As the national obsession with flying grew, Americans, Joseph Corn points out, “widely expected the airplane to foster democracy, equality, and freedom; [and] to improve public taste and spread culture,” ultimately bringing about the “expansion of freedom and an end to discrimination.” The outcome would be a society “at once more democratic, egalitarian, and cultured.” Quimby perhaps does not go to these lengths in her predictions, but she does convey the conviction that flying can, and will, instill elevating new perspectives and new values into its practitioners.<sup>45</sup>

This vision appears in her initial solo flight. As the flight proceeded, she reports experiencing a singular feeling: an epiphany of insight and freedom. “One who has not made an ascension,” she writes, “can scarcely comprehend the clearness with which objects beneath the aviator can be discerned.” Quimby’s phrasing is significant, for the earth and its objects are “beneath” the aviator—an image evocative of exaltation as much as elevation. The aviator is a person set apart. She is a person granted the privilege of seeing with a clarity and a precision denied the earthbound. Her elevated position gives her a new view and a new perspective on terrestrial matters, and she will never again be the same.<sup>46</sup>

Exaltation is followed by freedom. As Quimby records, she “felt like a bird cleaving the air with outstretched wings. There was no thought of obstruction or obstacle. There was no fear of falling because the mastery of a well-balanced machine seems complete.” In the air, at the controls of an airplane, one has a freedom not found on earth. The obstacles and obstructions of mundane life dwindle to nothing, and the pilot feels only liberation. She was not alone in feeling that ecstatic liberation. She here echoes ideas floated in 1907 by the feminist writer Charlotte Perkins Gilman. Although not herself a flier, Gilman saw in flight new possibilities and new hopes. Writing in *Harper’s Weekly* in 1907, she asserted that the freedom of flight will bring about a reshaping of human values. “When individual men and women, not confined in a ship nor held to track and trolley, can move fast and free in every direction,” she writes, “there follows a new sense of association—a wide interpersonal association unknown before.” That association will bring about a new kind of person, for “man aerial must vary far from man but earthy. He cannot think of himself further as a worm of the dust, but as butterfly, psyche, the risen soul.” Thus, for all its practical elements, aviation “will have tremendous influence in that one subject of all true ambition—the improvement of humanity.”<sup>47</sup>



In this essay, among the earliest published expressions in the United States of a woman's response to the implications of flight, Gilman links the enterprise with transcendence and liberation—progressive thoughts if ever there were such. Whether Quimby knew Gilman's essay is uncertain, but she echoes its spirit. She may not have been a passionate suffragist, but she saw the potential for feminine freedom in the exercise of flight. She served in her own right as a conscious role model for the women to whom she was writing. She served as a woman's voice speaking on numerous topics, not the least of which was aviation. She became a conduit for the transmission and interpretation of aviation's details to the larger public. And she articulated and defended the abilities of women both in flight and in the larger society. She was, like her male contemporaries in the field of aviation, hampered and restricted by the primitive state of the aircraft they used, but she saw through these material limitations—and the intangible, possibly greater ones of social convention—to lead American women toward a still greater engagement in aviation. If women enough took part, might not the bettering of male/female relations soon follow?

## II

# “Machinery Knows No Sex”: Ruth Law, the Stinson Sisters, and the Legacy of World War I

THE THIRD ANNUAL Boston Aviation Meet, held 29 June to 7 July 1912, was a watershed moment for American women’s aviation. It not surprisingly featured several of the most notable male celebrities of the day: Lincoln Beachey, who would be the first American to loop the loop (execute a vertical circle in midair, returning to the original direction of flight) in 1915, Arch Hoxsey, who had given former president Theodore Roosevelt his first airplane ride in 1910, designer-racer Glenn L. Martin, and others. Its reach, however, extended to the country’s only two performing women pilots as well. Harriet Quimby was there, fresh from her record-setting flight over the English Channel in April, and Blanche Stuart Scott, unlicensed but widely known as “The Tomboy of the Air” for her air show performances with the Curtiss troupe. Matilde Moisant, the only other woman air show flier of the time, had retired in April following a fiery crash in Wichita Falls, Texas, leaving Quimby and Scott the only professional women pilots flying. Their presence attested to their newsworthiness.

When the meet closed, the picture had changed. Quimby was dead, falling spectacularly to her death before a shocked audience. Scott, who had witnessed Quimby’s fall from the air while flying in the same airspace, began to wind down her career, continuing to perform, but retiring in 1916 because, she said, she was repelled by the ghoulishness of audiences who attended air shows hoping for a crash.<sup>1</sup> The old order was changing, as was the technology. The time was ripe for a new generation of women pilots, and the women were ready. One, Ruth Law (1887–1970), an as yet untrained flying enthusiast, was present at the Boston Aviation Meet when Quimby died. She began flying lessons the same week and was licensed in August 1912, the sixth American woman to earn a license. Another, Katherine Stinson (1891–1977), was in the midst

of her training at Max Lillie's flying school in Chicago. She would become the fourth American woman to earn a pilot's license and would immediately enter the air show circuit; her sister, Marjorie (1895–1975), would become the eighth in 1914.

The three were the public face of women's aviation in the United States until well after the end of World War I. Unlike Quimby, whose reputation was national but whose performances were limited to the East Coast, they performed at air shows throughout the nation and internationally, showing women's skills at flight from coast to coast and abroad. They recorded notable accomplishments, as well. Law and Katherine Stinson established records for distance flight, Katherine became the first woman to loop the loop, and Marjorie became the first woman to operate and instruct at a flying school. Her students would include some of the earliest American and Canadian pilots to enter World War I.

They were, moreover, independent women in their own right, earning their living in the air. None openly allied herself with any of the organized feminist societies, but they spoke as one when it came to matters of gender ability. They used their prominence as women fliers to become equally prominent voices of progressivism, they argued for a greater women's presence in the developing military effort, they made evident their support for the burgeoning women's rights movement, and they repeatedly demonstrated—and commented upon—their belief that airplanes and aviation posed no problem for women.

Law and the Stinsons took up professional flying at a turbulent time in the nation's history, and their careers span an era of significant cultural and technological evolution. The coming of World War I, the growing activism among women's groups, and the steady course of technological change inevitably upset the status quo. The changes brought new perspectives on the United States' place in the larger world, a heightened challenge to conventional views of women's roles and abilities, and a new—and sometimes baffling—consciousness of the impact of technology in general (and aviation technology in particular) upon the national culture. Whereas Americans as a culture might cling to the national myth of the nation as a frontier-shaped society close to nature and its benefits, the United States was in fact inexorably becoming urbanized and mechanized.<sup>2</sup> The changes were significant.

The women's movement, a prominent part of the American scene since the Seneca Falls conference of 1848, was gaining new prominence as it worked toward the passing and subsequent ratification of the Nineteenth Amendment in 1920. Its energy was increasingly being expressed in urban parades and all-female demonstrations outside the White House. Meanwhile, in August 1914, barely two years after Quimby's death, German military forces invaded Belgium. World War I had begun and the American public, by and large, wanted none of it. The United States, popularly and officially, held that the conflict was a strictly European one and saw no reason for American

involvement. Even so, the American aeronautical world felt its effects. The war would have a significant impact on aviation technology, the development of civil as well as military aviation, and the feminist movement.

Women's battles for suffrage were relatively bloodless ones, fought largely in the streets and caucus rooms of the United States; the battles of World War I were startlingly bloody and fought in the fields and cities of Europe. Strategically and tactically, it was a new kind of ground war, far removed from wars of the past. It was a war of attrition fought by infantry and artillery, the combatants using machine guns, tanks, and other advanced weaponry. It saw the coming of the first weapon of mass destruction, poison gas, as well. After the Germans released free chlorine gas at the Second Battle of Ypres (22 April 1915), the other combatants quickly followed suit with new and even more toxic agents.<sup>3</sup> The new technologies had their effect. Casualties, even by the standards of the twenty-first century, were appalling; by the standards of 1914–1918, they were staggering. In the First Battle of the Somme (1 July to 13 November 1916), British losses came to 420,000 combatants, French losses to 204,000, and German losses to an estimated 450,000 to 650,000. The United States, by comparison, which entered the war in April of 1917, lost approximately 112,000 troops from all causes during the eighteen months of its participation in the fighting.<sup>4</sup>

This new kind of war was increasingly appearing to the public as one of “collective annihilation,” a “mechanical slaughter” fought in the mud and the trenches of the modern battlefield. In the generalized public vision, the combat soldier was little more than an anonymous statistic in the daily rolls of losses. By its immensity and facelessness, the ground war was making it “impossible [for the civilian public] to imagine . . . the numbers of soldiers involved, [or] the romantic image of warfare conducted along Napoleonic example.” It was warfare that, in its anonymity, effectively forestalled “a positive emotional identification. . . with the war.”<sup>5</sup> If the civilian public was to support the war, leaders of both sides recognized, that emotional identification had to come from somewhere else.

The airplane provided the answer. In late 1915, the German military leadership, seeking to build public morale, began to publicize the feats of combat pilots, presenting them as stalwart, romantic heroes.<sup>6</sup> The publicity given these pilots by the news media of both sides created a new kind of public idol, the “fighter ace.” This figure, whose individuality and derring-do in man-to-man combat was conveyed through journalistic accounts, quickly came to dominate public perceptions of the air war. The “ace,” technically, was simply “a fighting pilot who has brought down five enemy airplanes.” The term, however, quickly became a universally recognized honorific, and the victories of individual pilots made a telling corrective to the anonymity of the ground war.<sup>7</sup> War in the air, at least in the public mind, became a romantic affair.

For the emerging United States Army Air Service, however, the reality was something else. When the war opened in August 1914, Germany possessed 232 battle-ready airplanes; France had 162; Great Britain fielded “somewhere between 50 and 100.” The United States lagged dramatically; when the country entered the war three years later, its aerial forces numbered twenty-three trained pilots and fifty-five obsolescent training aircraft. Despite well-publicized claims that “the air is the one field in which the United States can make an immediate and effective contribution” and that the U.S. would soon supply “a thousand aviators a month for overseas service,” government and military leaders quickly had to face reality. Its aircraft overall, as Ruth Law was to point out in April of 1917, were not equal to those of any of the combatants.<sup>8</sup>

The United States would contribute no new aircraft designs to the war, and its existing designs could not compete with the Nieuports, Sopwiths, and Fokkers of the other combatants. The only nominally American aircraft to come out of the war was the Curtiss JN-4 “Jenny,” and it was derived from a design first used by the Avro firm in England. Instead, American manufacturers quietly took up the building of British-designed de Havilland and Handley Page bombers. The Air Service, however, did not lack for men. Though they were flying European-designed (and largely European-built) aircraft, six American pursuit squadrons, six observation squadrons, and one bomber squadron were operating at the front by June 1918. The United States was sharing in the appeal of the aerial war.<sup>9</sup>

The romance of the air notwithstanding, women, as a group, did not flock to aviation. The activity’s heavily male-oriented aura and the inability of women to enter the military without doubt acted as inhibitors, and by war’s end in November 1918, only eleven American women had earned pilot’s licenses. Two (Harriet Quimby and Julia Clark) were dead; Matilde Moisant had retired; five flew solely for recreation. Only three, Ruth Law and the Stinson sisters, were actively flying in public, and by early 1918 they were being cited as the “only three prominent women aviators in the United States.” Each found ways to continue flying even after federal restrictions on civil aviation were imposed in March 1918, and each took it upon herself to speak out for women’s role in aviation.<sup>10</sup>

Law and the Stinsons were motivated by their enthusiasm for flight and abetted by their skills, but there *were* difficulties, and, if the three had not already been sensitized to the concerns of the women’s movement, their experiences stirred their awareness. The earliest days of aviation, as Ruth Law observed, reflected little gender-based discrimination among fliers. “There was a feeling of closeness,” she remarked, and “there seemed to be no difference in their feelings towards me because of my being a woman. . . . I was just one of the group.” That openness soon began to change, and as the cult of the ace accentuated male domination of the field, news of women fliers



Ruth Law and the Wright Model B in which she made her early air show flights.

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was pushed still further into the background.<sup>11</sup> All three found ways to confront this diminution.

The Boston Aviation Meet of 1912 catalyzed matters for Ruth Law. Born in Lynn, Massachusetts, and a resident of Boston, she was moved to learn to fly by the sight of the flying machines and their maneuvers. Before the end of the meet, she and her new husband, Charles Oliver, traveled to Dayton, Ohio, and bought a Wright Model B aircraft at the Wright factory. Orville Wright reluctantly sold them the airplane but flatly refused to admit Law to the company's flying school, saying he "wouldn't be responsible for trying to teach a woman to fly." Law returned to the Burgess Flying School in Boston and, after a brief spell of instruction, soloed; she was licensed in November and quickly embarked upon a career in aviation.<sup>12</sup>

Charles Oliver took on the role of her manager, and opportunities began to accumulate. Her first extended work came in Florida, where from 1913 until 1915 she flew under contract to a popular hotel, showing off her flying skills and giving rides to the hotel's guests. By 1914 she was well-known enough in Florida that a local newspaper called her "the world's most famous aviatrix" when she announced plans to take part in a projected round-the-world air race. Subsequent bookings came from outside Florida, including her substituting for Katherine Stinson in Ohio and flying at the 1915 Illinois State Fair.<sup>13</sup>

Law won national acclaim late in 1916, when she broke the distance record set by Victor Carlstrom. Carlstrom, a seasoned military pilot, had flown from Chicago to Hammondsport, New York, a distance of 452 miles, on 2 November 1916. He flew with the sponsorship of the *New York Times*, using a custom-built biplane from the Curtiss works in Hammondsport. Law decided to challenge his record, flying the same route in the Curtiss pusher that she had begun using in her air show appearances. Her purpose, she said, was “to break the present American non-stop flight records and second, to establish the practicality of women aviators in war time.”<sup>14</sup> She was, already, linking women’s concerns and aeronautical accomplishments.

The aircraft she intended to use had been built to her order by the Curtiss firm in 1915, but it was in most respects a largely unmodified example of the Curtiss D-III Headless Pusher biplane. “Headless” pertained to its having no forward-projecting pylon carrying the elevators, as the original Wright and Curtiss craft had possessed. With a single engine mounted behind the pilot and powering a rear-facing propeller, the machine had a wingspan of thirty-eight feet and a length of twenty-five feet. It was a handy, agile craft well-suited for Law’s airshow performances, but it was not the best choice for a cross-country flight in mid-winter. It had neither an enclosed cockpit nor a windshield and the pilot’s seat projected from the front—providing excellent visibility but no protection from the elements. Even by the standards of 1916, the aircraft was obsolescent, if not actually obsolete; nonetheless, Law was comfortable with the ship and confident of her ability to handle it whatever conditions she might encounter. She mounted a small aluminum shield in front to cover her feet, bundled herself in fur-lined trousers and leather outer garments, and set out.<sup>15</sup>

Leaving Chicago early on the morning of 19 November, she flew nonstop to Hornell, New York, a record-setting 590 miles, stopping short of New York City only because fighting an unexpected headwind forced her ship to consume fuel faster than she had planned. She completed the flight a day later, arriving at Governor’s Island, New York, mid-morning on 21 November, having set a new American cross-country distance record and broken all existing women’s records for distance flying. Her comments following the flight were modest but pointed: “I have made the longest flight a woman ever made. . . . It was the only distance flight I ever tried and I did better than the man who tried it. But I don’t mean that the fact that I am a woman makes any difference to speak of.”<sup>16</sup> For her, her achievement as a flier who happened to be female overshadowed any contribution she might make as a “woman flier.”

Her flight made her an instant celebrity, her fame reflected in the praise given her in national publications, popular as well as technical. An editorial in the *New York Times* observed that Law’s flight “puts her in the rank of the great aviators” and remarked to those who wanted to label her an “aviatrix” that her command of the qualities demanded by aviation leaves “no necessity, and hardly an excuse, for giving her a name

that emphasizes the fact, *professionally irrelevant, of sex.*” *Aerial Age Weekly*, a leading aviation journal, opened its 27 November 1916 issue by proclaiming, “Miss Ruth Law Now Holds American Non-Stop Cross-Country Record, and World Cross-Country Record for Women,” then, in a later issue, quoted a *New York Globe* editorial hailing her as “the practical sort of feminist that is going to do more for women than a decade of front parlor and lecture room talk on ‘sex barriers’ will ever do.”<sup>17</sup>

In its own recognition of her achievement, the Aero Club of America, the national entity certifying flying skills before the government began official licensing, gave a dinner in her honor at the Hotel Astor, seating her at the head table between the famed polar explorers Rear Admiral Robert E. Peary and Captain Roald Amundsen. Peary was acclaimed for reaching the North Pole in 1909; Amundsen, after crossing from the Atlantic to the Pacific via the Northwest Passage in 1909, had reached the South Pole in 1911. Other women were present at the occasion, including playwright and women’s activist Eleanor Gates. Their remarks dubbed Law “the emancipator of women,” and Gates later told an interviewer that “Ruth Law is the fourth superwoman,” going on to add that “Ruth Law’s flight wasn’t feminine, it wasn’t masculine. It was super-human.”<sup>18</sup>

Law’s seating between Amundsen and Peary tacitly equated her accomplishment with those of the men, implying that she, like them, had overcome significant odds to explore mysterious areas of the world to expand human knowledge—a notable concession for the predominantly male Aero Club. In toasting her success, Admiral Peary bluntly stated that “she had accomplished more toward the advancement of aviation than any man could have done,” while the *Literary Digest* dubbed her “A New-Crowned Queen of the Air” and reprinted extensive excerpts from accounts in the *New York Times*.<sup>19</sup> Her regional fame had spread nationwide, and she was, for all practical purposes, the personification of women in aviation.

Law turned her celebrity to good purpose in the years following 1916, with the 1917–1918 period representing perhaps the most visible part of her career. Early in January 1917 she signed a contract with Pulitzer’s *New York World* to travel to France, evaluate and buy a military-grade airplane, and undertake a coast-to-coast flight within the United States. Neither the airplane nor the coast-to-coast flight materialized, but the European trip gave her occasion to comment on the inferiority of American aircraft and to agitate for the admission of women to the Army Air Service.<sup>20</sup> Her efforts to enlist women were not entirely quixotic. The United States Navy and the Marine Corps began to enlist women for clerical work in 1917, giving them the rank of “Yeoman (F)” and full benefits for their rank. (Army nurses, who were formally enlisted members of the army and often posted perilously near the front lines, were denied military rank.)<sup>21</sup>

Meanwhile, in early January 1917 the aeronautical engineer Lawrence Sperry, with the endorsement of Major General Leonard Wood, proposed a plan “for probationary



enrollment of women aviators in the Army Aviation Reserve Corps.” The head of the Aviation Section of the Army Signal Corps, Lieutenant Colonel George O. Squier, expressed interest, saying that Law’s recent flight proved that “there are thousands of women in this country that could successfully operate aeroplanes, in case of necessity.” Given opportunity and incentive, American women could—and would—rise to the occasion. Squier’s comment, like Sperry’s proposal, ignored there being only eight licensed women pilots in the country; he was making a more general assessment of women’s abilities that was remarkably progressive for his rank and the times.<sup>22</sup>

The proposal from Sperry and comment from Squier were all Law needed. In the aftermath of her Chicago-New York flight, she had already spoken of an interest in establishing a role for women as military pilots. Now she had her opportunity, and, returning to the United States in April 1917, she made repeated efforts to enlist. She petitioned officials in Chicago and Washington, D.C., but was rejected each time. She did, however, win one concession. Law was admitted into the military recruiting service and authorized to wear “the smart khaki uniform of a United States officer . . . as an assistant recruiting officer of the United States army—her territory being . . . ‘the United States map and the atmosphere.’” Her charge was to recruit men for the armed forces generally, but she made it her mission to give “special attention to aviators.”<sup>23</sup>

She took her duties seriously, flying in recruitment and Liberty Bond drives across the country, dropping paper “bombs” emblazoned with “You Buy a Liberty Bond or the Next Bomb Dropped on You May Be a German Bomb” and arguing in the principal aeronautical magazines for the enlistment of both men and women. She never achieved her goal of formal enlistment in the Air Service, but she established herself as an articulate advocate speaking and writing on women and aviation throughout the duration of her work. Immediately after the Armistice, she made a six-month exhibition trip to the Philippines, China, and Japan, then returned to the United States to plan for a nonstop transatlantic flight.<sup>24</sup> Her plan came to naught, however, when John Alcock and Arthur W. Brown flew from Newfoundland to Ireland on 14 June 1919 in a modified British bomber, making the flight in somewhat more than sixteen hours.

She continued her exhibition flying, creating the three-airplane “Ruth Law’s Flying Circus” and touring the country with her troupe, but her success was short-lived. Although the airplanes involved in this enterprise were mechanically superior to those of the prewar exhibitions, the flying itself was becoming increasingly dangerous. Postwar audiences were no longer satisfied with the mere sight of a flying machine. Their memories of the stories told of the wartime aces still fresh, they expected “new and more daring exploits” from the fliers. Law met the demand with wing-walking, transferring from an airplane to a speeding automobile, and standing on the upper wing of a Curtiss JN-4 while its pilot looped the loop. (A harness of steel wires, imperceptible

from the ground, kept her firmly attached.) Though she herself experienced no accidents, the risks by 1922 compelled her husband to insist upon her retirement, and she left the profession.<sup>25</sup>

The duality reflected in Law's apparently ready submission to her husband is one found frequently in feminists' firsthand accounts of their lives involving a range of undertakings. Doris Rich, commenting on Matilde Moisant's activities of a decade before, observed: "Like most of them [women of her generation], she maintained a careful balance between a strong belief in her own ability and a public acquiescence to a patriarchal society." These women, like Law, were progressive in their pressing for advances of all sorts, yet they also, in varying degrees, made accommodations to familial and societal expectations. That Law acceded to her husband's wishes does not so much diminish her as an activist as it dramatizes the tensions faced by progressive women with families. In later years reporters occasionally sought her opinion on matters aeronautical; she took pride in her achievements but acknowledged that her days in the public eye were past.<sup>26</sup>

Mississippi-born Katherine Stinson, for her part, came to flying only indirectly. Her primary ambition was to become a pianist and music teacher; as she said later, "It wasn't that I particularly wanted to be an aviator. What I wanted was to be a music teacher! But aviation seemed the only means to that end." The appeal of flying and its financial returns, however, quickly overshadowed the attractions of music and she turned to professional demonstration flying. Her first national attention came in 1912, when she was twenty-one and less than a month after she had received her license. A brief mention in *Aerial Age* magazine, which hailed her as part of "the modern movement of woman to free herself of silly traditions," accentuated her progressivism more than her aeronautical skills.<sup>27</sup>

She entered the exhibition circuit almost immediately, initially flying a secondhand Wright Model B at Cincinnati, Ohio, in late July and Columbus, Indiana, in August. Major acclaim, however, came in July 1915, when she became the first woman to loop the loop. Adolphe Pégoud had managed the allegedly impossible feat in France in September 1913, and Lincoln Beachey repeated it in the United States in November of that year. From 1915 on Stinson made the loop a regular part of her performances, then, in 1916, added an even more daring loop at night. Her only comment on the achievement was, "When I looped-the-loop in Chicago last July . . . it was a bitter pill for the male loopers to swallow." Stinson's accomplishment placed her at the forefront of American fliers, and she was well-started on her professional career.<sup>28</sup>

For four years, from late 1913 until early 1917, Stinson took part in air shows throughout the United States. Her bookings were handled by William H. Pickens, a promoter who also handled Andre Houpert (who had taught Harriet Quimby), a half dozen other male fliers, and, eventually, Katherine's younger sister, Marjorie. He capitalized

shamelessly on Katherine's gender and youth. She was at the time in her mid-twenties, but Pickens, with Katherine's complicity, trimmed years from her age and billed her as "a frail, little school girl." He did, though, make a crucial point to his potential customers, speaking to them as "PROGRESSIVE" men and adding, "THIS IS A WOMAN'S AGE—THE WOMEN ARE VITALLY INTERESTED in the achievements of women." Pickens's success in booking her into fairs, football games, and local festivals throughout the country won her the exposure she needed.<sup>29</sup>

Katherine Stinson took to exhibition flying with enthusiasm, using her appearances to publicize—and finance—the flying school the family had begun in San Antonio, Texas. When her schedule permitted she joined Marjorie in teaching at the school, but she devoted most of her time to the exhibition circuit. In both endeavors, however, she held to her intent to publicize and popularize aviation. Part of her work at the Stinson School of Flying involved giving flying lessons and demonstrations to students in the San Antonio schools; she was, she told a local reporter, "conducting these exhibitions in the interest of aviation . . . on the theory that the more people interested in it, the more progress towards perfection in the science will be accomplished."<sup>30</sup>

Following a five-month tour of China and Japan, where she was the first woman to fly in either country, Stinson returned in May 1917 to the United States and a nation at war. In a public statement she offered her services to the American military. Contending that since "women fliers have demonstrated that we can do as much, and do it as well, as can the male aviators," she told an Ohio reporter that she saw "no reason why we, who are capable of helping the Government in this respect, should not be allowed to perform a task for which we are as well fitted as are the noble women who do nursing and other heroic work at the front for the duties to which they have been assigned."<sup>31</sup> She reconfirmed her views a week later in Indiana, telling a reporter that she wanted to be "sent to France as a member of the aerial army," for she "would be glad to have an opportunity to show what she could do should her services be required by the government."<sup>32</sup> Unlike Law, she made no mention of combat flying. She did, however, insist that women pilots could carry out military duties as well as men, and that they constituted a significant and unutilized resource.

Like Law, Stinson was denied outright military service, but she was booked to make several flights in support of Red Cross and Liberty Loan fundraising drives. That work led her to set two records, one personal, the other national. In June 1917, flying as part of a Red Cross fund drive, she made a two-day cross-country flight from Buffalo, New York, to Washington, D.C. Although broken into segments, it covered a distance of 670 miles and became the longest flight she had so far made. Then, in December 1917, she flew nonstop from San Diego to San Francisco, a seven-hour flight covering a distance of 610 miles that handily broke Ruth Law's record set in 1916. Her only comment on the latter achievement was a tacit twitting of the prevailing masculinity

of the aero world: "I'm happy, and I'll bet Ruth Law is glad a girl and not a man broke her record." Other writers were less restrained. A wire service story circulated nationally quoted her as saying that "I am happy to have accomplished a feat which elevates the world's opinion regarding my sex," and went on to comment that her flight was "today being hailed [*sic*] by American women as breaking down the final barrier against the working-world equality of the sexes."<sup>33</sup> As in her earlier quip about "a girl and not a man," she made clear her sympathy for the suffrage movement.

Difficulties arose in early 1918, when heightened government restrictions on civil aviation put an end to the exhibition circuit and forced the Stinsons to close their school. Looking for other ways to use her expertise, Katherine turned to the mails. After a concerted effort in mid-1918 to join the United States Air Mail Service as a full-fledged mail pilot, she was accepted, but made only four flights. She found the government restrictions placed on her because of her gender to be unduly confining and resigned before year's end.<sup>34</sup> Her airmail aspirations dashed, Stinson sought other forms of national service. Joining the Red Cross, she went to France in the fall of 1918, driving an ambulance in the rear areas of the combat zone. After contracting Spanish influenza and being sent home as an invalid, she developed tuberculosis and permanently retired from flying. She moved to New Mexico in search of improved health, married Miguel A. Otero, a state official, and, in her later days, made a name for herself as an architect in Santa Fe.<sup>35</sup>

Like her sister and Ruth Law before her, Marjorie Stinson turned to the exhibition circuit to exercise her flying skills. She had had occasional flying lessons from Katherine during lulls at the Stinson School but took her formal training at the Wright Flying School in Dayton, Ohio, Orville Wright having overcome his earlier objections to training women pilots. Completing her training in less than six weeks, she received license number 303 in August 1914 at the age of nineteen, supplanting Katherine as the youngest licensed woman pilot in the country. She was the only woman in her class.

Her brief exhibition career began almost immediately; she joined Katherine at an air show in Kansas City, Missouri, then went on to appearances in Texas and the Midwest. Katherine's manager, William Pickens, took over her bookings as well, billing the twenty-one-year-old Marjorie variously as "the kindergarten aviatrix" and the "High School Flier." Despite her unquestioned abilities, she could not escape the shadow of her older sister. Pickens seems to have treated her as a second-rank surrogate for Katherine, remarking in one advertisement, "She flies just as well as most of the male aviators. . . . If you cannot afford Miss Katherine's services let me send you Miss Marjorie."<sup>36</sup> At no point did Marjorie comment openly on the discrepancy between her fees and Katherine's, but she has to have felt the discrimination.

Perhaps in reaction to her subordination to Katherine as an exhibition flier, Marjorie increasingly turned from the popular circuit to teaching in the Stinson School of

Flying. She was from the outset the principal—and at times only—instructor, “teaching big brawny fellows the art of flying and converting them into enthusiastic airmen.” Her expertise quickly caught the attention of Canadian authorities, who were enlisting pilots for the Canadian armed forces. Wanting more flying time than they could gain in Dayton, four Canadian military officers followed her from the Wright School. When word of their enrollment spread, they were joined by others, until Marjorie was teaching classes of ten or more. Her teaching continued from late 1915 until the cessation of all civilian flying in 1918 forced the closing of the school.<sup>37</sup>

The high point of her teaching came in late 1917, when the Stinson School undertook the training of a corps of volunteer civilian pilots. Marjorie had in 1915 joined the United States Aviation Reserve Corps, an organization that, with the endorsement of the Aero Club of America, was meant to “promote American military use and development of the airplane.” She also at times used her exhibition flying to show off the airplane’s “possibilities as a medium for destruction in times of war,” including in her performance demonstrations of aerial bombing.<sup>38</sup> She plainly felt that women fliers could contribute substantially to the national defense, and, when the United States entered World War I in April 1917, took steps to do her part in making that contribution.

What resulted was the Texas Escadrille, a group of twenty-three men to whom Marjorie taught the basics of flying and aerobatics. The undertaking was her creation, intended to supply “men who will be thoroughly trained in the branch of service which the government most needs at this time,” and was distinctive enough that a local feature writer noted that “in suggesting and training the Esquadrilla [*sic*], Miss Stinson is accomplishing something which few women would attempt.” The enterprise continued until the Stinson School was closed in 1918 and constituted her last work as an instructor. Although she effectively stopped flying in 1919, the trade magazine *Southern Aviation* recognized her as late as 1930 as being “among the vanguard” of the “stout-hearted women . . . to whose efforts aeronautics today owes much for its steady and progressive development.”<sup>39</sup>

The war played its part in shaping the Stinsons and their activities. They both felt compelled to establish their public patriotism, volunteering their services to the government as war seemed more likely. In mid-1915 Marjorie proposed going to the Texas-Mexico border and flying scouting missions, “actuated by the news that General [Frederick] Funston had need of an aviator to assist in the border patrol work.” The following year Katherine “offered her services to the Government as an army aviator in keeping with the preparedness program of others of her own sex” in connection with the Villa Punitive Expedition of 1916. This foray, led by Brigadier General John J. Pershing, crossed into Mexico in pursuit of the revolutionary Pancho Villa and was accompanied by eight Curtiss JN-3 airplanes, a large part of the army’s air-ready

equipment. She repeated the offer throughout 1917, saying finally that she “offered her services to the country on condition that she be sent to France as a member of the aerial army Uncle Sam will send to the other side.”<sup>40</sup> She evinced no doubt that she could hold her own among the male fliers.

As the most visible—and, in fact, the only—women professionally at the controls of aircraft between 1913 and 1918, Law and the Stinsons found themselves celebrities of a new and somewhat unusual sort. They rose to prominence at a fortunate time, for they began to fly at a time when publicity was becoming more professionalized. Press agents and publicists were becoming as gifted at *creating* news as they were at *communicating* it. Celebrity, as Andrea M. McDonnell has noted, “is a complicated chimera, a blend of fact and fiction, reality and performance,” and the comment applies handily to the work of Law and the Stinsons. No matter how genuinely accomplished the three were in the realm of flight, they unquestionably benefitted from the associated publicity. Indeed, William H. Pickens, manager for the Stinsons, was by 1917 being hailed as the “de luxe impresario of dare-devils and king of press agents, the land over,” in an article that went on to speak of Katherine, “the greatest of all girl aviators.” Even in a secondhand report, the power of publicity elevated her.<sup>41</sup>

Capitalizing upon that celebrity, all three used their prominence to speak and write thoughtfully and deliberately of the war and America’s place in it; the general status of women, both in aviation and in more general life; and the ongoing development of aircraft and aviation. The extent to which the Stinsons’ offers were sincere and to what extent quixotic is open to debate. Certainly they were skilled enough to fly reconnaissance missions, were the opportunity to arise. They were, however, still practicing exhibition fliers, and the publicity garnered from their offers could only help their bookings. No such ambiguity followed Ruth Law. The most outspoken of the three, she repeatedly called for the greater utilization of women in military flying and expressed more than a little resentment at being denied the opportunity simply because of her gender. A gifted flier she was, but she understood the power of publicity.

Law early on took the position that the military would benefit from women’s skills, telling a reporter in late 1916, “Should this country get into war, you would find a great number of women capable and willing to manipulate battleplanes for Uncle Sam.” America’s impending entrance into the war caused her to intensify her argument; in mid-1917 she asserted, “I am at the service of my country,” and “above all things I’d like to go to the front in France if America sends any soldiers over there. If we have a woman congressman, why can’t we have a woman fighting aviator?” Then, in 1917, came a syndicated article, “Go Get the Kaiser,” published over her name as “The World’s Greatest Aviatrix.” Here she maintained that her ambition was “to fly a battle plane on the Allied western front—a dueling airplane.” (Her “dueling airplane” reference suggests she was in part responding to journalistic glorification of the ace and posing



Ruth Law in her uniform as an army recruiter (1917) and the Curtiss Model D pusher in which she made her publicity flights. COURTESY OF SMITHSONIAN NATIONAL AIR AND SPACE MUSEUM (NASM NAM-A-5532)

her skills as the equal of theirs.) Once commissioned, she continued, she was certain that she “could drive an airplane into battle and perform the destructive work of bombing the Teuton batteries and barracks without any feeling of remorse,” clearly implying that women pilots could overcome their “softer” feelings and fly as effectively as their male counterparts.<sup>42</sup>

Shortly after she published her threats to the Kaiser, Law began her flying for the Liberty Bond campaign and her work to build up army recruitment. Her first engagement took her on a ten-day, 2,500-mile flight throughout the Midwest, where she preached the importance of keeping the United States from “the same horrors that war had brought to all Europe.” She spoke most extensively, though, in support of recruiting, using a series of articles in the aviation press to stress the national need for a strong air force. Her first essay, published in late 1917, stated bluntly that “the war will be decided, and liberty preserved, in the air. Our aircraft must be more numerous

than the flies that hover over the German trenches.” She ended it with a pointed dig at government obstinacy: “Give them a shot for me, boys! I can’t go because I ain’t a man.”<sup>43</sup>

She returned to her theme in early 1918, when *Air Travel* magazine paired her essay “Let Women Fly!” with a companion piece, “Yes—Let Women Fly,” by Representative Murray Hulbert (D-NY). Hulbert, she said, supported her contention, introducing a bill in the House to allow the enlistment of women. The bill failed because of “red tape and precedent—bugbears of ambition,” but Law herself spoke out emphatically: “Why should not women be permitted [*sic*] to fight, if they want to and have had any training or experience that could be utilized in warfare?” The same month she used the well-regarded trade magazine *Flying* to make her case one final time: “Although I have helped many young men to enlist their services for their country, I am unable to enlist myself in the U.S. Flying Corps. They all agree that I can fly, but they can’t understand in Washington why a woman should want to go to France and fight in an aeroplane. They can’t understand that a woman may have the same desire to serve her country as a man and that perhaps flying is the very work that she can do best.”<sup>44</sup>

The Stinsons’ and Law’s desire to volunteer and their support for women in the military ranged from tepid to vehement, but two themes consistently ran throughout their statements. One was the argument that aviation was to play a significant role in the war, and the United States Army would do well to make use of all the resources at its disposal. The other was the contention that women were wholly capable of playing a part in a male-dominated undertaking and very likely would prove to be the equal, if not the superior, of men. They were to speak still more fully on both topics.

The endorsement the three gave to the presence of women in the military only reinforced their more general premise that women as individuals were capable of any deed they might put their minds to—or be permitted to do by a condescending culture. They were in no way militants. They made no mention of Carrie Chapman Catt or Emmeline Pankhurst, of woman’s suffrage parades or demonstrations outside the White House. They did, though, hold definite opinions concerning women’s rights, and these opinions came through clearly in both their press coverage and their individual statements.

The three benefitted from frequent favorable mentions in the press. Marjorie Stinson was recognized in an article in the “About People” department of *Woman’s Home Companion* in 1915, where she was paired with Hélène Dutrieu as foreshadowing a time when the nation would hear “‘Aëroplanes for women’ as often as the famous suffrage slogan.” Following Law’s 1916 flight from Chicago to New York, an editorial in the *Baltimore Sun* (reprinted in the Newark, Ohio, *Daily Advocate*) remarked, “Having beaten man at everything on earth that is worth doing, woman now shows him his inferiority in the sky.”<sup>45</sup>

A demonstration flight by Katherine Stinson in Texas led the *Brownwood Daily Bulletin* to observe that “along with the agitation of equal suffrage rights and other



matters of a similar nature, the women of America are daily demonstrating their skill to cope with men in any kind of endeavor." Her San Diego to San Francisco flight of 1917 prompted a syndicated editorial writer to comment that her "remarkable achievement in the field which has provided man's most serious tests of daring and endurance is today being hailed by American women as breaking down the final barrier against the working-world equality of the sexes."<sup>46</sup>

The three themselves took every opportunity to speak out for women. When Marjorie Stinson reprinted the diary of her experiences at the Wright School in 1914 in the trade journal *Aero Digest*, she said flatly that she wanted "to show some of the other girls how easily one of them can learn the A B C's of flying. Flying, you know, never was intended exclusively for mere man anyway." Katherine used the occasion of her mastering the loop the loop at night to maintain: "Now that I have equaled the greatest efforts of the male flyers I am going to go ahead and evolve a new stunt or two that will put woman ahead of man at the most difficult of all sciences." She tipped her hat to Ruth Law after beating Law's distance record in 1917, then, in a commissioned column for an Indiana newspaper, went on to say: "What I have done other girls can do. They can use an airplane to carry them to their heart's desire, or as a permanent livelihood." She reinforced her comments in an article in *American Magazine* in 1919, stating her conviction that "there is nothing about flying that makes it unsuited to a woman."<sup>47</sup>

Ruth Law was equally outspoken, taking advantage of the publishing opportunities offered her to call repeatedly for a reevaluation of women's status. She wrote that her Chicago to New York flight of 1916 surpassed Victor Carlstrom's record, then added, "I suppose I ought to say that I am in favor of woman suffrage—but what has that got to do with it?" In a later statement on the same accomplishment, she held that "man can do nothing with an aeroplane that women cannot do equally as well. . . . As to woman's part in the future of aviation, they will master the heavier-than-air machine as they have mastered the automobile. . . . Sex will be forgotten, or at least ignored, henceforth when aviation is discussed. . . . *Machinery knows no sex.*"<sup>48</sup>

Law also used the prospect of military service to advance her larger views about women. In her army uniform on her recruiting trips, she had a unique opportunity to speak out for an expanded women's role in the war. "Trained women can serve in an air navy quite as capably as men. . . . Women's work in this war proves there are very few exclusive occupations," she wrote in 1917. Though she conceded in "Go Get the Kaiser" that not all women were suited for combat flying, she held that "where women might fly to advantage would be in supply and messenger work. . . . As the business of flying becomes more and more stabilized . . . I have not the slightest doubt but that it will become first a fad and then a practical thing with women."<sup>49</sup>

More generally, however, she recognized that society rather than biology was at the heart of women's being pushed to the side. In a comment anticipating Amelia Earhart's

views of two decades later, she wrote: "It was a question of training and experience, rather than of sex, and that the world was at its old game of . . . disregarding, passing over and wasting its woman power. There is the world-old controversy that crops up again whenever women attempt to enter a new field: Is woman fitted for this or that work? It would seem that a woman's success in any particular line would prove her fitness for that work, without regard to theories to the contrary."<sup>50</sup>

Law, like the Stinson sisters, believed in women's ability to deal with the world as it was, and she did not hesitate to speak her mind in challenging traditional ways of treating women.

Katherine Stinson handily encapsulated the views of all three on women in a short column of 1918, ruminating thoughtfully upon women and American aviation. She noted that she, Marjorie, and Law were the only women flying professionally in the United States. And this, she said, needed correction. "Instead of three I should like to see hundreds of girls skimming the clouds. We're awfully lonely up here and not at all jealous of our distinction. Come on up, girls—the air is fine!"<sup>51</sup> American women would not get the vote for another two years, but, to Stinson (and, by extension, to Law and Marjorie Stinson), there was nothing to keep them from the air but their own reluctance to act.

For all the authoritativeness the three gained in their roles as women pilots, they faced overt condescension as they made their way. Publicity announcements routinely billed the two Stinsons as "schoolgirl" and "kindergarten" pilots, although both were in their twenties, just as the thirty-year-old Law was regularly called a "girl." Accounts of their activities repeatedly described the three as "girls," using the term even in newspaper headlines. Yet, condescension and tacit masculine resistance notwithstanding, they made a place for themselves in aviation, through aviation. In many respects they anticipate Susan Ware's conclusions concerning the more widely known women pilots of the 1930s. These women, Ware observes, "dealt with the ongoing discrimination and double standard by a combination of two tactics: ignoring it and just going about their business, or trying to use their own examples of individual success as a way of breaking down prejudices and stereotypes."<sup>52</sup> Law and the Stinsons were, after all, essentially contemporaries of Harriet Quimby, yet they had to deal with a shifting, advancing milieu of technology and social attitudes that Quimby never had to face. They confronted their world directly.

Behind the support of women's concerns in military and in civil life that the Stinsons and Law offered was a still more compelling matter: their sense of the larger role and place of aviation in American life. They accepted the airplane's military significance yet openly believed aviation was to have as powerful a role in the peaceful advancement of national progress as it did in furthering military might. Flight was an enterprise that would in time blend seamlessly with American society and bring about a new way of

life. Early on Katherine Stinson made the point, telling a reporter that although she was indeed making her living through exhibition flying, what she truly wanted was for “aviation to become commonplace, an everyday affair.”<sup>53</sup> The novelty of flight was a transient quality, she believed, and she was striving to encourage in the public a general embracing of flight and an understanding of its potential.

All three, in addition, publicized the evolving technology of flight—a process accelerated by the rapid development of aircraft during the war. They made the move from clumsy pusher aircraft, with the engine and propeller behind the pilot and the pilot seated in the open, to the more maneuverable tractor ships, with engine and propeller in front and the pilot sitting in a cockpit. They accepted the transition from wing-warping for turning, as used by the Wrights, to the independent ailerons promoted by Glenn Curtiss. And they adjusted to the shift from the clumsy two-stick control system of the Wrights to the single-wheel system developed by Curtiss—turn the wheel for yaw and roll, push the stick to control elevator and pitch.<sup>54</sup>

Ruth Law, the oldest and most experienced of the three, looked ahead to the time when aircraft would reach new levels of reliability and accessibility. Flying, she wrote, is “in the same stage as motoring was ten years ago.” For it to grow, airfields, maintenance facilities, and guide mechanisms will have to be put into place. But, she continues, “All this will come, and come soon,” just as improved service facilities and better roads followed the automobile. Aviation will become a central component of “commercial transportation, both for passengers and for merchandise,” and airplanes will become a wholly integrated part of commercial and individual life.<sup>55</sup> Katherine Stinson, for her part, spoke readily of technical matters in a testimonial for the oil she used in her San Diego to San Francisco flight; it permitted, she said, “one of the severest tests an airplane engine has ever been put to in this country.” She had, the article took care to point out, used products she had to pay for, rather than adopting some other brands that the manufacturers would have supplied free “for the sake of the advertising her trip would have given them.”<sup>56</sup>

The receptivity of the three to the changes taking place in aviation confirms their belief in the steady (and healthy) progress of aviation. Behind their receptivity, however, was a still greater conviction: the belief that, as aviation and the airplane developed, so, too, would society. As they shifted their vision from the benefits the individual might garner from aviation to those that would accrue to the larger society, they did their part in communicating flight’s emotional appeals. In their accomplishments and in their prominence, they gave the American public still another glimpse of all that flight might offer.

Air-minded thinkers in the post-World War I era held that the integrated life that Law anticipated would in time evolve into a wholly new “winged age,” and women fliers like Law and the Stinsons would contribute to its creation. As Joseph Corn contends

in *The Winged Gospel* (1983), women fliers of the later 1920s and the decade of the 1930s widely considered themselves “evangelists of aviation,” preaching the enterprise’s virtues to all who would listen. Earlier fliers, however, like Law and the Stinsons, also saw aviation as symbolizing “the freedom and power which was lacking in their daily lives” in the years prior to the Nineteenth Amendment. Indeed, it was the “giddy sense of liberation they found in the sky which prompted so many women to predict that the new field of aviation promised great opportunities to their sex in the future.”<sup>57</sup>

The expectations of a heightened future that Corn attributes to these early fliers resonate throughout the statements of Law and the Stinson sisters. They were practical fliers well-versed in the military and commercial applications of the airplane, yet behind this commonsense awareness lay the dream of an aeronautically shaped future. Thus, when Katherine Stinson proclaims that “women should and will have a big, responsible part in the winged age,” she is looking toward an assimilation of aviation into American culture that will uniquely benefit the nation’s commerce, technology, and, more than anything else, individual citizens. She envisions a future imbued with aviation and rich in opportunities for women, but one that benefits the society as a whole.<sup>58</sup>

A second element unifies the responses of all three to flight. Each speaks in an intensely personal voice, relating the sensations and emotions that are happening *to her*. Thus, their first responses are of their individual, personal impressions of the world and their effects upon them. Only later in a flight—and often only after having returned to earth—do they begin to extend these impressions and effects to the larger scene. It is here that they resume their roles as members of the prevalent culture and begin to reflect upon the consequences of that culture’s wholehearted embrace of flight.

Aviation’s benefits, therefore, come in great part from what Katherine Stinson, in a 1915 interview, described as a “sense of being apart from the world; the further up you go, the greater the pleasure.” Ruth Law concurs, remarking that thanks to aviation, she, “a woman . . . , had looked at [the nation] from the same point of view as an eagle, and had admired it, understood it, and gloried in it!” And that glorification is only enhanced by the freedom bestowed by flight for, she says, “it is a wonderful sensation, flying before a strong wind, slipping past one town after another at such a tremendous speed. . . . One can almost fancy himself a leaf sailing away before an autumn gale.”<sup>59</sup> Distinctiveness, empowerment, and freedom are inseparably associated with flying.

Reminiscing somewhat later in “Why I Am Not Afraid to Fly,” Katherine Stinson noted that “flying is not like anything else in the world. The problems are different, and so are the sensations.” And from those new sensations comes a wholly new vision of society and the world. “When you leave the ground,” she muses, “it does not seem as if *you* are going up, but as if the earth were sinking away from you. . . . When you fly upside down you don’t feel as if *you* had turned over. . . . The earth goes around *you*.” Like Ruth Law before her, she changes her perspective, giving the airborne human

centrality and presenting nature and society alike as subordinate to the flier. "As you go higher," moreover, "everything on the ground flattens out. The hills sink until they look like little mounds. A big building dwindles until it is like a spool of thread standing on a table." Even the populace shrinks to nothing: "At a thousand feet, boys and men look alike. At two thousand feet, you can't tell any of these apart. Finally they become mere moving specks."<sup>60</sup> Yet, while the hills sink to flatness and mankind shrinks to a mass of faceless specks, the woman pilot's vision remains. She and she alone is the mistress of existence, and she and she alone stands, exalted, glorified, above all that is beneath her.

The careers of Ruth Law and the Stinsons provide a new perspective on the parallels between the quest for women's rights and the early days of aviation. The three were conscious that they were distinctive examples of the independent woman who happily chanced to be in the public eye. From the outset of their careers they took pride in meeting or surpassing male achievements in flight. Their pride did not go unrecognized. Rixola Greeley-Smith, a nationally known celebrity journalist and the principal woman reporter for the *New York World*, quoted playwright Eleanor Gates (one of the two women sharing the head table with Law at the Aero Club gala) as dubbing Law a "superwoman" whose accomplishment would stimulate more women "to feel that being a woman is not a handicap; that, after all, a woman can do anything." The story relating Marjorie Stinson's work with the Texas Escadrille spoke of the male student pilots' ambition to "be rising above the clouds like the daring young woman who was piloting the machine in the air," omitting any mention of a stigma that might be attached to a woman pilot or instructor. J. P. M'Evoy noted in *American Magazine* that Katherine Stinson, who had "duplicated every stunt in the air that a man has ever done," was "one of the most remarkable aviators in the world!"<sup>61</sup>

Each of these commentators, in his or her way, spoke almost exclusively of the deeds of the three as women pilots. Their emphasis was on the capability of the individuals and the ease with which they matched—or even surpassed—men's achievements in the field. But they were outsiders, lacking the firsthand exhilaration that Law and the Stinsons found in flight. Thus, they looked only at the individual person; it remained for the women actively engaged in flying to express the larger, more far-reaching social and spiritual benefits to come from flight. If the members of this group did not extensively articulate a coherent vision of the future, they nonetheless laid the foundations for such a vision. They (and their less publicized contemporaries) were the apostles of flight.

Perhaps the most notable recognition of their part in advancing the cause of aviation came in 1918, as polar explorer Rear Admiral Robert E. Peary mused on "The Future of the Airplane" for readers of *National Geographic* magazine. He noted that "utilization of the atmosphere for commerce and transportation presents possibilities far beyond anything that we can now imagine," and called upon the United States to

become “the *first air power in the world*” in the “stupendous era” of aviation that was dawning. Not surprisingly, he remarked that “the young men who are training for fliers in war service will have an important and useful role to play in the commercial, industrial, and scientific growth of aviation.” But then he went even farther in his predictions, echoing his praise of Law in 1916 but widening the scope of his views: “In considering the air personnel resources of America, the patriotism, intrepidity of spirit, and energy of the young women who are anxious to fly must not be overlooked. That women can become skilful aviatrices has been splendidly demonstrated by the brilliant achievements of Miss Ruth Law and Miss Katherine Stinson.”<sup>62</sup> Accompanying the article was a full-page picture of Law chatting with Major General Leonard Wood in Chicago following her record-setting flight.

In their projection of an aeronautically shaped future, fueled by technological advance, national pride, and the growing presence of the airplane, Peary’s remarks make an appropriate conclusion to the early days of flight. In his view, as in those of numerous other enthusiasts, aviation was going to be a vehicle for American ascendancy in the world, whether the world of social culture, the world of politics, the world of commerce, or the world of science and technology. Women were going to assist in that ascendancy. The careers of Ruth Law and the Stinson sisters confirmed his beliefs, but they go on to establish a still larger point—that aviation progress was to be accompanied by women’s progress. The decades of the 1920s and after would add still greater substance to their implications.

### III

## The Earhart Phenomenon and “The Accident of Sex”

TWO YEARS BEFORE Ruth Law retired from the air show circuit, the person who was to become the most memorable face of American women's aviation was herself watching aerobatics. Amelia Earhart (1897–1937), having dropped out of premedical studies at Columbia University, was visiting her family in Los Angeles. She had visited military airfields during a stint of volunteer work in Canada in 1918, and on Christmas Day 1920 she persuaded her father to take her to an amateur air show at the opening of a local airport. Watching the various aerial feats, she reflected that at some point she might like to fly. Three days later she took her first airplane ride, after which she stated, “As soon as we left the ground, I knew I myself had to fly.” Shortly after the first of the New Year, she signed up for flying lessons. Her instructor was Neta Snook, field manager at Kinner Field.<sup>1</sup>

Born in Atchison, Kansas, Earhart had passed through various public schools and the private Ogontz School in Pennsylvania. She served with the Canadian Red Cross in 1918 as a V.A.D. (Volunteer Aid Detachment) nurse's aide, then briefly attended Columbia University before returning to California. Under Snook's instruction she received her National Aeronautic Association flying license in 1921. License in hand, she bought her own sport airplane and flew when she had money for fuel, with nothing in the next several years suggesting that she was headed toward a life in aviation; in fact, she considered herself only a recreational flier, and her energies went more toward finding a permanent job than toward expanding her flying skills. She gravitated to Boston, where, in the autumn of 1925, she enlisted as a social worker at Denison House, a well-established settlement house in an immigrant section of the city. The work there captured her interest, and the salary allowed her to pursue her “two greatest

interests, aviation and social work.<sup>2</sup> All this changed, however, in April 1928, when a telephone call radically altered her world.

The call, from Captain Hilton H. Railey, invited her to join the crew of a transatlantic flight; though she would be only a passenger, she would still become the first woman to cross the Atlantic by air. The outburst of national enthusiasm surrounding Lindbergh's flight in May 1927 had prompted Amy Phipps Guest, a wealthy matron, to decide that if a man such as Lindbergh could make the flight, a woman should be able to do equally as well. Guest could not make the trip; however, determined to sponsor the first transatlantic flight by a woman, she commissioned publisher George Palmer Putnam to locate "an American girl who would measure up to adequate standards of American womanhood."<sup>3</sup> Earhart was known in Boston aviation circles and seemed a credible candidate.

To support the flight, Guest bought a three-engined Fokker F-VIIB-3m aircraft from Commander Richard E. Byrd, who had planned to use the craft as part of an Antarctic expedition.<sup>4</sup> Earhart's flying license and her clean-cut looks confirmed her suitability as an emblem of American femininity, and she was selected for the flight. To her dismay, she was not allowed to share piloting duties; those would be carried out by two well-seasoned fliers, Wilmer ("Bill") Stultz and navigator Louis ("Slim") Gordon. Although nominally the flight commander, Earhart had no specified assignment, telling a friend upon her return, "All I did was lie on my tummy and take pictures of the clouds. . . . I was just baggage, like a sack of potatoes."<sup>5</sup> Her pique notwithstanding, she readily gave full credit for piloting the flight to her companions, repeatedly emphasizing that she had not been an active participant. Nonetheless, when she stepped from the airplane in Burry Port, South Wales, she was a celebrity. Column after column of praise followed her activities and she quickly became the aviation heroine of the hour.

Earhart's skyrocketing to fame was aided by several changes in American culture. First of all, means of popular communication were changing. Magazines, in particular, were taking on a new role, expanding their audience and their topics. These magazines, "among them *McClure's*, *Munsey's*, and *Cosmopolitan*, . . . had become the first truly national medium, outdistancing city newspapers and reaching from coast to coast . . . , offering stories of national interest and import while showcasing ample advertisements that stimulated demand for national brands of soaps and soups." The periodicals attracted readers nationwide, and at times "exercised an influence in politics and society that often exceeded the impact of newspapers." They were to provide Earhart access and exposure to a far wider audience than that enjoyed by her predecessors.<sup>6</sup>

Complementing the diverse new print sources was the burgeoning motion picture industry. Films had begun to explore their narrative possibilities as early as 1903, starting with *The Great Train Robbery* and reaching a first peak with D. W. Griffith's *Birth of a Nation* (1915). Subsequent advances in film technology, the growth of narrative



film, and the coming of the sound picture in 1926 enhanced the medium and its possibilities, until “the years from 1915 to 1930 saw that new and immensely popular art form—the motion picture—come to first maturity.” Newsreels also became an increasingly common part of the journalistic scene. They figured in the presidential election of 1912 and by the 1920s were a popular means of spreading images of current events. Earhart’s flight was ready-made for film, as George Palmer Putnam quickly realized. Already active in film development (he had “helped produce” the 1927 flying epic, *Wings*), Putnam would in 1932 become head of the editorial board of Paramount Studios, a position he held until 1935.<sup>7</sup> He was no stranger to the realm of film and its possibilities for publicity.

The worlds of print and film were linked by the coming of the professional press agent, or publicist. Harriet Quimby, Ruth Law, and the Stinsons, to be sure, had had managers (all male) to help them. Quimby enlisted the services of A. Leo Stevens, a balloonist and holder of the National Aero Club’s ballooning license number 2. Law depended upon her husband, Charles Oliver, who took over the managing and publicizing of her career. Only the Stinsons, who were among William Pickens’s stable of aeronautical notables, benefitted from the work of a professional publicist, and even Pickens’s activities were largely limited to print advertising and event scheduling. After World War I, however, individuals “who had trained in the Wilson administration’s war propaganda operations became articulate leaders advocating psychological and other scientific techniques for manipulating public opinion.” The result was “the growing business that in the 1920s became known as public relations,” and Earhart, thanks to her association with—and later marriage to—George Putnam, had access to an energetic, sophisticated, and well-connected publicist. Putnam, who had published Lindbergh’s best-selling memoir, *We*, in 1927, was a person “who knew how to provide heroes to a hero-worshipping public” and was to contribute substantially to Earhart’s visibility in the media.<sup>8</sup>

Other societal changes worked in Earhart’s favor as well. Whereas the New Woman of the turn-of-the-century period had been a person principally involved with sociopolitical issues, women of diverse minds and interests populated the 1920s. Energized by the newly ratified Nineteenth Amendment, some women sought greater roles in the professional and political worlds, some continued the feminists’ push for full economic independence and legal equality, while others looked upon marriage with liberated ideas about the relationship between men and women. The majority of these activists were young and single, characterized by “energy, spunk, and sportive esprit” and a desire to question conventional rules and practices.<sup>9</sup> Their efforts helped to change the face of the surrounding culture.

Evidence of women’s new independence was apparent in the growing visibility of women in the workplace and mass media. They were prominent protagonists in the

motion pictures of the time, dramatic and comic cinema as well as the newsreels, and they were increasingly visible in aviation.<sup>10</sup> As more and more American women began to engage in aviation, their numbers caught the attention of the popular press as well as the technical press. Howard Mingos, offering “The Ladies Take the Air” in the *Ladies’ Home Journal* for May 1928, reviewed the careers of more than a dozen women pilots. He cited such pioneers as Harriet Quimby, Hélène Dutrieu, and Matilde Moisant, then went on to point out the more recent achievements of Thea Rasche in Germany, Hilda Hewlett in England, and, among others, Katherine Stinson, Ruth Law, Ruth Nichols, and Phoebe Omlie of the United States, women noteworthy in aviation even before Earhart entered the limelight.<sup>11</sup>

Some months later, Alicia Patterson announced, “I Want to Be a Transport Pilot,” in *Liberty Magazine* (a widely circulated, general interest publication dating from 1924), identifying Ruth Nichols, Louise Thaden, Amelia Earhart, Phoebe Omlie, and Evelyn (“Bobbi”) Trout as among those holding a transport license, “the highest recognition the Department of Commerce can give to an aviator.” Ruth Nichols spoke out about “Aviation for You and for Me” in *Ladies’ Home Journal*, supporting her campaign for a national network of aviation country clubs, and G. K. Spencer, writing in 1930 in *Sportsman Pilot*, a publication intended for the well-off amateur flier, linked women’s flying to the earlier New Woman: “There has not been a single step in aviation’s development in which the student woman, the woman of action or the woman of derring-do has not played an important role. . . . The subtle influence of fashion and the electric tension of our post-war world seem perpetually to invite achievement by women, [and] since the war . . . there are none but ‘new women.’”<sup>12</sup> All of these articles spoke explicitly and emphatically of the influential role that women had played, were playing, and could yet play in aviation.

Spencer’s comments in particular are significant. Although by 1930 women had had the vote for a decade, he retains the label “New Woman,” drawing upon its overtones of the forward-looking female activists of years past. Next, he equates the New Woman with women of “action” or “derring-do”—qualities not traditionally associated with the gender, yet qualities behind many noteworthy achievements. Finally, he uses the label in a positive sense. He is not twitting women for their aeronautical aspirations. Writing in a magazine intended for upper-class aviation enthusiasts of both genders, he acknowledges and applauds the solid contributions that women had thus far made to the realm of flight. Already a “presence” in earthbound society, the New American Woman of the twenties and thirties was finding her way into the air.

The media response to Earhart’s 1928 flight made her a public figure, despite her intention to return to her work at Denison House. She repeatedly made clear her own amateur status and her minimal participation in the flight, writing in *20 Hrs. 40 Min.* (1928): “I tried to make them realize that all the credit belonged to the boys, who

did the work. But from the beginning it was evident *the accident of sex—the fact that I happened to be the first woman to have made the Atlantic flight—made me the chief performer in our particular sideshow.*” She called herself an enthusiastic amateur who had gone on the flight as a lark, “a social worker, for whom, generally speaking, aviation has been a luring avocation. . . . I was just a social worker on a bat.” Circumstances, however, worked against her as Putnam’s publicity efforts kept her in the public eye. A photograph spread accompanying her first article in *Cosmopolitan* stressed her “all-American” looks, presenting her in tennis and equestrian garb, flying togs, an informal but modish dress, and slacks, a tailored white shirt, and a masculine necktie. Photographs of her in flying gear emphasized her singular resemblance to Lindbergh and she became popularly known as “Lady Lindy,” at last conceding that “the Friendship flight unexpectedly uprooted me from social work and forced aviation more prominently into my life.”<sup>13</sup>

Like Lindbergh she wrote about her achievements. She produced a four-part account of the flight for the *New York Times* and placed an article, “Dropping In on England,” in *McCall’s Magazine*. Her book *20 Hrs. 40 Min.* was published by the Putnam firm in September 1928, and, when *Cosmopolitan* magazine offered her appointment as aviation editor, she accepted. She considered the magazine, she wrote, “progressively air-minded,” and stated openly that she “was casting [her] lot permanently with aviation.” Her first article, “Try Flying Yourself,” appeared in November 1928, and with that essay Earhart began a ten-year career of writing about flight and women’s concerns. If her writings played a practical role in helping her find funds for her record-setting flights, they nonetheless enhanced her visionary role as well. As early as 1927 she had appeared in print as an advocate for women and aviation, telling the *Boston Daily Globe* that flying was an appropriate recreation for women. A year later, “full of missionary zeal for the cause of aviation,” she willy-nilly found herself the worldwide personification of women in American aviation.<sup>14</sup>

From 1929 until 1935, Earhart made all but one of her record flights in a single aircraft type—the Lockheed Vega. The Vega was the first significant product of the Lockheed Aircraft Company and represented a dramatic step forward in aeronautical design. It was a single-engined, high-winged monoplane of all-wood construction, distinguished by a sleek, molded-wood fuselage and an internally supported, cantilevered wing lacking external struts or wires. It was a large craft for its time, almost twenty-eight feet long with a wingspan of forty-one feet, and cruised comfortably at 165 mph.<sup>15</sup> In August 1929, flying a Vega, Earhart took part in the first National Women’s Air Derby (the “Powder Puff Derby”), competing against nineteen other women fliers. Fourteen of the twenty entrants completed the nine-day race and Earhart placed third, behind Louise Thaden and Gladys O’Donnell.<sup>16</sup>

She married George Palmer Putnam in 1931, keeping her own name for her writings and activities, although newspapers frequently spoke of her as “Mrs. Putnam.”



Amelia Earhart stands by as a crew refuels her Lockheed Vega (circa 1933). COURTESY OF SMITHSONIAN NATIONAL AIR AND SPACE MUSEUM (NASM 75-5728)

Now Putnam's principal client, she became the first woman to solo in an autogiro (an ungainly precursor of the helicopter, characterized by stub wings, a forward-mounted engine and propeller, and a large, unpowered overhead rotor). She made her initial flight in the craft in April 1931 and two days later set an altitude record for the design. This flight gave her the stuff of two articles, one in the *New York Times* and the other in *Cosmopolitan*. In May 1932, on the fifth anniversary of Lindbergh's flight, flying a Vega she made a nonstop solo flight across the Atlantic, the first woman and second person to do so. She followed the flight with a second book, *The Fun of It* (1932). For the flight she received the National Geographic Society's Special Gold Medal and reported her activities for *National Geographic* magazine. Her prominence increased still further when it became known that she was a personal friend of President and Mrs. Franklin D. Roosevelt, was a welcome visitor at the White House, and once had taken First Lady Eleanor Roosevelt for a spontaneous late-night flight.<sup>17</sup>

Despite a growing public tendency to label record-setting flights “stunts” as commercial aviation became more commonplace, Earhart continued to seek new undertakings.<sup>18</sup> She set a woman’s record for nonstop transcontinental flight in August 1932. In January 1935 she made a nonstop solo flight from Hawaii to California, the first woman to fly the route and the first person to fly it alone. She followed this exploit in May with a nonstop solo flight from Mexico City to Newark, New Jersey. She also began an association with Purdue University, serving as a part-time advisor and counselor to the institution’s women students. Over the next two years she lived in one of the women’s dormitories during her intermittent stays at the school, stressing to the students “her belief that women should have and really did have choices about what they could do with their lives.” She found the work a welcome change and hinted that she might return to it after giving up flying.<sup>19</sup>

In 1936 she changed aircraft, replacing her familiar Vega with a Lockheed 10-E Electra owned by Purdue University. A low-winged, all-metal, twin-engined monoplane, the Electra was thirty-eight feet long, had a wingspan of fifty-five feet, and cruised at 190 mph.<sup>20</sup> To polish her skills with the new craft, Earhart entered the 1936 Bendix race, a cross-country flight against time from Los Angeles to New York, flying with Helen Richey as copilot. She placed fifth, while Louise Thaden and Blanche Noyes, in a Beechcraft C-17 Staggerwing (a speedy single-engined craft as advanced as the Electra), placed first. In 1937 she announced what was to be her final public flight, a west-to-east, around-the-world flight at the Equator. Her first attempt failed on takeoff from Hawaii when the Electra’s landing gear collapsed; the cause of the accident remains unclear, but Earhart’s relative unfamiliarity with the airplane may have contributed.<sup>21</sup> She returned to the mainland, planning a second attempt, this time east-to-west, for later in the year. This flight began with her takeoff from Miami, Florida, on 1 June 1937 and ended with her disappearance somewhere over the Pacific in early July.

Although Putnam’s publicity schemes at times strained credulity, Earhart legitimately earned her reputation as a preeminent woman pilot of the decade. The mystery of her disappearance only intensified her prominence, and she quickly attained mythic status, a condition that continues into the twenty-first century. The most substantial part of her legacy, however, resides in the interviews, books, and articles she left behind. Taking advantage of the opportunities available through her position with *Cosmopolitan* and the readiness of other media outlets to publish her ideas, she produced a body of writing that established her as an articulate spokesperson for aviation and an ardent—if understated—advocate of a progressive role for women. She believed strongly in both endeavors and did not hesitate to speak out repeatedly in their support.

Earhart’s first book, *20 Hrs. 40 Min.* (1928), was little more than an expansion of her logbook of the initial transatlantic flight, a hurried production dashed off at George Putnam’s insistence to capitalize on the excitement following the event. Her second,

*The Fun of It* (1932), was more personal and more considered. In it she ruminated on her life, her work in aviation generally, and the varied contributions, past and present, made by women in the field. She paid homage to Harriet Quimby, Ruth Law, and the Stinson sisters, as well as praising her contemporaries Elinor Smith, Ruth Nichols, and Louise Thaden. Her final book revealed its source in its title—*Last Flight* (1937). Assembled by Putnam from dispatches Earhart sent from stops along the equatorial flight route, it was, like the first work, a volume intended to seize a potentially profitable moment; nonetheless, even if freely edited by Putnam, it constitutes her final commentary on matters feminine and aeronautical.

All three books received friendly—if unspectacular—reviews. The *New York Times* review of the first was little more than a lengthy summary, noting that Earhart seemed quite different “from the popular conception of ‘Lady Lindy,’ as she was nicknamed, to her dismay.” Reviews of the second, coming after her solo transatlantic flight, were more substantial. The *New York Times* review called attention to the emphasis Earhart gave to American women fliers and went on to observe that, “thus assembled, they make, in numbers and in the capability and importance of their work, an impressive group.” The final book the *Times* dubbed “the most interesting flying book yet written by a woman” and spoke approvingly of her commitment to advancing the cause of women. The book presented, the review noted, “at times a defensive creed that women must do the things they want to do, that it is not unfeminine to prefer getting greasy around an airplane engine . . . to working in a kitchen or designing hats.”<sup>22</sup> Earhart’s speaking for women resonated even after her disappearance.

A somewhat more measured review appeared in the *Chicago Tribune*, published five months after Earhart’s disappearance. Putting the book alongside works by Gertrude Stein and Vita Sackville-West, Fanny Butcher, the newspaper’s longtime literary editor, took the opportunity to comment on “three unique women.” Earhart’s work, she wrote, was “one of the most inspiring books of the year,” for Earhart was “a woman pioneer in a field which seemed destined to be preempted by men.” She concluded that *Last Flight* was ideally shaped to establish “to women that flying was possible for them.”<sup>23</sup> Overall, the reviews show an evolution in their treatment of women, moving from comments on Earhart’s appearance and personality to considerations of her stance on women’s issues.

Periodical articles perhaps best reveal Earhart’s authentic voice and the several audiences she strove to address. From the very outset, with her “Dropping In on England” in the October 1928 issue of *McCall’s* (a women’s magazine dating from 1873), she sought out women readers. She followed this piece with articles in *House and Garden* and *Home Magazine*, while one of her last pieces, an article reprinted from a newspaper essay, appeared in the nationally syndicated Sunday newspaper supplement *This Week* in 1937. Far more of her works, however, were directed to a general, educated

audience: representative writings are her articles in *Cosmopolitan*, two essays for *National Geographic* magazine, a 1930 review of aviation books for young people in *Saturday Review of Literature*, and a quiet reminiscence of flier Wiley Post for *Forum and Century* in 1935. Perhaps the most contemplative of the lot is her “Flying the Atlantic,” published in *American Magazine*, a progressive publication founded by muckraking journalists Ray Stannard Baker, Lincoln Steffens, and Ida Tarbell. Its subtitle goes on to say that flying the Atlantic “and selling sausages have a lot of things in common,” and the article becomes an extended plea for spontaneity and individualism in everyday life.<sup>24</sup>

For all her interest in a general audience, Earhart did not neglect aviation professionals. She published numerous articles in aviation’s trade and recreational magazines. In 1930 she wrote of her work with the Ludington Line, a shuttle service in the Northeast, for *National Aeronautic Magazine* and about “Women’s Influence on Air Travel Luxury” for *Aeronautic Review*. For recreational fliers she contributed three essays to *Sportsman Pilot*. A 1929 piece called for more technical details and more realism in aircraft advertising directed toward civil aviation (“Poet’s Corner”), while two in 1930 addressed aspects of women’s role in aviation. In 1934 she contributed to *Airwoman*, the official magazine of the Ninety-Nines, a professional association for women in aviation that she had helped found. When one factors in the extensive quotations from her in interviews published in the press, the popular magazines, and the trade publications, it is clear that Earhart spoke to a widespread audience.

*Cosmopolitan* was an apposite vehicle for Earhart’s ideas. Established in 1886 as a general interest family magazine, it quickly expanded into a journal publishing some of the most prominent authors of its times, including feminist pioneer Elizabeth Cady Stanton. It early on evinced an interest in “aerial navigation,” publishing writings by Samuel P. Langley and Hiram Stevens Maxim. Sold to William Randolph Hearst in 1905, it was, by the late 1920s, known as “a magazine for forward-thinking ‘modern’ young women . . . , reflecting the fashionable currents of the day. . . . Flying was arguably ‘the’ hot media topic.”<sup>25</sup> That it sought Earhart for its stable of contributors was not surprising.

An editorial statement introducing Earhart’s first column confirmed this assessment. “You who read *Cosmopolitan* are alertly interested in today and tomorrow,” editor Ray Long wrote. “If you were old-fashioned you wouldn’t like this magazine, so Miss Earhart shares my belief that you will be more receptive to what she has to say than any other group of readers in the world.” Understated though its progressivism might be, the journal was forward-looking in its policies, implicitly endorsing the view of aviation and life that Earhart had to offer. Her essays were guaranteed appreciative readers.<sup>26</sup>

The sixteen articles that Earhart produced for the magazine between November 1928 and September 1932 lay out the principal themes of her larger message. The first

defining theme, whether in *Cosmopolitan* or elsewhere, is that aviation will offer “a definite business career, and a diversified one,” for those men *and* women looking to the future. There is a place for it in the mercantile world, and as it develops it will become a successful commercial enterprise generally accepted by the public and the marketplace. Pilots, of course, will lead the way, but, she contends, the burgeoning of aviation will create technical and managerial jobs as well—all of them well-suited to women. Her first *Cosmopolitan* article, “Try Flying Yourself,” pointed out that increased public awareness of aviation will “establish flying as a business more firmly.” A later piece, “Is It Safe For You to Fly?,” conceded that because “the whole industry is so new it has more difficulties proportionately than any other.” However, she continued, “one can reasonably feel that soon air travel, from the standpoint of reliability and safety, will rank with those older forms of transportation to which we are accustomed.” Finally, she observed that “in modern transportation, aviation is the growing younger giant,” and “rapidly the winged giant is striding forward.”<sup>27</sup>

Many of those forward strides appeared in the growing infrastructure of commercial aviation. Nine thousand miles of navigational beacons, initially constructed to aid airmail pilots, she said, now permit “the most extensive night-flying service in the world.” The major cities of the nation were developing well-equipped, up-to-date passenger terminals, and “three transcontinental trunks [were] building a sturdy backbone to aerial service in this country.” One of these, Transcontinental Air Transport (TAT), of which Earhart was a nominal vice president, offered a package journey using Ford 5-AT Tri-Motors that would carry passengers from coast to coast in forty-eight hours. Passengers would travel by air in the daytime and by rail at night, substantially reducing the time needed for a trip made wholly by rail and becoming a persuasive advertisement for commercial flight. Nor should safety be an issue, despite the relative newness of commercial air service. Air travel in 1929 was “not more hazardous . . . than [was] automobiling,” and, with improved equipment and more readily available landing fields, commercial flying “from the standpoint of reliability and safety, will rank with those older forms of transportation to which we are accustomed.”<sup>28</sup>

A second theme is her contention that aviation naturally and steadily enhanced the national belief in progress, thereby contributing to greater national and international unity. She embraced the promise offered by an aviation-based future, and, in her own way, captured the ebullient American spirit of the between-the-wars years. Like Lindbergh (and like Law and the Stinsons before her), she placed great emphasis on the benefits that might come from flight, a faith in the progress that would occur in realms social and national as well as technological.<sup>29</sup>

Her earliest words confirmed her beliefs. Her initial contribution to *Cosmopolitan* told readers that she was drawn to the magazine because its editor, “wisely looking to tomorrow, realized what a great part aviation will play for men and women in many



phases of American life." Subsequent contributions only expanded this view. The year 1929, she wrote, "is ushering in the Flying Generation."<sup>30</sup> Life in the age of aviation will be dramatically different. As flying becomes more familiar and aircraft more accessible, Earhart predicted, "the family car of today will be the family plane of tomorrow." And this, in turn, will change the nature of the workplace, for it will make possible "a vast commuting system . . . which will permit city workers to live a hundred or two hundred miles from the office and yet be no farther away in time than at present." Commercial air travel, already transcontinental, will become international, allowing "excursions . . . to the poles at an average cost of a thousand dollars a person," and in time there would be no financial or technological hindrance to air travel of any sort.<sup>31</sup>

Even individual recreation will be shaped by aviation. Her treatment of the autogiro in *Cosmopolitan* emphasized its purported ease of use, implying it could become almost as manageable as the automobile. An earlier column in the *New York Times* had called the machine "a friendly aircraft" but was initially cautious. Her *Cosmopolitan* account, however, praised the autogiro's promise. She invoked the mystique of the age of aviation as she predicted that future houses "will have wind cones flying from their roofs to guide guests to the front-lawn landing field," while newly developed machines such as the autogiro will usher in personal aircraft and "a new era in aviation," permitting "back yards (generous ones) and ample roofs . . . to be used as landing fields."<sup>32</sup> Aircraft will lead the way into the future, and the United States will follow.

Like Charles Lindbergh before her, she offered a view of aviation as a culturally unifying element. "Isolation breeds distrust and differences of outlook," she wrote. "Anything which tends to annihilate distance destroys isolation, and brings the world and its peoples closer together. I think aviation has a chance to increase intimacy, understanding, and far-flung friendships thus."<sup>33</sup> Aviation may not, in and of itself, bring about social change, but its attributes encourage and shape that change, and Earhart contended that all mankind would respond to the opportunities offered by flight. Like the emerging winged gospel surrounding her, she anticipated aviation's making the world a better place.

Her final theme embraced this vision of the future, expanding upon the new human and political relationships that she believed would come from flight. These will grow from the altered, expanded vision and sense of the larger world that accrue to the flier, a vision denied to the earthbound. The astronauts of the Apollo 8 mission, it is said, experienced an epiphany in their first view of the sphere of Earth in 1968. Astronaut James Lovell had anticipated such a reaction, saying in a preflight meeting, "I can't think of a better religious aspect to the flight than to further explore the heavens." He reinforced this anticipation with a comment during the flight: "The Earth is a grand oasis in the vastness of space." All three crew members, however, realized as no one before them had that the planet was "a beautiful blue but fragile bubble in the black and barren

sea of space,” on which the peoples of Earth were linked in a new and profound relationship. Their message from lunar orbit on Christmas Eve, following readings from the book of Genesis, drove home their revelation, for it ended with blessings to “*all of you on the good earth.*”<sup>34</sup> Earhart found the same revelations, albeit on a smaller scale, in the experience of flight.

The first awakening the flier receives, she said, is “the magnificent extent of the view. If the visibility is good, the passenger seems to see the whole world.” The effect of this comprehensive vision is to reduce the world and exalt the viewer. “Even mountains grow humble and a really rough terrain appears comparatively smooth. . . . Wherever one looks down on what his brother man has done[,] country or city, it is the same—only the rectangles are of different sizes.” She expanded this vision in “Try Flying Yourself,” remarking that “men and their movements are very slow. Automobiles crawl along the streets. Even the white waves on the shore seem stationary.”<sup>35</sup> The flier’s perspective shrinks the constructs of civilization and the features of nature almost to nothingness, expanding his or her consciousness in ways bordering on the fantastic. Thus, in the air, the flier’s world is one distinct from the mundanes’ world. Her most explicit statement of this conclusion appears in *Last Flight* (1937). To the aviator, the world is, she says, “a fairy-story sky country, peopled with grotesque cloud creatures who eyed us with ancient wisdom as we threaded our way through its shining white valleys.” And from that “ancient wisdom” will come the profoundly comprehensive understanding of flight, nature, society, and humanity that so distinguishes the new, exalted citizen of the air age.<sup>36</sup>

Earhart’s vision of the transcendent qualities of flight recurs again and again in her writings. “The size of the canvas admits a sweep unattainable otherwise,” she wrote in 1930 in *National Aeronautic Magazine*, a major trade journal. “The sunset seen around the corner of a barn or through trees blazes as a whole from ‘upstairs’—and the higher the more of it.” She repeated her conviction that flight gives one a holistic view of existence and added a degree of aesthetic enhancement. Earthbound transport carries one through “tiresome and uninteresting” vistas as highways and railroads wind through cities, suburbs, and industrial developments. In the air, in contrast, “no such barriers to enjoyment exist.” Indeed, she implied, the airborne vision can transcend time as well as space, for the individual’s view from his or her elevated location embraces nature, civilization, and history in a single sweep.<sup>37</sup>

That transcendence gives the aviator a unique sense of existence, one that is firmly optimistic in outlook and complements aviation’s progressivism. In a long passage reflecting her optimism, she spoke figuratively but overtly of the pilot’s vision versus the mundane vision: “How many of the earthbound realize the relative nearness of sunlight above the cloud-covering? How many know that perhaps only three thousand feet above the gray dank world my plane, if I will it, may emerge into sunlight

over a billowy sea of clouds stretching away into blue infinity. . . . No matter whether separated by ice or snow or rain or cold gray mist, the pilot knows the wall-card motto is meteorologically true, ‘Behind the clouds the sun’s still shining.’”<sup>38</sup> Technological progress melds with spiritual progress, and the flier returns to earth a changed, and better, person.

In a late contribution to *Cosmopolitan*, written shortly after her solo transatlantic flight of 1932, Earhart reviewed her belief in the exalting and edifying qualities of flight. “Most of us know this earth from only one point of view,” she said. “Most of us vision it from the bottom up. Now, wings have given us the opportunity to see familiar views from unfamiliar viewpoints. There are other worlds to conquer. Open to all, the world of the air may make an explorer of anyone who wishes.” Here is her credo: aviation opens the unexpected and the unfamiliar to those who participate in it. Those who experience this awakening will never again view mundane life in the same way. They will, instead, become a new breed of explorers, searching for the new perspectives, the new ambitions, and the new experiences available in the air.<sup>39</sup>

Tellingly, those explorations will be personal as much as social. “As flying enters into everyday life,” she wrote, “the dreams of centuries become actualities.” And from pursuing those dreams can come a new individualism that will itself evolve an enlightened approach to life. She flew the Atlantic, she said, because she “wanted to”—meaning, to carry out one of her own dreams. Any person can do as much, so long as he or she accepts the responsibility of self-knowledge: “To want in one’s heart to do a thing, for its own sake; to enjoy doing it; to concentrate all one’s energies upon it—that is not only the surest guarantee of its success. It is also being true to oneself.” From that truth can come the open-minded, inquisitive, responsible citizen so necessary to a democratic society: “*Whatever you want very much to do, against the opposition of tradition, neighborhood opinion, and so-called ‘common sense’—that is an Atlantic. . . . The small things that invite us to hop out of the rut mean just as much as flying the Atlantic.*” Writing in the depths of the Great Depression and as a professional pilot steeped in the technology of flight, knowledgeable of its hazards as well as its delights, she nonetheless continued to embrace and articulate the “romantic excitement” and “prophetic promise” that airplanes and aviation provide. By enabling participants to face the challenges of the air, aviation equips them to face the greater challenges of life.<sup>40</sup>

Earhart’s aeronautical writings may have established her as a determined spokesperson for contemporary aviation in general, but her words and actions relating to women, both within aviation and outside of the field, reflect a still greater concern. Throughout her career, she denied being a feminist in any overt sense. Others may have called her one (an editorial in *Equal Rights*, the official magazine of the National Woman’s Party, spoke of her as an “ardent young feminist who sees no obstacles to women in any field merely because they are women”), but she herself rejected the label.

On the other hand, her friend and competitor, Louise Thaden, observed that “A.E.’s personal ambitions were secondary to an insatiable desire to get women into the air,” and her actions consistently supported the judgment. From her youth she was steadfast in her belief in the need for women to question and move beyond the stereotypes applied to them, and her beliefs informed her own actions.<sup>41</sup>

In 1927, more than a year before her first Atlantic flight, Earhart wrote to Ruth Nichols, against whom she would compete in 1929 and a pilot already known for her support of sport aviation, to suggest a professional organization for women affiliated with flying. She defined herself as “a social worker who flies for sport. . . . I can not claim to be a feminist but do rather enjoy seeing women tackling all kinds of new problems—new to them, that is.” Nichols responded with some interest, urging her to pursue the matter, and Earhart in time wrote back: “Let us take up the feminine end of flying with action in view. To have a purpose is sometimes a deadening thing, but I think to boost aviation is behind all thought of mine and probably of yours.” Following the National Women’s Air Derby of 1929, Earhart, Nichols, and others of the competitors established the Ninety-Nines, the first professional organization for women in aviation.<sup>42</sup>

A personal statement of her independent outlook came in 1931 in a letter written on the eve of her marriage to George Palmer Putnam. Saying that she intended to hold neither Putnam nor herself “to any medieval code of faithfulness,” she laid claim to her own life and her own time: “I may have to keep some place where I can go to be myself . . . for I cannot guarantee to endure at all times the confinement of even an attractive cage.” In later years she went on to lend her name and celebrity to women’s organizations such as Zonta International, the Society of Women Geographers, and the National Woman’s Party, joining the latter and accompanying a delegation to the White House in 1932 to lobby for an equal rights amendment. There, in remarks to President Herbert Hoover, she said that she joined with the party in urging “the speedy passage of the Lucretia Mott amendment, which would write into the highest law of our land that men and women shall have equal rights throughout the United States.”<sup>43</sup>

Her beliefs concerning women’s potential took her even into the midst of a professional controversy. Late in 1934, Central Air Lines, a regional carrier, hired Helen Richey as a copilot—the first woman to be employed as a pilot by a scheduled airline. Richey’s qualifications were impeccable: she was an experienced pilot who held a transport license, an endurance record for women, and more flying hours than many male pilots. Initially, her hiring was widely acclaimed in the public press, with Richey herself saying that “one day of her scheduled flying job is worth more to the cause of aviation than the endurance record for women.” Yet, despite a flawless record with Central, she resigned under pressure in 1935, the victim of opposition from the all-male

pilots' union and a charge that she would be unable to handle the heavy controls of the Ford Tri-Motors used by the line.<sup>44</sup>

Earhart immediately spoke out for Richey, accusing the pilots' union of opposing her "not because of lack of ability but because she was a female." Ruth Nichols and some other women pilots sided with Central, agreeing that "transport planes are too heavy to handle," but a number of active feminists, including Alice Paul, joined Earhart in the protest, saying that "Miss Earhart herself has demonstrated the fallacy of that old idea of women's physical inferiority." Central did not heed their protests, but Richey went on to a position with the National Air Marking Program and subsequent celebrity as a racing pilot and record-setter.<sup>45</sup> Here, as in so many of her activities, Earhart acted on her conviction that women must take on the challenge of shaping and directing their own lives.

Her writings and public statements expanded and extended that view, identifying a cluster of issues that she considered central to women's circumstances. Her arguments proceed from a single, basic point. Women have physical limitations that must be recognized; in an early interview she noted that "aside from heavy cars and racing, a woman is about as competent a chauffeur on the average as men are. . . . At least with light planes women may become as competent pilots as men." To expect a woman to go head-to-head in the ring with boxing champions Jack Dempsey or Gene Tunney, for example, was absurd and obviously unrealistic. Apart from that, however, women were no more and no less able than men in any undertaking not requiring raw bulk and strength. And raw bulk and strength were unnecessary in aviation, where the technology and mechanisms could be mastered as easily by women as by men. Women could stand equally alongside men in virtually every activity in the realm of flight. Like Ruth Law before her, Earhart proclaimed the gender-neutrality of aviation. "There should be no line between men and women, so far as piloting is concerned," she said early on. She enlarged upon this point in an address at Columbia University, saying "There is no cause inherent in her nature which would make a woman inferior to a man as an air pilot." A still fuller iteration came in 1932, following her solo transatlantic flight: "Women can do most things that men can do. . . . What I contend is that women, in any job that requires intelligence, coordination, spirit, coolness, and will power (without too heavy muscular strength) are able to meet men on their own ground."<sup>46</sup>

Although herself strongly pacifistic, a belief dating from her experiences as a hospital aide during World War I, Earhart ultimately extended her argument for feminine equity even to military service. Speaking before the Daughters of the American Revolution in 1933, she chided the group for supporting rearmament yet ignoring women as potential combatants, saying that "equality with men was essential and . . . women should be drafted in war time." In a 1935 article in *Home Magazine*, she reiterated her point:

“Please understand I am utterly opposed to war itself. I do not want to go to war. But logically I believe women as human beings should go—should insist upon going.” All of these views, whatever their special focus, she summarized in *Last Flight*, saying that her overarching goal was to convey her belief that “there is so much women can do in the modern world and should be permitted to do irrespective of their sex. Probably my greatest satisfaction was to indicate by example now and then, that women can sometimes do things themselves if given the chance.”<sup>47</sup> Women, in short, can—and should—do virtually anything for which they were physically and mentally suited.

Her argument then took up the question of *why* women have traditionally been so accepting of being overshadowed by men. Like Katherine Stinson before her, Earhart concluded that women had been in many respects the victim of their own timidity. She initially observed that women “seem content to take their thrills vicariously, and watch men do things a long time before they attempt to do them.” Taking her text from Mrs. Bertrand Russell, who had remarked that women were “bred to timidity,” she challenged the societally shaped education and training provided girls and women. “Society pushes men forward and holds women back,” she told students at Columbia University, not because of any sinister male conspiracy but because of the weight of age-old tradition—a tradition “which keeps women from trying new things.” Thus, she concluded, “inheritance, training and environment seem to make women less aggressive than men,” combining to create the inborn timidity she so deplors.<sup>48</sup>

Enlarging on her theme, she turned to the cultural assumptions that contribute to woman’s inheritance, environment, and training. She looked first at the fundamental inheritance—the worldview passed along by one’s parents, which can create or crush the inquiring spirit. “Parents do not comprehend how familiar is aviation to the boys and girls of today,” she wrote in *Cosmopolitan*. “Instead of trying to hold back these youngsters of yours, I do wish you mothers and fathers would step out in front and lead them—because in flying, as in so many other activities, they need your help.” In an article considering the larger influence of women on aviation, she noted that “It is the responsibility of parents (mothers in particular) to oversee their children’s welfare by acquiring first hand flying experience.” Without such firsthand experience and a correspondingly enlightened view on the part of parents, she concluded, “girls, especially those whose tastes aren’t routine, often don’t get a fair break . . . an inheritance of age-old customs which produced the corollary that women are bred to timidity.”<sup>49</sup>

Already burdened by their sociocultural inheritance, young women find themselves in an environment seemingly designed to hold them back. Part of the environment is created in the schools, where “too often little attention is paid to individual talent [and] education goes on dividing people according to their sex, and putting them into little feminine or masculine pigeonholes.” Another—and crucial—part of that environment occurs in the home, where “boys and girls usually follow the pursuits which tradition

has decreed for the one and the other. . . . Girls are shielded and sometimes helped so much that they lose initiative and begin to believe the signs 'Girls don't' and 'Girls can't' which mark their paths." Thus, whether at school, in the workplace, or even at home, women find themselves in an environment relegating them to second-class status.<sup>50</sup>

The environment Earhart so deplored is handily illustrated in the news coverage of the National Women's Air Derby of 1929. The race itself was a grueling trek from Santa Monica, California, to Cleveland, Ohio, broken into nine segments to allow time for rest and aircraft maintenance. The entrants, without exception, were experienced fliers, many of whom were more accomplished than Earhart herself, yet lacking her celebrity. Ruth Nichols, who had earlier made a nonstop flight from New York to Miami, had just finished a solo six-month, twelve-thousand-mile national tour to publicize aviation country clubs. Viola Gentry, Bobbi Trout, and Louise Thaden had set a variety of endurance records. Marvel Crosson held the women's altitude record. Thaden held the women's record for speed and was working as a demonstration pilot for the Travel Air firm. Florence ("Pancho") Barnes worked as an occasional test pilot for the Lockheed firm, had defeated both Trout and the flamboyant racing pilot Roscoe Turner in point-to-point speed races, and was an experienced Hollywood stunt pilot.<sup>51</sup>

Despite the demonstrated competence of the entrants, journalists routinely spoke of the pilots as "Ladybirds,' 'Angels,' or 'Sweethearts of the Air.'" As Earhart later went on to say, what the entrants themselves "really wished and felt entitled to be considered was simply 'flyers'—'women flyers,' if you must."<sup>52</sup> The most blatant expression of the cultural environment came in the days following the death of Marvel Crosson, who crashed after being overcome by carbon monoxide in her cockpit. The contenders themselves voted to continue the race, arguing that Crosson would have wanted them to do so and their completing the race would be an appropriate memorial to her. Others, however, disagreed. Erle P. Halliburton, an Oklahoma oil entrepreneur, operator of Southwest Air Fast Express and an official of the Derby, held that Crosson's death proved the ineptness of the women pilots. In a nationally distributed interview, he maintained that the Derby was "contributing nothing to aviation. It should be cancelled immediately." He then added: "Women are lacking in certain qualities that men possess. . . . Handling of details essential to safe flying is one of the qualifications women have not mastered successfully."<sup>53</sup>

Reaction to Halliburton's comment was swift, with other Derby officials quickly speaking out in support of the racers. The director of the Derby called the remark "a tragic betrayal to the very industry he [Halliburton] represents," with another official adding, "We wish officially to thumb our noses at the press." Earhart herself defended the Derby and the participants, noting that "a greater percentage of the women fliers in this derby are still going than has ever been the case in any man's race." She later told an interviewer that even after Crosson's death, "the women stuck, every one whose

plane could carry her on. They felt they had to . . . for the sake of women in aviation.”<sup>54</sup> The damage, however, had been done. In airing his views, Halliburton articulated the persistence of the prejudice that women fliers faced.

Changing that prejudice, Earhart realized, would require a reshaping of basic attitudes, a change that would compel American society to recognize the different abilities possessed by young men and young women and the kinds of training they receive. All of her arguments concerning this training are prefigured in an interview from late 1929. There she told the reporter: “It is my belief that woman’s interest in aviation—backed up by the strong opinions of an air-minded generation of schoolgirls—will bring this question of unfair and unjust discrimination between the sexes as regards education with reference to vocational aptitude directly into the open and definitely burn away fallacious barriers.”<sup>55</sup> To give women the fair chance to which they are entitled, basic changes will have to come in the public’s approach to male and female education.

Her development of this argument was lengthy and consistent. To the readers of *Sportsman Pilot* she observed that “difference in training and environment seems to me to be one of the highest of these barriers.” The same month, she dedicated an entire *Cosmopolitan* essay, “Shall You Let Your Daughter Fly?,” to the topic, noting that, in her experience, the modern girl was as informed as the modern boy, holding flying to be “an every-day matter.” She then went on to argue for more comprehensive, open-minded education, allowing boys and girls alike to experience the same opportunities. Access to a common curriculum would overcome the arbitrary segregation that was to Earhart the root cause of women’s absence from aviation: from girlhood on, women were trained to cultural, vocational, and intellectual subservience. This segregated indoctrination, whether deliberate or inadvertent, became a principal target: “Women are determined to be an integral part of aviation. Speed the day when the announcement is made of the first aviation training school ‘exclusively for girls.’”<sup>56</sup>

She expanded the argument in *The Fun of It*, where she noted, “I know many boys who should, I am sure, be making pies and girls who are much better fitted for manual training than domestic science.” Her growing emphasis on the topic she acknowledged in “Women and Courage,” published in *Cosmopolitan*: “Doubtless by now I am running the risk of becoming a heavy-handed feminist. In a measure, I’m guilty, as I do become increasingly weary of male superiority unquestioned.” She continued to argue her case as she was preparing for her round-the-world flight: “With rare exceptions, the delights of finding out what makes a motor go, or batting the bumps out of a bent fender, are joys reserved for masculinity.” Yet, she continued, given the chance, many girls would “master [mechanical skills] quite as well as Brother Bill.” To this end she envisioned the creation of an all-girls workshop, where “they may sprawl on their back . . . and have the fun of finding out how things are made.”<sup>57</sup> Feminist or not, she



recognized that “femaleness” was a socially rather than biologically determined quality, and she argued against the conventions that limited its opportunities.

The strength of Earhart’s convictions on this matter can be seen from an article appearing in *Liberty Magazine* some six months before her disappearance. The title is comprehensive: “Are American Women Holding Aviation Back?” Within the article, however, she focuses on two matters. The first is that women’s reluctance to fly—or to allow their husbands to fly—was detrimental to commercial aviation. That reluctance was a powerful drag on the airlines, with only “twenty to thirty percent of the aviation traveling public . . . women.” Behind the reluctance, however, was a more deep-seated issue: women’s timidity. “Because of inheritance and training and the barriers maintained around women for so long, it is inevitable that we, as a sex, should be invested with special timidities,” she wrote. Nonetheless, there was hope, and it was reflected in changing social attitudes: “The emancipation of modern women is rapidly changing such characteristics. A girl’s upbringing today differs from that of her grandmother as much in independence of attitude as in scholastic subject matter. Her viewpoint and her willingness—nay, her eagerness—to try new things rival that of her brothers.”<sup>88</sup> Commercial development and social development can go hand in hand, if only the public will embrace an enlightened outlook toward gender capabilities.

Not content with simply identifying a problem, Earhart went on to propose a possible solution to the matter of female conditioning. First, women must be recognized for what they achieve *as women*. Second, when women and men *compete on equal terms*, as they do in the cockpit of an airplane, their achievements must be *judged on equal terms*. The first of these matters concerned her in “Why Are Women Afraid to Fly?,” where she took up the issue of the criteria for judging women’s achievements in flight: “Inasmuch as women haven’t traveled so far as men aeronautically, I [feel] a much keener interest would result if they could be properly credited with what efforts they can make at the present times.” Then, once women have established their abilities, they can confront men on their own terms: “Such regulation does not mean that when a woman is capable she cannot compete with men on equal terms. I’d like to see men’s and women’s records *and* a sexless thing called a world’s record in all activities, flying being no exception.”<sup>89</sup>

Earhart’s belief in the importance of equity took her even to the White House. During the NWP delegation’s meeting with President Hoover, she spoke out on behalf of all women who had experienced discrimination: “I know from practical experience of the discriminations which confront women when they enter an occupation where men have priority in opportunity, advancement and protection. . . . In aviation the Department of Commerce recognizes no legal differences between men and women licensed to fly. I feel that similar equality should be carried into all fields of endeavor, so

that men and women may achieve without handicap because of sex." In her first book, she wrote: "It is ability, not sex, which counts, in the final analysis. There should be no line between men and women, so far as piloting is concerned." Her views continued to resonate even after her death. Early in *Last Flight*, she spoke of her "conviction that there is so much women can do in the modern world and should be permitted to do irrespective of their sex." Throughout her advocacy of the cause of women, she acknowledged that it was "the accident of sex" in 1928 that had given her the opportunity to speak out.<sup>60</sup> She meant to see that the opportunity for other women's voices to be heard was not accidental.

Eight decades after Earhart's disappearance in the Pacific, she remains an enigma. Her skill as a pilot, for example, is uncertain. Some (such as her friend Louise Thaden, or Lockheed Aircraft's legendary design engineer Kelly Johnson) considered her to be focused and professionally capable. Others (among them her contemporaries and associates Elinor Smith and Lady Mary Heath) contended she was no more than a journeyman pilot with a troubling indifference to the small details of flight. A few held that she was principally a headline-seeker whose flights (notably her final, round-the-world attempt) were but "the latest and most distressing racket that has been given to a trusting and enthusiastic public." Even her longtime friend Hilton Railey, who had followed her career from the day he recruited her for the 1928 Atlantic flight, reluctantly concluded that "she was caught up in the hero racket" in ways that worked to her detriment.<sup>61</sup>

Judgments of her status as a feminist activist and role model are equally ambiguous and contradictory. She was, from the outset of her emergence as a celebrity, viewed by many as an epitome of "the All-American Girl." Her selection for the 1928 flight was influenced by Putnam's charge to find what Amy Phipps Guest considered "the right sort of girl," while an article on the eve of her departure emphasized her wholesomeness. She was, it said, "striking both in personality and physique. She is tall and slender . . . [with] serene eyes, which can show a humorous twinkle on occasion [and] gaze out calmly on a world which has never failed to interest Amelia Earhart." In the fanfare following the 1928 flight, columnist O. O. McIntyre made the analogy explicit. On the first page of the *Cosmopolitan* issue carrying Earhart's first article, he announced: "I Want You to Meet a Real American Girl," saying she typified "the healthy curiosity of the clean mind and the strong body and a challenging rebuke to those of us who have damned the youth of the land." Far from being one of the studiously dissolute flappers who characterized the era, she was an emblem of national propriety and worth.<sup>62</sup>

Some of Earhart's contemporaries, such as Thaden, openly attested to her desire to open new doors for women, whether in aviation or in life. Thaden quotes her as saying, "If enough of us [i.e., women] keep trying, we'll get someplace." An article following her 1932 transatlantic flight remarks that the undertaking "was intended to advance

the conquest, not so much of the air as of the lingering prejudice against woman," then went on to say that "social historians of the future might do worse than to use her flight as a marker of the new battlefield of feminism." Hilton Railey, though critical of her record-seeking, acknowledged that she worked constantly and faithfully "for the participation of women in aviation, which at all times she strove to encourage and pace." The *New York Times*, in an editorial reflecting upon her disappearance, credited her with being "in rebellion against a world which had been made, for women, too safe, too unexciting." Her colleagues in the Ninety-Nines held that "all women pilots owe her an immeasurable debt." A feminist critic of the 1990s concluded that she "demonstrated that women could be autonomous human beings, could live life on their own terms, and could overcome conventional barriers," while a later one posited that she "represented an alternative to both the decadence of the heterosexualized flapper of the 1920s and biological motherhood as it was appropriated by the fascists in the 1930s."<sup>63</sup>

Other observers, however, were less certain. A memorializing editorial in the respected trade journal *Aviation*, for example, reflecting that the editors believed that the time "was long since past for great solo achievement in aviation," concluded that "the real tragedy of Amelia Earhart is that hers was the psychology of the Age of Vikings applied at a time when aviation had already passed over into the Age of the Clipper." She was, in their view, an idealistic individualist understandably but sadly out of touch with the demands of an increasingly cooperative and commercialized era. A later academic critic, reviewing her career in the context of the larger milieu of American feminism, concluded that although her achievements undeniably focused attention on women's abilities, they did little to establish aviation as a truly legitimate vocation for women.<sup>64</sup>

What she *was*, however, is less significant than how she was *perceived*, and her public image as a notable woman flier is unchallenged. Whatever sort of pilot she may have been, duffer or ace, she nonetheless became the personification of American women in aviation. The reality of her achievements is secondary to their perception: she appeared a vigorous, attractive, independent, and articulate spokesperson as much for the possibilities of women as for the possibilities of flight. Accident may have made her a celebrity, but she accepted that celebrity as a means of advancing her causes. Those causes were close to her heart, and she passionately believed that they pointed the way to a new and better future, one shaped by social change as much as by technological change. Her influence may have waned in the long run, but in the short run she spoke for the future.

However she is viewed, as flier or feminist, Earhart heightened the profile of women in American aviation. She offered a critique of American society appropriate to her interests as a social worker. She identified the power of inertia and convention in controlling social attitudes. She proposed practical, plausible ways to address and rectify that power. And she consistently held to her belief that, barring outright physical limitations, there was no realm of endeavor that was inherently, exclusively male.

Overall, she called for a rethinking of what femininity meant and entailed and for the creation of new, expanded approaches to the education and acculturation of young women. Her vision was of a world where “the accident of sex” had no role, and it was one well-suited to the air age so many envisioned.

Whatever the long-term influence of her activities and writing, her views were to be taken up in varying ways by the women fliers who succeeded her. One, Louise Thaden, while benefitting from her association with Earhart, would approach her in national prominence in her own right. A second, Ruth Nichols, very likely would have surpassed her had circumstances not intervened. A third, Anne Morrow Lindbergh, achieved aeronautical prominence almost in spite of herself. In their actions and their writings, all three stepped willingly into Earhart’s role as thoughtful commentator on the female experience of flight, carrying the torch of aviation and feminism into the later twentieth century.

## IV

# Louise Thaden: Rethinking *Flying* and *Flight*

**A**LTHOUGH AMELIA EARHART'S fate dominated newspaper front pages until well into the autumn of 1937, a new topic began to emerge as early as September. Reports increasingly conveyed a clear sense of "The Queen is dead; long live the Queen!" as speculations arose about the *next* Earhart to speak for women's aviation. The issue of succession was raised most explicitly by Florence Wessels, writing in the *New York Journal and American*, who asked: "Who will succeed Amelia Earhart as the world's leading woman flier? Who will recapture the public's admiration, held by the girl who so resembled Col. Charles A. Lindbergh in appearance and achievement?" Wessels reviewed Earhart's career and accomplishments, crediting her with "more aviation 'firsts'" than any other woman flier, then, acknowledging Earhart's role as "a wonderful friend and inspiration" to all women fliers, suggested that "there will never be another woman pioneer like Amelia" because "most of the pioneering is done." Pioneering notwithstanding, though, other women were making aviation history in the maturing enterprise, and from their ranks was likely to come the next public idol.<sup>1</sup>

Among those mentioned as potential successors, Louise Thaden (1905–1979) was "a flier," in Wessels's opinion, "to be reckoned with."<sup>2</sup> Thaden was already a notable presence in aviation circles. The winner of the 1929 National Women's Air Derby and the first woman to win the Bendix race, she had earlier set records for speed, endurance, and cross-country flying. In 1932 Earhart herself named her as "one of the ablest women flyers," while *U.S. Air Services* called her "one of the most prominent women in aviation for several years." She was also known for her work in furthering the cause of women in aviation, writing widely of her experiences, and for her role as a demonstration pilot for the Travel Air Manufacturing Company.<sup>3</sup>

Thaden was born Iris Louise McPhetridge in Bentonville, Arkansas, where a tomboy's childhood gave her solid self-confidence and a knowledge of things mechanical. She entered the University of Arkansas in 1921 but left without a degree to take up work with the J. C. Turner Coal Company of Wichita, Kansas. Walter Beech's Travel Air Manufacturing Company was nearby, and Thaden began spending her spare time at the Travel Air field. Her employer, Turner, chanced to be a director of the Travel Air firm, and, noting her interest, arranged an interview with Beech. From this came the offer of a job with D. C. Warren, the regional Travel Air distributor in Oakland, California.<sup>4</sup>

Once settled in California, she took flying lessons to help with her work at the Warren firm, and by the end of 1928 she was licensed as a transport pilot. The same year she married Herbert von Thaden, an aeronautical engineer sharing the Travel Air facility. Then, with Travel Air's backing, she quickly set her first three records: altitude (20,260 feet) in December 1928, solo duration (22 hours, 3 minutes) in March 1929, and speed (156 mph) in April 1929, becoming the first woman to hold all three simultaneously. For two of the records (altitude and endurance) she flew a Travel Air Model 3000, a three-place, open-cockpit biplane powered by a 180-horsepower Hispano-Suiza engine. For the speed record, she flew a Model 4000, a comparably sized aircraft equipped with a more powerful Wright Whirlwind engine and a newly designed "speed wing" airfoil.<sup>5</sup>

The combination of her sales work and her flying achievements quickly gave her a degree of celebrity. The Women in Business section of the *Ladies' Home Journal* profiled her in March 1929, calling specific attention to her work as de facto manager of the Warren enterprise and noting her efforts to convince "the timid that flying was entirely safe, even for a woman." She won greater aeronautical prominence in August 1929, winning the first National Women's Air Derby. Her Travel Air 4000 was one of five especially built by the company for Derby contenders, comparable in most respects to her earlier Model 4000 but with a still more powerful Wright J-5 engine. Its specifications placed it in the heavy-plane class of the race, putting Thaden in direct competition with Earhart, Ruth Nichols, and other well-publicized fliers, yet she won the race with a total flying time of twenty hours, nineteen minutes, and four seconds.<sup>6</sup>

Thaden's achievements continued into the 1930s. In November 1930 she briefly became women's editor of *Popular Aviation*, taking over the Women's Activities column begun by the noted British flier Lady Mary Heath, serving in that capacity until July 1931. In 1932 she and Frances Marsalis set a women's endurance record (196 hours, 5 minutes) using an early form of in-flight refueling and flying a Curtiss Model 56 Thrush, a single-engined, six-passenger monoplane. In 1936, with Blanche Noyes (like Thaden a 1929 Derby veteran) as copilot, she won the Bendix Trophy, flying from New York to Los Angeles in 14 hours, 55 minutes and becoming the first woman to win the Trophy. Earhart and Ruth Nichols had flown the contest in 1933 and Jacqueline



Thea Rasche departs Clover Field, California, in a de Havilland Moth at the start of the National Women's Air Derby—the “Powder Puff Derby” (1929). Amelia Earhart's Lockheed Vega is second from the right in the back row; Ruth Nichols's Rearwin Ken-Royce is fourth from the right in the same row. COURTESY OF SMITHSONIAN NATIONAL AIR AND SPACE MUSEUM (NASM 83-2147)

Cochran in 1935; neither Nichols nor Cochran finished the race, and Earhart placed last. In 1936 Thaden also won the Harmon Trophy, awarded by the Ligue Internationale des Aviateurs to “the Champion Aviatrix of the United States,” a recognition of her stature in the profession.<sup>7</sup>

She followed this with a three-year stint as factory representative and demonstration pilot for Beech Aircraft (successor to the Travel Air company).<sup>8</sup> Her work with Beechcraft consisted primarily of flying and demonstrating the company's most sophisticated design, the Model 17 Staggerwing, a high-performance, single-engined craft with an enclosed cabin intended for corporate and business use. (Thaden had flown an unmodified stock C17R in the 1936 Bendix race.) The biplane got its name by having the upper of its two wings positioned behind the lower—an arrangement called “negative stagger” by aerodynamicists and a feature rarely seen in aircraft design. The unusual configuration paid off in improved landing characteristics and increased speed; when

the initial version flew in 1932, it was faster than the military fighter aircraft of the time and became even speedier when Beechcraft added retractable landing gear.

When Thaden took on the task of demonstrating the Staggerwing's qualities to prospective customers, her gender worked to her and the company's advantage, for male buyers, wary of the ship's speed and relative complexity, were reassured by a woman's ability to handle it. She viewed the demeaning situation philosophically and with some amusement. In an essay for *Airwoman* written two years before her triumph in the Bendix race, she wrote humorously of having to snatch the controls away from panicked male pilots, shook her head over men's tendency to abuse the machine in dives and abrupt maneuvers, and remarked on the number of times she had to "become very commanding," seizing the controls and flying the craft "in a reasonably normal fashion." Although her career was at a high point, growing family responsibilities moved her to retire from professional flying in 1938.<sup>9</sup>

Like Earhart before her, Thaden turned to writing almost as soon as she began setting records. Overall she wrote some sixteen pieces for local outlets of one sort or another; interspersed among these were twelve articles in national publications. Several of these dealt with her achievements—her endurance records, her winning of the National Women's Air Derby, and her participation in the National Air Race Transcontinental Sweepstakes Handicap Derby of 1931. Others spoke out forcefully for the expansion of commercial flight, the importance of women's taking a larger role in aviation, the usefulness of records in calling attention to women's abilities, and the diverse opportunities open to women in the field. Her final work, her autobiography, appeared in 1938, although she made important additions to it when the book was reissued in 1973. Whatever their nature, though, all of her writings, early or late, journalistic or contemplative, were unified by her belief that aviation was to play a significant role in American society, that women were to contribute to the advancement of aviation, and that flight can have significant moral and spiritual uplifting effects upon the individual.

Thaden believed in the centrality of aviation to American life and strove to give the public a realistic assessment of the endeavor. She started with a basic assumption: an air-minded society will want to know of (and could understand) the mechanical and physical requirements of flying. Unlike many of her contemporaries, she wrote openly of the unlovely realities of flying—for example, the pilot's need to monitor the engine, to regularly pump fuel from the reserve tank, and to keep a careful eye on fuel consumption and reserves.<sup>10</sup> She intended to deromanticize the image of competitive flying, spelling out its mechanical demands. In writing of her 1932 endurance flight with Frances Marsalis, she did not minimize the daily drudgery: "All we had to do was to grease rocker arms, clean oil and gasoline strainers every six hours, pump at a fourth of a pint at a stroke, 220 gallons of gasoline every 20 hours, change oil, make



three contacts for food, one radio contact, three contacts for gasoline and one contact for oil every day. We also had to bathe and keep clean. . . . And every time we made a contact with the refueling plane, our entire load had to be shifted and then shifted back again.”<sup>11</sup> The public might see romance in record flying, but Thaden understood that records came at a physical as well as financial cost to the flier.

Her realism heightened the irony of journalists’ dubbing the endurance aircraft “the Flying Boudoir.” Thaden and Marsalis had asked for cosmetics along with their daily food package, a request that was less for vanity than for comfort; the altitude aggravated dry skin and gasoline fumes in the cabin were a constant irritant to eyes, nose, and skin. The glib label, however, implied a public unwillingness (or inability) to separate empirical observation from cultural preconceptions. “Newspaper men looking . . . through rose-colored glasses, had nicknamed our ship ‘the Flying Boudoir,’” she wrote, giving visions of an aircraft equipped with “hot and cold running water, a chaise lounge, dressing table, upholstered pilot’s seats and what not.” Thaden spelled out the reality, detailing the cramped conditions, primitive sanitary facilities, grueling hours, and endless engine noise to give a telling counterpoint to the condescension of the reporters.<sup>12</sup> Flying had its romance, but its reality had to be acknowledged as well if society was fully to assimilate aviation.

An aviation-oriented society would also embrace commercial aviation. A truly national air travel system did not develop until 1929, when a series of mergers among regional companies began to reshape the air travel landscape. Transcontinental Air Transport (TAT) merged with Western Air Express to become Transcontinental and Western Air (TWA; 1930). A network of carriers linking New York and Miami coalesced as Eastern Air Transport (1930); carriers in the southern and middle United States evolved into American Airways (1930); and a combination of Boeing Air Transport, Stout Air Services, and National Air Transport, beginning in the northwest and moving eastward, emerged as United Air Transport (1931). Barely four years after Lindbergh’s flight, the antecedents of four major airlines were in place and a national air commerce system was a reality.<sup>13</sup> All that remained was to encourage travelers to fly.

Thaden spoke out in support of commercial flight almost as soon as the system took shape. Writing for the Women’s Athletic Association of Pittsburgh in 1929, she maintained that “flying has passed the experimental stage, and has become the accepted carrier of the mails, an accepted and much used mode of transportation and travel.” The next year, in an aviation column published in the *Pittsburgh (PA) Post-Gazette*, she noted that “travel by air has become an important factor of transportation to local business men and women, and the traveling public has seemingly definitely accepted air transportation.” Practical, comfortable, and safe commercial aviation was a reality, the most modern and progressive form of transport to date, and an evolving society should take advantage of all that it offered.<sup>14</sup>

She steadily widened her arguments in the cause of aviation, whether civil or commercial. Echoing Earhart's "Shall You Let Your Daughter Fly?" of 1929, she asked in 1930, "Shall I Let My Child Fly?" Her answer, in the *Sportsman Pilot*, was an emphatic affirmative: "Your child will not only *want* to know [about aviation], it *will* know, and its ambitions should be intelligently directed." It is the adults who must consciously turn their attention to the skies, for "being air-minded today is not sufficient. One must be air active!" Two years later, writing of the Ninety-Nines for the regional trade journal *Western Flying*, she stated bluntly that the organization existed "to perfect any movement that might be for . . . aviation in general; [and] to further the interests of aviation."<sup>15</sup> In Thaden's view, women were increasingly working to shape the enterprise.

All of these points recur, with even greater emphasis, in an address to the National Aviation Forum given in 1940. The Forum, held in Washington, D.C., was a national meeting organized by the National Aeronautic Association, the military, and the aviation industry to publicize aviation and "give the public a picture of American air strength, civil and military." It included notables from throughout the field, with some "1,000 of the nation's leaders in all phases of aviation" taking part. Over a hundred aviation-related manufacturers were involved, and displays offered closeup views of the most modern civil and military aircraft. Featured speakers included the speed-setting Jacqueline Cochran, Al Williams (famed as a competition flier and spokesperson for the Gulf Oil Corporation), Major General H. H. Arnold of the Army Air Corps, and Dr. Vannevar Bush, chairman of the National Advisory Committee for Aeronautics. Betty Gillies, the then president of the Ninety-Nines, was to speak on behalf of the organization; when she was unable to take part, the organizers asked Thaden, as a prominent and well-qualified advocate of women and aviation, to step in.<sup>16</sup>

Thaden's talk nominally dealt with the activities of the Ninety-Nines but in fact considered the future that aviation held for the public in general. "With a rapidly expanding industry," she observed, "with increased opportunities offered American youth to take to the air through the C.A.A. [Civil Aeronautics Authority] training program, with the general public becoming more and more air conscious; the most I can say is that possibilities are infinite."<sup>17</sup> Aviation, civil and commercial, as a hobby or as a profession, was, if anything, a state of mind. It also was a real and necessary part of the American scene, and its potential for progress had no limits.

For all her concern with the possibilities of aviation per se, she was even more concerned with the place and role of women in the undertaking. Her first national article, a report on the National Women's Air Derby for *Aero Digest*, established her position. She began by placing the Derby squarely within the larger picture of women in American aviation: "This year's derby . . . brought us [i.e., active women pilots] all together for the first time since women have started winning their wings." She challenged prevailing public attitudes toward the race: "We did object to being made

exhibits and more or less circus attractions.” She acknowledged that part of the novelty of women racers came from their being the first, but recast their role as a pioneering one: “Pioneers can only look forward, never back—so each of us carried on.” And, in her estimation, their efforts were not in vain: “We have proved that we can fly as long, as hard, as consistently, and as well as the men. And we haven’t had the experience, nor the thorough training—remember that!”<sup>18</sup> From this beginning she went on to maintain that aviation was an appropriate enterprise for women. Women had contributed to it in the past and would continue to contribute in the future, and there were employment opportunities for women at all levels in aviation. Her consciousness of the importance of awakening women’s vision was a strong motivation. One purpose of her 1929 altitude record, she said, was to “set out to go higher or stay up in the air longer than any other girl flyer”—a clear implication that women were actively flying and that women were actively setting noteworthy records.<sup>19</sup>

She widened her argument with a later piece, remarking that the 1929 Derby had “brought to the attention of the entire world the fact that women can fly and fly well. It has not brought to light the fact that women have been flying since the advent of the airplane.” She singled out Harriet Quimby, Matilde Moisant, and Ruth Law for special attention, citing their work as exhibition fliers and concluding that “women have left their mark upon the progress and development of aviation.” Then, in a newsletter directed to potential students of the Pennsylvania School of Aeronautics, she identified nine women, from Earhart to Gladys O’Donnell (another veteran of the 1929 Derby), currently active in aviation, pointing out their work in jobs ranging from airline administration to demonstration flying for manufacturers. Her conclusion: “There is a definite field for women in aviation for which they must prepare.”<sup>20</sup>

Her Aviation column for the *Pittsburgh* (PA) *Post-Gazette* of 14 February 1930 talked at length of the Ninety-Nines, quoting Opal Kunz (still another Derby veteran) to support her contention that “by trying to eliminate the sex idea in flying, we are not seeking advantages. . . . We are trying only to be received as an equal rather than being spoiled as something rare and precious.” She closed the column by quoting a Spartan Aircraft Company advertisement proclaiming that “the American woman has accepted aviation as a vital factor in modern, progressive life . . . justly earning her right to wings.” Two months later, she wrote “Women and Aviation,” holding that women “are becoming more and more an integral and highly important part of aviation today” and citing thirty-one women, European as well as American, who were making their living working with the diverse opportunities—administrative, educational, managerial—that aviation provides.<sup>21</sup>

Thaden reviewed her own accomplishments in a long feature article written for the *St. Louis* (MO) *Post-Dispatch* midway through 1930, then went on to link her own experiences to those of women in general. “I can say with assurance,” she wrote, reviving an

image she had used in 1929, “that there is a bright future for women in aviation, especially in the fields of air transportation, sales, advertising and publicity. . . . It is definitely agreed by the aviation industry that woman holds the future of aviation in the palm of her hand.” While she allowed that there were some areas of aviation that women were unlikely to enter (flying the mail or piloting heavy commercial passenger craft), the larger field of aviation was “far less crowded” than other specialties. Advancement was certain if one were willing to pursue the “training, study and application” that aviation work requires, and the woman aspirant bringing determination and discipline would find much of the field open to her.<sup>22</sup>

In “A Message From Louise Thaden,” addressed to the 1939 graduates of Venice (CA) High School, she reviewed the lives and activities of thirteen notable American women fliers, from Harriet Quimby and the Stinson sisters to Earhart, Phoebe Omlie, Ruth Nichols, and Jacqueline Cochran. These were “outstanding women, as well as pilots,” she noted, and their lives gave her the confidence to say, simply, “To you who would be pilots . . . I can say this: there is no ambition too high for attainment, no obstacle too great to be surmounted.” Determination and courage were required, to be sure, but the women fliers of the future possessed these qualities as certainly as did the women fliers of the past.<sup>23</sup> And those aeronautical abilities can be expressed in many ways. She had some years earlier recalled Earhart’s belief that “the Ninety-Nines may be one of those agencies which will help at least one segment of women to become individuals—industrially, mentally and spiritually.”<sup>24</sup> Her remarks about the Ninety-Nines in 1940 asserted that “women pilots should be banded together in a close relationship to enable them to perfect any movement that might be for their benefit as a class.” Aviation holds many rewards, individually and communally, for the women who practice it.

That practice took on a greater significance as Thaden reflected on the growing war in Europe and the possibility that the United States might soon be involved. Should war come, she asked, “what part will women and particularly women pilots take in the drama?” She cited the Stinsons’ work as instructors and Ruth Law’s recruiting efforts during World War I, then asserted that “every able woman who can be used will release a more able man for combat.”<sup>25</sup> Were women to be enlisted, they could fly as copilots for airlines, oversee flight instruction of new recruits, fly ambulance service abroad as well as domestically, or fly cargo to support the nation’s industrial needs. She made no effort to justify a combat role for women; that was better dealt with by men. But women could play their part—as they already had, she noted, in China, Spain, and Russia—in bolstering any and all of the needs of aviation.

Thaden’s vision of the air-based society and women’s place in the realm of flying explored readily apparent practical, real-world, noncombatant needs of aviation. She returned to these views in her 1940 address to the National Aviation Forum. “With a major crisis approaching in Europe,” she noted, “it may well be that women pilots will

be utilized should this country become engaged in a major conflict." They would not necessarily be used in combat, but rather "to relieve those trained for combat flying. Of our present 800 women pilots at least half that number would be competent to act as primary instructors, to ferry planes from factories to bases, or to serve as co-pilots on our airlines."<sup>26</sup> She had taken this view to its extreme implications in her dystopian romance, "Noble Experiment," published as part of her autobiography in 1938, but here stepped back from combat issues to make firmly realistic suggestions.

At least one of her audience paid heed. Jacqueline Cochran, whom Thaden cited in the article as one of the "outstanding women pilots with sufficient experience to step into both instruction and airline jobs with no preliminary training," took up the cause. Cochran pressed the United States Army Air Corps to create a women's auxiliary. Although Air Corps officials had already established the Women's Auxiliary Ferrying Squadron, led by Nancy Harkness Love, they grudgingly acceded to Cochran's urging. The result was the Women's Flying Training Detachment with Cochran at its head, intended to create "a pool of women pilots trained for non-combat duties." The two competing enterprises merged in 1943, forming the Women Airforce Service Pilots (WASP), with Cochran in full command. By war's end in 1945, more than one thousand women participating in the group had piloted every version of aircraft active in the military inventory. It was a notable achievement.<sup>27</sup>

The WASP and the war, however, were still in the future when Thaden published her autobiography, *High, Wide, and Frightened*, in 1938. She wanted the book, she said, to explain and interpret flying as a human endeavor. The public needed to remember that a pilot is not "a super-individual full of iron nerve, or remarkable courage . . . , of absolute control over brain and body." Pilots were, instead, "human beings with the usual inhibitions, phobias, and frailties," and "a pilot who says he has never been frightened in an airplane is, I'm afraid, lying." She wanted as well to re-create a time of excitement and discovery, an era when the technology was new, the colleagues and competitors closely knit, and the activity offered both challenge and hope. Her optimism notwithstanding, however, she also went on to reflect about women's possible roles in an aerial war—reflections that go far beyond those of Ruth Law.<sup>28</sup>

Thaden's views of potential roles for women take on new dimensions in chapter 13 of the 1938 edition, a chapter omitted from the 1973 and 2004 editions. This is an extension of her developing anti-war views, drawing heavily on her firsthand knowledge of American military policy and hardware. Herbert von Thaden had gone on active duty with the Army Air Corps at Langley Field in 1935, giving Thaden an opportunity to observe military practices and fly some of the Corps' most advanced hardware. The chapter, entitled "Noble Experiment," is a fictional "test of the adaptability of . . . woman power in times of national emergency" that anticipates her remarks of 1939 and 1940 on possible roles in military aviation for women and makes some sharply

critical comments about the evolving strategy of “strategic bombing” being developed by the United States.<sup>29</sup>

At the time she was observing activities at Langley Field, the Corps was still influenced by the policies of Brigadier General William (“Billy”) Mitchell (1879–1936), a vigorous and outspoken advocate of air power as the principal element of modern war. Mitchell’s views on strategic bombing in warfare parallel those advanced by Giulio Douhet (1869–1930), a retired brigadier general in the Italian Army and one of the earliest proponents of strategic bombing. By the time Douhet’s book, *The Command of the Air (Il Domino dell’Aria)* (1921), was being disseminated through the War Department general staff and the Air Service Field Officers’ School in the 1930s, his and Mitchell’s combined contention that “the bomber will always get through” was shaping the American air force’s aerial strategy and tactics.<sup>30</sup>

*The Command of the Air* is a bluntly explicit consideration of the evolving role of air power in future wars. Douhet’s central argument is outwardly simple. The airplane, he says, has added a new dimension to war: it provides “complete freedom of action and direction. . . . Nothing man can do on the surface of the earth can interfere with a plane in flight, moving freely in the third dimension.” That new dimension extends to more than space because it forces changes in the fundamental tactics and strategies of combat: “No longer can areas exist in which life can be lived in safety and tranquility, nor can the battlefield any longer be limited to actual combatants.”<sup>31</sup> Wars of the past have been fought in two dimensions and on limited battlefields. Now, however, the airplane requires new tactics and a new view of war.

The argument *is* simple, but it requires a rethinking of the philosophy of war. To a military establishment still thinking in terms of the two-dimensional wars of the past, fought on the ground with infantry and tanks, artillery and machine guns, Douhet makes a radical proposal: conducting a modern, total, all-out war in which strategic offensive bombing plays a central part.<sup>32</sup> Air-based warfare will, first of all, necessarily involve civilian populations: “The battle field will be limited only by the boundaries of the nations of war, and all of their citizens will become combatants. . . . There will be no distinction any longer between soldiers and civilians.” Thus, in Douhet’s analysis, aerial attacks must be expanded to include “peacetime industrial and commercial establishments; important buildings, private and public; transportation arteries and centers; and certain designated areas of civilian population as well.”<sup>33</sup> Eliminating an enemy country’s industries, services, and populations is necessary to bring its economy to a standstill, demoralize its population, and in general destroy its ability to make war.

Second, war must be pressed ruthlessly and mercilessly. Douhet endorses a preemptive strike on an enemy capital in advance of any formal declaration of war: “All contenders must use all means without hesitation, whether or not they are forbidden by treaties, which after all are nothing but scraps of paper compared to the tragedy

which would follow.”<sup>34</sup> In Douhet’s analysis, every individual—enlisted or civilian—is a combatant; every locale—military, industrial, agricultural, or residential—is a target; and the realities of modern war require direct, overwhelming, and total destruction of one’s enemy. The airplane is the agency of that destruction.

These theories play a central role in “Noble Experiment,” for Thaden offers an intriguingly dystopian vision of life in a Douhet-influenced future. She accepts a point that Douhet makes explicitly: “The preparation for war demands . . . exercise of the imagination; we are compelled to make a mental excursion into the future.”<sup>35</sup> Employing the genre of dystopian fiction, she looks to an imaginary future when Douhet’s theories have been comprehensively embraced by the world’s air forces, then goes on to consider just what those theories might mean to—and *might cost*—the women pilots whom the male-dominated military has reluctantly pressed into service. She pays little heed to the geopolitical elements of the war she records; instead, she focuses on the personal and emotional consequences of military policy.

“Noble Experiment” begins in medias res with the United States embroiled in a war that has already dragged on for seven months. From the outset women have flown noncombatant ambulance planes, moving the wounded from frontline aid stations to general hospitals behind the lines. Now, however, a pressing shortage of experienced pilots forces the Army Air Corps to create an eleven-plane bombing squadron crewed exclusively by women—the “noble experiment” of the title. The squadron is equipped with the latest Martin bombers, ships carrying a crew of six and closely resembling the Martin B-10. The B-10B, an all-metal, twin-engined craft with retractable landing gear, went into service in 1934, and Thaden briefly piloted one in 1935 while visiting her husband at Langley Field. With a top speed of 207 mph and a cruising speed of 169 mph, the B-10B served as the Air Corps’ principal bomber until supplanted by the four-engined Boeing B-17 in 1939.<sup>36</sup>

Male prejudice against women pilots immediately colors their combat training and beginning assignments; the women of the squadron want only to prove that they have no need for special treatment. But special treatment they get, and it is not friendly treatment. They are considered inferiors by Air Corps brass, and their first combat missions involve what the highers-up consider only minor targets. Male pilots are reserved for missions against targets that strategically matter. The squadron’s effectiveness in its “minor” assignments, however, at last persuades officials to form five additional bombing squadrons and twelve interceptor (i.e., fighter) squadrons, all with exclusively female personnel, and women’s place on the aerial front lines is assured.

Thaden’s story follows six months in the lives of two women, Iris Jiles and a younger friend, Julia McIlroy, as they move from ambulance flying to combat. Jiles, the narrator, seems to speak for Thaden; she has the same first name, is the same age (thirty-two), and is in the same marital circumstances (married with two children). A seasoned

pilot, she views war realistically, acknowledging its horrors and chaotic, brutal nature. McIlroy, in contrast, dreams of the excitement of combat, her romanticized vision of war an ironic counterpoint to the bleakness of Jiles's worldview.

Active service ends quickly for both. McIlroy dies when the enemy mounts a surprise bombing raid against their base. Jiles is wounded and sent behind the lines, where complications force the immediate amputation of one of her legs. The story ends after a break of unspecified duration in the narrative. In the final pages, sometime after the return of peace and a presumptive American victory, life is once again tranquil. Jiles is in hospital being fitted for a prosthetic leg, and her thoughts range widely as she contemplates the future. She and other women have acquitted themselves honorably and effectively. The cost to them, however, has been great, for the means they employed to achieve that acquittal have been horrifying. They have played an important, even necessary role in winning victory, but, as Jiles at last realizes, the war has left personal scars deeper and more lasting even than the material destruction brought about by aerial bombing.<sup>37</sup>

Thaden gives the fictional account plausibility by consciously linking it to the American aviation scene of the 1930s. As "Noble Experiment" opens, the women are flying their hospital missions in outdated aircraft impressed from the airlines; Jiles remarks that her ship "was worn out by TWA in 1929." Thaden, like Douhet, sees the world of civil aviation as a steadily evolving, up-to-date one, its principal aircraft the most modern available, while antiquated ships are passed on to "lesser" service. Added authenticity comes through explicit reference to other women pilots of the day. Helen Richey and Pancho Barnes, both of whom shared contemporary headlines with Thaden, make offstage appearances.<sup>38</sup> It is a milieu that her readers would recognize.

When the women are at last grudgingly admitted to combat duties, their commander minimizes the action as "an experiment on the part of the Army Air Corps as an actual test of the adaptability of—er—woman power in times of national emergency." A shortage of trained pilots for frontline duty has forced the accommodation, and the central command sees the decision as only temporary. For their part, Jiles and McIlroy are incensed by the commander's condescending tone, with McIlroy ranting "They *must* be hard up for pilots! And we have the 'signal honor of assignment to bombardment on less important missions.' The old coot!!" Nonetheless, they recognize that they are "in this thing tooth and toe-nail, so we might as well take it gracefully."<sup>39</sup>

The military culture also embraces Douhet's philosophy of total aerial war. The first missions assigned the women highlight the randomness of such a war; flying at night, they "simply [fly] to [their] objective, let loose the bombs, and [fly] back again." This is bombing with no pretense of precision, and initially is aimed, as Douhet advocates, at "strategic points—rail-heads, ammunition dumps, factories, bases, and supply sources in general." The first targets presented Jiles and McIlroy seem to have direct



applications to the overall ability of the enemy to make war, and the two accept their assignments without hesitation.<sup>40</sup>

Soon, however, they grasp the real nature of their assignments as “mission creep” causes them to bomb civilian populations near the more “military” targets. Jiles perceives that their missions are meant to terrorize as well as to destroy; they reach the target area “around 2:30 a.m., that time of early morning when terror grips strongest at the vitals of an innocent populace.” Following one mission, she vents her distaste to McIlroy: “This foul job we have stinks; blowing to bits innocent men, old women, and little children! People who have never had an enemy.” McIlroy at first demurs, but later comes to understand Jiles’s point and ties it to the circumstances of pre-aviation warfare: “Perhaps you are right Iris, modern warfare *is* a bloody business. Once it wasn’t so bad,—more or less a gentleman’s game, if one could call it that; but sneaking up in the dark and blasting innocent children out of their beds . . . !”<sup>41</sup> The actuality of modern war is far removed from the way it is portrayed in lore and legend, and both women come to a vivid understanding of the true consequences of their “military” missions.

Thaden uses this grim vision of imagined future warfare to make several points. She first of all reflects on the personal effects of the war and the degree to which they will color the outlook of those affected. The wounded, like Jiles, face a totally altered existence requiring “a confused remaking of life [and a] revision of ambitions.” They will never wholly be able to return to the carefree world of sport, recreation, and flirtation that the noncombatants know, and their understanding of war is necessarily far removed from that of the civilians not touched by it. Jiles understands that returning to work, domesticity, and family love will dull the pain and help with the adjustment. She also understands, however, that all those who took part in combat, whether wounded or not, will unalterably be changed. In the story’s final paragraph she thinks, “I would not have those who love me see the long livid scar which will never quite erase itself, the jagged scar burned indelibly into memory.” The body may heal, but the soul will not, and Jiles and her comrades in arms will never again view the world of total war in the same way.<sup>42</sup>

Thaden’s story offers a rebuttal of the military establishment’s belief in the invulnerability of the modern bomber. Here she anticipates the reality of World War II, when Allied bomber losses were disproportionately high until the advent of the North American P-51 Mustang in 1943. (The P-51, a single-pilot fighter powered by the British-designed Merlin engine, had the range to accompany bombers to the target, engage in defensive combat, and return.) Jiles is her spokesperson in both instances. She records the severe losses suffered by the squadron when they are set upon by the enemy’s defending fighter planes, then goes on to make clear that, while *some* bombers may well get through, without fighter escort not all of them will.<sup>43</sup>

Her anti-war views become explicit as the story develops. After one mission, Jiles says to McIlroy, "What sense is there in one civilized people leaping at the throats of another . . . ?" She later returns to the topic, reflecting that "Since time beyond memory men have fought and died, most of them in the cause of 'Justice.' But what a bloodthirsty useless business it is." Then, almost in the same breath, she echoes Amelia Earhart, saying, "War is for very old men to make, and for Youth to consummate. It's the in-between age which sees the senselessness of waste, who suffer *for* that waste." Thaden believes that those who will suffer most from a Douhet-influenced air war are those who are least involved in it, but all the participants will suffer—a circumstance that only enhances the conflict's brutality.<sup>44</sup>

Finally, Thaden makes a pointed comment about the abilities of women pilots. Whether flying in civil or military roles, her women, like the participants in the Women's Air Derby, neither want nor expect special treatment simply because they are women. Nor do they want to be ignored or diminished because of their gender. They understand that the technology of aviation makes no distinction between male and female abilities, and ask only to be judged simply as "pilots who happen to be women," not as "women pilots."<sup>45</sup> She speaks explicitly to the matter midway through the story. The unit captain (a man) calls Jiles into his office, tells her of her promotion to first lieutenant, then adds: "If it will make you women feel any better, you've put in as much flying on exactly the same missions as the other Bombardment squadrons. Beginning tomorrow we work with them as a recognized unit of the Air Corps. . . . You women pilots are helping to fill, and creditably, a big gap in the Air Corps."<sup>46</sup> The captain, to be sure, is younger than the Old Guard soldiers who dictate strategy. Less bound by traditions, whether civilian or military, he makes and voices an objective judgment without hesitation and without condescension.

"Noble Experiment" meets all the criteria necessary for a literary dystopia. The war is isolated in time and space, concentrating readers' attention on the issues Thaden raises. Neither the date nor the location of the war is given, although the range limitations of the aircraft of the day suggest that it is taking place on the North American continent. The enemy is unnamed, existing only as a threatening force somewhere over the horizon. Ironically, and in keeping with the dystopian context, only the United States seems to have embraced Douhet's argument, for the enemy raids that are mentioned hit only military targets and Jiles returns to an undamaged community. The ending, although ambiguous in many ways, is generally a positive one, posing a tacit recommendation for the future.

Why the chapter was dropped from the 1973 and 2004 reissues of *High, Wide, and Frightened* is puzzling, although a possible cause lies in the pervasive American anti-war sentiment of the mid-1970s. Riots protesting American involvement in Vietnam had

marked the Democratic National Convention in Chicago in 1968, and National Guard soldiers had fired on a student demonstration at Kent State University in 1970, killing four students. American involvement was being viewed with increasing hostility, and public protests of the war continued until the fall of Saigon in 1975 and the withdrawal of all American military forces. Thaden's editors in 1973 not unreasonably might have believed that her treatment of total war would clash with the national *Zeitgeist* and distract readers from her other, more progressive views.<sup>47</sup>

The chapter nonetheless has its merits. Although the military tactics and aircraft in it are dated, it remains a valuable part of Thaden's thinking about aviation and women. In one of the few published comments on the chapter, Joseph Corn describes the story as an argument for "flying and equality" and an expression of "discontent with existing sex roles." He could as well have pointed out its use of dystopian conventions to make its larger case. As a more recent critic of dystopia has written, speaking of the genre in general, "by rejecting the traditional subjugation of the individual at the end of the novel, the critical dystopia opens a space of contestation and opposition for those groups—women and other ex-centric [*sic*] subjects whose subject position is not contemplated by hegemonic discourse—for whom subject status has yet to be attained."<sup>48</sup> Thaden's chapter is a model for this contention.

Throughout the story she maintains that women are capable of combat duties and will carry out those duties at least as well as men. She supports her argument by placing her protagonists in the bleakest and least promising of situations, a war being conducted according to Giulio Douhet's theories. Fought with heavy bombers and destruction from the air, bringing about arbitrary death and mutilation, modern war unavoidably traumatizes those who engage in it. The memories of its horrors are long-lasting, and the permanence of its victories is uncertain. Should such a war arise, women as well as men should share in the responsibilities of combat and national defense. She implies, in fact, as Deborah Douglas points out, that "injury in the line of duty should be seen as a socially accepted hazard, regardless of sex."<sup>49</sup> Women as well as men will be wounded and killed in the undertaking, and the reality must be accepted.

Yet Thaden's conclusion offers a cautiously optimistic ending that reflects the "social project of hope" so central to the dystopian vision. In her projected world the society will embrace a larger view, recognizing that "one individual's injury should not affect women's participation in general." In thus accepting the bleaker side of war, society also accepts the possibility of more positive consequences. Jiles knows that she *and the society* have adjustments to make but looks confidently to the future. She will adapt to her wounds and society will adapt to the new values required by the war and its veterans. The war has proven the worth of women in a traditional male realm, and they can now come to be accepted (albeit slowly) in other nontraditional realms. The society

will become, willy-nilly, a more progressive, enlightened one; the forces of reason and equity will at last prevail, and they will do so in great part because of the participation of women.

Her journalistic and autobiographical writings about the air-based society, women's place in the realm of flying, and the implications of aerial war explored readily apparent, real-world issues. The final concern about which she wrote is one far less mundane but no less significant. This is a consideration of the intangible and personal benefits that flight can—and will—bestow upon the individual. Early on, she noted, “There is something one gets from that thing we have called flight, *that one cannot find elsewhere*.”<sup>50</sup> Like so many of the women pilots who preceded her, she saw flight and flying as providing a distinctive, unique experience with far-reaching consequences.

She expanded upon that distinctive benefit in 1930, suggesting the extent to which flying affected one's vision of life and the world: “There is another type of thrill . . . which comes from that feeling which just soaring along in the air gives . . . , cruising over layers of rolling fleecy clouds, over jagged mountain peaks, broad fertile valleys with their neat rows of fruit trees, pastures filled with tiny toy cattle. Words cannot adequately describe flying!” Like Earhart and her other predecessors, she found the flier's perspective an elevated one, lifted above the mundane. Features of the ordinary world (tilled valleys, pastures of “toy” cattle) shrink almost to insignificance, while the pilot herself is able to overcome even the elements of nature. When she writes of soaring over mountains and clouds, moreover, she gives the flier a transcendently celestial quality, lifting her almost wholly out of the realm of ordinary existence.<sup>51</sup>

A column the following month singled out the “limitless space” that flying provided the pilot, and “the thrill of being so gloriously alive.” In the air, the flier's world can be a perfect, limitless one. It is a clean, pure construct in which there is total command of a swift and graceful craft, one in which the individual becomes “gloriously alive” in ways impossible to attain in earthbound society. Individual skill and accomplishment, the excitement of discovery, and the boundlessness of the atmosphere come together to make the flier a person set apart from the masses—and all the better for that separation.<sup>52</sup>

Thaden's vision of the unique transcendence of the flier's world extended even into her late-career writings. In reporting her 1932 endurance flight with Frances Marsalis she spoke of the practical and technical matters involved, but then included the personal and emotional: “Here I am,” she wrote in her log during a nighttime stint, “hating like everything to come down. The night is so beautiful, so peaceful and calm. . . . We haven't been bothered by the pettiness of every day existence for a week and that fact is enjoyable in itself.” By now it is apparent that she identified herself with the flier's world—one elevated above the “pettiness” of mundane life, and one from which she

“[hated] like everything to come down.” Even in the midst of a physically exhausting quest for a flying record, dirty, sleep-deprived, and cramped, she sensed the uplifting benefit of flight.<sup>53</sup>

She drew together all the benefits accruing from flight in her remarks to the Venice High School seniors. She had already spoken to them of the determination and courage that will enable the students—as they have enabled women fliers before them—to follow their ambition in the world of the workplace. Now she added the more individual, even spiritual virtues that each may gain from the undertaking. “Piloting . . . gives a *higher* sense of values and it brings a *deep peace*. Flying is *pure* joy in itself.” In Thaden’s eyes, the pilot was indeed a person set apart, a person with a “higher sense of values.” These, in turn, inform and guide an approach to her existence that is a distinctively elevated one, and its execution will bring “deep peace” and “pure joy.” For all her commitment to the practical advancement of aviation, she found it to be an undertaking with the potential to be far more exalting than simply a way to make a living.<sup>54</sup>

Her autobiography of 1938 was in many respects an interim report. She wrote as a person still young, looking back on accomplishments still fresh—in her mind and in that of the public. She reflected a consciousness of herself as a woman pilot, taking pride in the knowledge that her work was quietly helping to change public attitudes toward women and helping to open new doors for women in aviation. That pride resonated in the emotional and professional high note that ends the book: a farewell to Amelia Earhart, a friend and colleague whose disappearance was as fresh a memory in 1938 as Thaden’s own accomplishments. The book did well enough that the publisher issued a second edition in 1973, allowing Thaden to add a retrospective prologue and epilogue. The University of Arkansas Press reprinted this edition in 2004, adding a preface by women’s aerobatic champion Patti Wagstaff. When Thaden shifted her focus to a wider, more national audience, she somewhat modified her emphases. Most of these works were directed toward the aviation community, regional as well as national. Nonetheless, her principal themes of fostering aviation, realistically assessing the requirements for successful flying, encouraging the involvement and advancement of women, and evoking the ecstatic nature of flight, remained the same.

Just as Earhart’s disappearance left unanswered questions about her career, however, *High, Wide, and Frightened* leaves open questions about Thaden’s subsequent life. At the time of its original publication she was only in her early thirties and had the potential for building an even more notable career in years to come. As she initially presents her story, her future is a blank slate. When the book was reissued thirty-five years later, life had moved on. She now undertook to present the thoughts and syntheses of an older, more experienced person, looking at what was once the future but now had become her past. She had, she said, seen aviation evolve from the individualism of

the 1920s and 1930s (the so-called Golden Age of American Aviation) to the corporate mindset of the present, and her new perspective allowed her to see that development in a larger context.

The tone of her additions is elegiac, as befits an older person's looking back upon her youth. Three important paragraphs of the 1973 prologue open with the nostalgic qualifier, "*When the airplane and I were young*," a recognition that both she and aviation had changed. By thus linking her personal and vocational growth in the intervening years with that of her profession, she concluded that "to have been born at a right time was the greatest good fortune," and she acknowledged that World War II effectively put an end to what she described as "the most fascinating, the most personally challenging, the most personally rewarding period in aviation."<sup>55</sup> The interwar years were ones well suited to mesh with the hopes and aspirations of the young as aviation moved from its own awkward adolescence to a full maturity.

Elegiac as her additions to the 1973 edition are, there is one topic on which she remained steadfastly unmoved. This is the inherent ability of women to deal with matters aeronautical with the same competence and efficacy as men. Late in the 1938 edition she spelled out her basic conviction: "Generally speaking, women are innately better pilots than men." Their naturally occurring physical and psychological qualities gave them an edge over men, and that edge is manifested in their ready capability in the cockpit. All that holds them back is the woman pilot's "inability to secure flight training comparable with that available to men, that and the scant opportunity of securing flying jobs to gain experience."<sup>56</sup> The same passage appears, without alteration of any sort, late in the 2004 edition. To Thaden, that women possess all the qualifications for careers in professional aviation seems an article of faith. All they need is opportunity.

The 1938 edition articulates Thaden's lasting commitment to professional aviation. She talks of how the women in the 1929 Derby "were out to prove that flying was safe, to sell aviation to the layman" and maintains that flying is safer than automobile or marine transportation. Only the relative novelty of the airplane in 1938—"a strange mechanism transporting us through a strange medium"—held back total public acceptance. In the future, however, citizens, now grown accustomed to the airplane will be no more fearful of it than they are of the railroad and the automobile, and commercial flight will be an integral part of life.<sup>57</sup> She continues as well her advocacy of women in aviation, approvingly quoting Earhart's belief that "the more women who fly, the more who become pilots, the quicker will we be recognized as an important factor in aviation." She returns to this contention in the 1973 epilogue, observing that although women's acceptance in the field is still incomplete, "many of the earlier prejudices have been surmounted."<sup>58</sup> She acknowledges the obstacles that still exist but holds that if some prejudices can be overcome, others may also fall to the unique nature of the aviation experience.

Realism and women's issues give way to idealism as the autobiography takes up Thaden's final concern, her praise of the exalting qualities of flight. As early as 1927 she came to believe that flying gave her "better understanding, peace, and contentment," reducing the mundane concerns of daily life to the frettings of "an infinitesimal bit of humanity." Calling flying "the only real freedom we are privileged to possess," she used her own career to illustrate the enterprise's benefits. Her achieving her speed record of 1929, for example, left her "exalted with speed, with swift, powerful, unobstructed flight." So elevated was she that she was "ready to burst with the joy of being so thoroughly alive," finding in her achievement "mastery, accomplishment, freedom, ego, verve, vitality." Thus, she said, flight can motivate, stimulate, and elevate the individual.<sup>59</sup>

The National Women's Air Derby deepened her understanding as she found herself and her colleagues collaborating in "hope, determination, a feeling of history in the making with each one playing a part." Whatever the outcome of the race might be, it offered *all* its participants "adventure, youth soaring carefree on wings of romance, intoxicated, happy, thrilled, suffocated in rapture." She and her friends were breaking new ground—in flying skills, in technological mastery, in demonstration of the abilities of women. The exercise was anything but routine and stultifying, offering instead the privileges of exaltation and freedom.<sup>60</sup> What began as the privileging of an individual had expanded to the privileging of a class—women, to be sure, but *pilots* even more so. The pilot was indeed a person engaged in activities of a higher sort.

Her view of those activities remained strong in the 1973 edition, as is clear when she contrasts "then" and "now" to explore a distinction that, she said, she only recently had understood. This is the distinction between *flying* and *flight*. *Flying* she defines as the practical, mundane component of aviation. It is, she says, "the essence of the mind." From it have come an emerging worldwide network of commercial aviation, an expansion of civil aviation, and, inevitably, the growth of a sophisticated and constantly evolving military aviation.<sup>61</sup> These developments are significant ones that make their own distinctive contributions to life, but they are solidly rooted in the rational day-to-day world of technology, defense, and commerce.

*Flight*, however, is another matter. *Flight* offers the individual "a fringe of dreams not yet born" and "the ecstasy of discovery." She now recognizes that she was fortunate enough to live in a time of exploration and discovery, "when flying and flight were synonymous," when "innovative progress and derring-do were the order of the day," and when "every accomplishment, no matter how meager, became an advancement in the state of the art." But times change. Thanks to the crowded skies and expanding regulations of modern America, *flying* by 1973 has surrendered some of its freedoms. Even so, she contends, *flight* retains its magic. Its enduring appeal is visible in "the stars shining in the eyes of new pilots" and manifested in "the aura surrounding each deliriously



A victorious Louise Thaden waves from her Travel Air B-4000 at the conclusion of the National Women's Air Derby (1929). LOUISE MCPHETRIDGE THADEN COLLECTION, COURTESY OF SMITHSONIAN NATIONAL AIR AND SPACE MUSEUM (NASM 83-2133)

happy owner of a restored 'antique.'"<sup>62</sup> Even if new realities have forced themselves upon the experience of *flying*, the inherent, essential appeal of *flight* remains.

Engaging in *flight* can elevate the pilot still further. The realities of 1973 notwithstanding, she holds to her belief in the power of *flight* to exalt. *Flight*, Thaden said in 1938, offers "soothing splendor—the ability to go up into God's heaven, to look out toward distant horizons, to gaze down upon the struggling creatures far below, to forget troubles which so short a time before seemed staggering."<sup>63</sup> By 1973, *flying* has changed, but *flight* has not. "The essence of the spirit" that "nurtures the soul," it continues to offer "abiding peace" and absolute serenity." It embodies "faith and compassion" and "purest joy," and is "awesome, often ethereal, emotionally wondrous and all-pervading."<sup>64</sup> The technological and statutory changes affecting *flying*, when examined closely, prove to be only cosmetic; the essential nature of *flight* remains pure. In the overall endeavor that makes up aviation, *flying* appeals to the rational, empirical side of the human animal. *Flight* speaks to the intuitive and emotional. The pilot's experience, however practical or commercial its goal, can still become a spiritual, godlike



one, empowering the pilot to view with divine detachment (if not sorrow and/or pity) the trivial lives of the earthbound.

When Earhart began writing, aviation was still feeling its way. When Thaden wrote a decade later, aviation was far more a part of life and airplanes seemed destined for everyone's hands. By 1973, airplanes were commonplace but much less accessible. Yet if their purity was blunted by their worldwide use in warfare, they retained, at least in her view, distinctive powers. The 1973 epilogue reflects that evolution. After the restrictions of World War II were lifted, individuals could once again return to the air: "When we civilians were allowed back into the air, it was almost as ecstatic an experience . . . as it had been . . . so many years before." Some of the ecstasy has perhaps been blunted by the horrors of the war, but the essential nature of *flight* is unchanged. "Ah, flight!" she writes. "There is no substitute for it! I could feel whole again! Gloriously, vigorously, satisfyingly alive again!"<sup>65</sup> Wartime may have required compromises and demonstrated unthinkable horrors, but, in its aftermath, *flight* can still restore the individual's necessary unity, leading her yet again to a distinctive, elevating life.

From 1929 onward, Thaden accepted aviation as an organic part of the existing world. She saw women as deserving equal standing in its operations, excluding only those activities requiring significant physical strength. Yet, for all her acknowledgment of the obstacles facing the aspiring woman flier, for all her belief in the practical possibilities of aviation, present and future, she clung to the aviator's belief that the simple act of flying carries its own distinctive if intangible rewards.

She saw two principal benefits. Like Margery Brown, she believed that flying "has a decided tendency toward shaping the characters of men and women." That character-shaping takes place unobtrusively, at least within those men and women most responsive to flight's influence. Part of it develops from responsibility: aviation is not an undertaking for the careless. Among the many things dramatized by the 1929 Derby, for example, was the recognition that "a very small portion of the flying is done in the air, and that if you don't check things yourself there is going to be something to go wrong."<sup>66</sup> Flight also teaches the importance of reliability and of carrying through with a commitment. There is, she believed, "something [in flying] which keeps [aspirants] plugging in spite of discouragement until they have arrived at that point of happiness in a job well done." She conceded that there will be "long hours of drudgery, fraught with discouragement," but from them will come "a new grasp of the fundamentals" and the emergence of "a self-sufficient man or woman." And that self-sufficient person will take to the skies, the "sole master" of the airplane's—and life's—controls and finding in flight "the only real compensation in life."<sup>67</sup>

The second benefit is greater still, for it extends beyond the purely individual into the universal and links Thaden's vision of flight with that postulated in Joseph Corn's "winged gospel." This is the belief that flying can give the individual a new level of

perception. The process begins with the recognition of flying's potential: the receptive individual will seek "new experiences, exciting things, anything that offers relief from the monotony of every-day living." That relief will be found in *flight*, for "in all history there is probably no sport, no means of transportation that offers so much as aviation." The individuals who embrace this vision of flying will find themselves "sharing the romance, the adventure, the exhilaration of flight."<sup>68</sup> Here, already, is the beginning of the purifying process, as a frankly practical undertaking leads to a profound exhilaration.

The process quickly takes its adherents to the next level. Those who approach flight in a receptive frame of mind will find that they are liberated from time: "Time does not pluck at our sleeves. We are beating it. . . . Our days lengthen; we find more hours for our job." They are freed as well from the trials of mundane existence: "The conventions, the pettiness, and the worry of the earthbound are far beneath us. We pass over them swiftly, heedlessly." Once freed, moreover, from the daily grind, the individual can revel in a new kind of self-discovery, finding that "the upper air of the earth and the upper levels of the mind are clear and clean." And, when the clarity of the air is translated into the working of the mind, the pilot's "vision is as broad as the sky."<sup>69</sup>

From the clarified mind and the broadened vision comes the final step, making the pilot of reality into the flier of the spirit. New perceptions and new possibilities emerge: "Only the large, eternal beauties are visible from our vantage point. And we are aware of glories yet unexplored above us." The flier of the spirit will experience the eternity of those beauties and take up the challenge of the unexplored glories, and the transition will become complete. "As we fly," Thaden writes, "we are conscious of a kind of superiority, a feeling of self-grandeur, not akin to egotism. It is the sense of freedom. We are . . . the masters of our fate—and humble in the face of all we see." Here, at last, is the ultimate expression of the flier: a person free, superior, and wholly self-determining, yet one humble in his or her consciousness of humanity's place amidst Creation's richness.<sup>70</sup> Despite the darkness of her views in "Noble Experiment," the magic of flight persists.

Thaden's ready nomination as a likely successor to Earhart attests to the substantial—and newsworthy—achievements she recorded. It also attests to a more subtle yet no less significant achievement, her demonstration that a career of professional flying and business involvement with flying were compatible with a traditionally "domestic" life. She acknowledged in 1938 that she retired from professional flying in response to a pledge made to her husband at the time of their marriage; she also, in 1973, argued "that no woman can successfully have two careers simultaneously." (That Earhart disagreed with her was the source of several good-natured debates.) The historical record says otherwise. When she retired from flying, writing candidly of the professional world and thoughtfully of the emotional one, she was an experienced, record-holding pilot,

the mother of two children, and a well-regarded representative for the Beech Aircraft Corporation. She had demanding responsibilities of her own, both at home and in the workplace. She embraced her husband's name in her professional flying and collaborated with him in his business ventures, moving from place to place as that business demanded.<sup>71</sup>

When she returned to flying in 1973, the world was changed. She had seen the reality of three wars; she had engaged in defense work with her husband's manufacturing business (and had taken over its management following his death in 1969); she had confronted problems both personal and professional; she had seen the protests of the civil rights movement and the turmoil of the anti-war factions during the decade of the 1960s; and she had risen in the ranks of the Civil Air Patrol. She knew well the nature, trials, and limitations of twentieth-century life, whether on the ground or in the air. Yet she actively retained her convictions concerning *flight* as an uplifting undertaking. She speaks of her own excitement and quotes a 1973 letter from her adult daughter (herself a pilot), saying that "there is still that something *special* and mystical connected with flight . . . the moments of clear communing in the solitude aloft with the overwhelming appreciation of the magnitude of the beauty and order of the universe both above and below." She makes no attempts to proselytize, letting women decide for themselves the merits of family and profession. She details her own choice and, for her, the wonder of *flight* endures in the mundane world.<sup>72</sup>

Despite her prominence in professional aviation and the widespread public notice given her accomplishments, Thaden never achieved Earhart's iconic stature. Her husband's interests were technical and commercial rather than focused on publicity for his wife, and her own attentions when not flying were increasingly devoted to her family. (Her decision, unlike Earhart's, to use her married name as she pursued her career suggests as much, as she worked to balance the demands of her professional and domestic lives.) Nonetheless, she made her mark in the "man's world" of aviation. Unlike Earhart, she lived through and past the exhilaration of the 1930s. She recognized the era's uniqueness and idealism and thus could view its passing with sadness, compassion, and understanding; indeed, she attributed her memoir to "aviation's 'golden age,' of which this book is a product."<sup>73</sup> Her actual achievements equaled Earhart's in substance if not in flair, and her career overall was a testimonial to flight and its appeals. She had no difficulty in maintaining that those qualities had a real and important place in a practical world. Throughout her career and afterward her faith in the transcendent qualities of flight was deep-seated. Her life is a telling record of one woman's making a place for herself in the realm of professional flight, and her words are an eloquent testimony to the enduring power of flight.

## V

# Ruth Nichols, the Air-Minded Society, and the Aerial Frontier

**I**N MID-SEPTEMBER 1927, four months after Charles Lindbergh's transatlantic flight from New York to Paris, Ruth Rowland Nichols received a letter from an older but lesser-known flying enthusiast. The writer was Amelia Earhart, who, seeing frequent mention of Nichols's activities in the press, posed a question to her as the more experienced flier: "What do you think of the advisability of forming an organization composed of women who fly?" Nichols's response led Earhart to write a second letter in April 1928, at about the time she was being approached to make the *Friendship* flight. Here she talked more concretely and specifically about looking at "the feminine end of flying with action in view." The letter provided a number of organizational points for further discussion, then concluded: "To have a purpose is sometimes a deadening thing, but I think to boost aviation is behind all thought of mine and probably of yours." Thus, by early 1928, Nichols was aware that women other than herself were attracted to aviation and was sympathetic to their cause.<sup>1</sup>

At the time of Earhart's first query, Nichols (1901–1960) was among the most prominent women pilots in the United States. On her way to that flying prominence, she enjoyed all the benefits of a privileged upbringing. The daughter of a well-to-do stockbroker in Rye, New York, she attended an elite finishing school, made her social debut in Miami in 1922, and graduated in 1924 from Wellesley College with a degree in sociology. She had her first taste of aviation in 1919 when, as a reward for her graduation from finishing school, her father treated her to an airplane ride. The flight proved to be a life-changing experience, for she ultimately turned her back on the conventional life of a woman of her class and devoted herself to professional aviation. Nichols began flying in 1922, won her floatplane license (the first to be issued to a woman) in 1924,

her land plane license in 1926, and her transport license (the then highest classification from the Civil Aeronautics Authority) in 1928. She was the second woman to win a transport license (Earhart, awarded *her* transport license in 1929, was the fourth) and the first to be licensed as an aeronautical mechanic.

Her first public notice came in 1925, when she wrote a brief account of her post-graduation round-the-world Grand Tour for the trade journal *Aero Digest*. More notice followed in 1928 when she took part in a record-setting nonstop flight from New York to Miami, then served on the committee that welcomed Earhart in New York upon her return from the *Friendship* flight. By year's end she was being cited in print as among the most distinguished women pilots in the United States. A nationally syndicated newspaper article remarked on the relatively few women active in aviation at the time, then went on to talk of eighteen who were or had been notably prominent in "setting and adhering to new standards of safety and sanity in flying." It linked women's endeavors in aviation to both feminism and optimism, then spoke of Nichols's transport license and her work as a sales/demonstration pilot with the Fairchild firm. Earhart was passed over, but the story looked back to Harriet Quimby, Marjorie Stinson, and Ruth Law; of Nichols's contemporaries cited, six would take part in the next year's National Women's Air Derby.<sup>2</sup>

In 1929, Nichols competed in the Derby alongside an international slate of nineteen other women pilots. Her aircraft, a Rearwin Ken-Royce powered by a Challenger engine, was a compact new design; with a wingspan of thirty-five feet, a length of twenty-five feet, and a cruising speed of 107 mph, it had been granted its airworthiness certificate earlier in the year. Nichols's machine and her skills proved well up to the demands of the race. She was in third place at the final leg of the race in Columbus, Ohio, when an accident knocked her out of contention. As she was landing following a prerace test hop, a rogue wind gust slammed her craft into a road grader that had been parked perilously close to the runway. She was unhurt, but her airplane was demolished.<sup>3</sup>

Following the Derby and her work helping to organize the women's professional association, the Ninety-Nines, Nichols sought other records. For these she used a Lockheed Vega provided by the Crosley Radio Corporation. In 1931 she set records for altitude (28,743 feet), speed (210.636 mph), and nonstop distance (1,977 miles), becoming the first woman to set all three records with the same airplane. The same year she launched plans for a solo flight across the Atlantic, intending to use the Vega to "demonstrate the progress in the design and construction of airplanes since Colonel Lindbergh and Colonel Chamberlin made their flights in 1927." Had a crack-up in New Brunswick not intervened, she could have beaten Earhart's 1932 solo flight by almost ten months.<sup>4</sup> She continued her endeavors after recovering from the accident, setting an altitude record (21,350 feet) for diesel-powered aircraft in a modified Vega owned



Ruth Nichols and the Crosley Radio Corporation's Lockheed Vega in which she set records for speed, distance, and altitude (1931). COURTESY OF SMITHSONIAN NATIONAL AIR AND SPACE MUSEUM (NASM 79-3164)

by aviation legend Clarence Chamberlin. She was the subject of numerous interviews in the press, published articles of her own in both trade and popular magazines, and in her heyday was generally credited with being “one of the most accomplished pilots in Earhart’s . . . generation.”<sup>5</sup>

Between 1930 and 1950 Nichols devoted much of her energy to humanitarian causes. She became a member of the Emergency Peace Campaign in 1936, and, prior to World War II, founded Relief Wings, an organization intended to enlist amateur fliers for emergency flights in times of natural disasters or other emergencies national and international. The group was absorbed by the Civil Air Patrol (CAP) after the attack on Pearl Harbor. Following the war, she served with the United Nations International Children's Emergency Fund (UNICEF) and took part in a world flight evaluating its campaigns. She continued to fly as opportunities presented themselves and in 1958 set a women's altitude record (51,000 feet) flying an Air Force Convair TF-102A Delta Dagger, a trainer version of the USAF's first-line jet fighter. She also became an ardent spokesperson for the greater involvement of women in the emerging space program, although her efforts in the latter area met only official resistance.<sup>6</sup>

When Nichols began to write about aviation, widespread ownership of private airplanes seemed certain. In March 1929 *Scientific American* featured an article by Alexander Klemin of the Guggenheim School of Aeronautics, who, though doubting whether Ford's Flivver airplane would ever reach a status comparable to the automobile's, readily conceded that "millions of people in the United States are deeply interested in flying and . . . private owners will increase rapidly in numbers."<sup>7</sup> Nichols sought to encourage that public interest. She could do little about the inherent costs of private aviation, but she strove to educate potential recreational fliers in the nature and complexities of the sport. She also believed that she, simply as an individual woman pilot, could contribute to aviation's progress. Record-setting, she understood, carried benefits for aviation as much as for the man or woman setting the record, and every new record, or its attempt, helped to move aviation forward.<sup>8</sup> The several records she set demonstrated, she believed, both the importance of advances in aviation technology and the opportunities that aviation held for even the individual flier. Finally, she extended her concern to the social and moral implications of aviation and the possibilities it held for American society.

Nichols's published writings fall into three broad categories: occasional pieces such as the account of her Grand Tour or a late-career reflection upon her Quaker faith; newspaper and magazine articles dealing with her record-setting efforts, the Aviation Country Club enterprise, and civil aviation generally; and a book, her autobiography, published in 1957. She also left behind a substantial body of unpublished material, principally texts of talks given to various women's groups, drafts of magazine articles, and files of her plans for various record-attempting flights. By far the most intriguing part of her unpublished work, however, is the unfinished manuscript of a novel, "Sky Girl." These artifacts, held in the Ruth Nichols Collection of the International Women's Air and Space Museum, Cleveland, Ohio, are a valuable complement to her published work and add a telling insight into her views of flight.

"An American Aviatrix Abroad," Nichols's first venture into print (1925), in many ways lays the foundation for all her subsequent writings. She was still rooted in the comfortable socioeconomic milieu of her youth: an editorial introduction to the article described her as "socially distinguished" and "one of the world's best-known aviatrixes," then categorized her as "an American society girl, interested in flying as American society girls a few years ago first began to be interested in motoring." She opened the account with a nod to flying's accessibility and proceeded with the tacit assumption that her readers would share her outlook.<sup>9</sup>

In a brief synopsis of her trip she reviewed the status of popular aviation at her stops. She piloted craft at clubs and private fields in Hawaii, France, and England, observed that the English seemed to be trailing the French in aviation development, and concluded with a fervent endorsement of civil aviation: "It is a marvelous sport and has wonderful commercial value. I believe that within five years anyone who can afford a

Cadillac car will be able to afford an airplane.”<sup>10</sup> Her imagery was revealing. She expressed a progressive optimism and general sense of democratization in her paralleling of the airplane and the automobile, but, citing a Cadillac as an analogue, tacitly associated flying with the upper economic strata.

After returning from her junket, she worked briefly in the women’s department of a New York bank, then moved to the Fairchild Airplane & Engine Company, where she worked for several months in sales. She left this post to join the Aviation Country Club enterprise, one of the three founders of the undertaking and the women’s editor of their publication, *Sportsman Pilot*. Her work here produced a cluster of articles appearing in several outlets between 1929 and 1930, all intended to stimulate creation of the clubs, a network intended to encourage aircraft ownership and general aviation flying. She saw her efforts, as a socially prominent woman who flew, as playing “a part in the development of aviation which [she] believed even then must better the lot of mankind.”<sup>11</sup> These articles proclaimed her belief in the importance of aviation for all citizens.

“Aviation for You and for Me,” published in *Ladies’ Home Journal*, in 1929, introduced the aviation country club concept but concentrated more on the need for public education about flight. The *Journal* was an apt—and influential—outlet for Nichols’s views. Founded in 1876, it became the first American “slick” magazine to attain a circulation of one million, featuring many of the times’ most popular authors, mounting a range of modest social crusades, and offering “a forum from which anyone was glad to speak.” When Barton W. Currie became editor in 1921, it became still more forward-looking. Currie, writing in 1926, briskly asserted that women’s magazines “are no longer edited for helpless, submerged and inarticulate gentlewomen who in order to maintain gentility and purity of thought must stifle their impulses and disregard their complexes. . . . The intellectual development of American women has jumped forward one hundred years in the past ten. The pose of masculine superiority has lost all its old swagger.” Currie left the editorship in 1928, but his successors continued his philosophy, with articles ranging from “standards and specifications for intelligent buying” to “public questions involving both domestic politics and international relations.” Nichols’s arguments for aviation only added to the magazine’s encouragement of a developing role for women as she spoke directly to its general, national readership.<sup>12</sup>

Nichols’s approach was straightforward. Aviation was advancing almost daily, with significant developments in safety, in airplanes themselves, and in the national infrastructure to support them. “People must be brought into more frequent and closer contact with the planes themselves,” she observed, but once the public understands what flight entails *and* grasps the increasing safety of the undertaking, citizens will readily embrace recreational and commercial flying.<sup>13</sup> Her second article, “Flying for Sport: Coast to Coast With Aviation Country Clubs,” published four months later in



the *Journal*, summarized the twelve-thousand-mile flying trek she and two associates made around the country to publicize the idea of aviation country clubs. Secondary goals were to survey the overall state of the country's readiness for general aviation and to stimulate flying as recreation.<sup>14</sup> In both instances, she affirmed that women were ready and able to participate in the enterprise.

Her "America's Reaction to Social Aviation," appearing in *Sportsman Pilot* the next month, took up the aviation country club initiative. Here again her choice of outlet was apposite. *Sportsman Pilot*, published from 1929 until 1943, was the house organ of Aviation Country Club, Inc. Aimed at the affluent individual aircraft owner, it emphasized the social and recreational possibilities of flight. Her argument in the piece was again straightforward: the United States had ample means for popular aviation, with aircraft steadily becoming more affordable and fields more accessible. Pointing out that "social aviation is simply group flying by congenial individuals in an atmosphere of comfort, refinement, and privacy," she argued that the clubs could educate the general public about flying and help to alleviate the cost of buying and maintaining an airplane. Although better-off club members might own their own craft, each club itself could own one or more airplanes for other members to share. The cost to those members would be far less than that of owning and maintaining a ship of their own.<sup>15</sup>

She returned to this theme in "The Sportsman Flies His Plane," published in the *National Aeronautic Review*, where she reported the opening of the Long Island Aviation Country Club, the first of the groups to form "a completely equipped flying center, situated conveniently near the well-to-do suburban community of a large city." Clubs like this one, she posited, would be attractive to women as well as men, would make aircraft available at a modest cost, and would become "an important influence in building the American aeronautical industry." The publicity associated with club-sponsored events would heighten general awareness of sport aviation and inspire more and more of the populace to turn to flight. The movement's intention might be to democratize aviation; however, echoing the account of her Grand Tour, she tacitly implied an elevated social status for the club, listing Charles L. Lawrence of the Wright Aeronautical Corporation, Chance Vought, founder of the Vought Aircraft Company, and Cornelius Vanderbilt Whitney among the first members.<sup>16</sup>

Two of her writings take up the nature and importance of record-seeking. "Ruth Nichols Soars Six Miles Above City, Setting New Record," written for the *New York Times*, was a matter-of-fact report of her record-setting altitude flight of March 1931. She candidly related the frigid temperatures and rarefied atmosphere she encountered approaching thirty thousand feet but nonetheless came away "impressed by the ease and the casualness" of the flight. She returned to the subject of record-setting in "Behind the Ballyhoo," published in *American Magazine* the next year. Here she acknowledged the sensationalism of flights attempted purely for publicity but contended that "if

record flying were to stop, aviation progress would slow down.” She then reviewed her own flights that set altitude, speed, and distance records, noting that her work “resulted in new and interesting ideas and designs. . . . It is by such means that new equipment and new ideas are developed in this far-reaching industry of the air.”<sup>17</sup> Her point here is a legitimate one, particularly if considered against the backdrop of aviation’s earlier days. It reflects, however, a position that increasingly was under critical scrutiny as aeronautical research became more complex and more sophisticated.

As her pursuit of records lessened, she turned more and more to considerations of aviation as a business and the larger concerns of flight and women. Like Earhart, she strove to let women know that work in aviation took many forms. “Women’s Share of Aviation Job Will Increase, Says Ruth Nichols,” written for the *New York Herald Tribune* in 1933, reported a survey made of several aviation-related businesses (including an instrument company, a parachute manufacturer, and a pontoon maker) and concluded that nonflying jobs for women were becoming more prevalent than flying ones.<sup>18</sup>

An article in *Pictorial Review*, published in the same year, was more outspoken in its progressivism. Women of the day, she said, live “in an age of feminism.” That push for women’s greater participation in the workplace had led to significant advances; why, then, did it not affect aviation as well? “In modern business they [women] have become indispensable. Is there any reason why they should not take their proper place in the development of flying, the coming mode of transportation?” She conceded a lack of opportunities for women in professional aviation, like Earhart acknowledging that the opportunities for training available to men were not open to women. Even so, if the woman pilot is “interested in aviation for its own sake,” she will, ultimately, “find her place in aviation.”<sup>19</sup> Aviation can only complement modern trends for women.

Nichols herself flew a stint as a pilot for a nonscheduled airline in 1932 (New York and New England Airways, founded by her friend Clarence Chamberlin), preceding by two years Helen Richey’s more widely publicized appointment as pilot in a scheduled airline. Then, in 1933, she and Earhart were invited to take part in the transcontinental Bendix race. Mechanical problems with her aircraft kept Nichols from participating, but the occasion gave her opportunity to make the point “that if women flyers were given an equal break with men in time to prepare for the Bendix, we’d show ‘em.”<sup>20</sup> The debate over women’s participation in the Bendix competition also prompted her to write of the existence of separate competitive rules for male and female fliers. Like Earhart, Nichols held this policy to be an injustice, putting women at an undeserved disadvantage, and she campaigned steadily for revision of the rules. After the Bendix race itself was formally opened to women in 1935, Louise Thaden handily won the 1936 race, Laura Ingalls took second place, and Earhart fourth, making women three

of the top five finishers. Nichols applauded Thaden's victory as helping to establish "the future prestige of women flyers" and to advance gender equality in aviation.<sup>21</sup>

Nichols maintained her belief in aviation's possibilities for women throughout her career. An outspoken late-career op-ed piece for the *Washington Daily News* in 1959 is one of her most overt expressions of her concern with women's issues, for in it she asks directly, "Why Not Lady Astronauts?" Written on the heels of dealings with NASA and her appearance at a meeting of the American Rocket Society in Washington, it is a brief but scathing exposition of NASA's neglect of women. She asserts that "nature equipped women emotionally, physically, and even psychologically for space flight," then states bluntly: "It isn't chivalry which is keeping our researchers from thinking of women pioneering space flight. It is a matter of knowledge." Her stance was not surprising, for she had introduced the topic in 1957, ending her autobiography with remarks on the prospect of interplanetary exploration then adding, in her final sentence, "Of one thing I am certain—when space ships take off, I shall be flying them." Her frustration by 1959 is evident.<sup>22</sup>

Two final pieces take up the spiritual and humanitarian qualities of flight. "Thoughts While Flying," published in the *Christian Science Monitor* in 1937, returned to the premise that aviation could break down personal and national obstacles: "Between flying men and women throughout the world there is a bond that knows no national boundaries." Conceding the probability of an impending air war, she went on to detail the growing Emergency Peace Campaign, which she hopes will lead to "strong neutrality laws, and a national genuine hatred of war as an institution." The other essay, published barely six months before her death, linked flying and individual development. Flying had led her to believe that "we are here to grow. I know that I, and many other pilots, will find our growth—and destiny—written in the skies."<sup>23</sup> Even as her life and career were winding down, she held to her faith in the social and moral merits of aviation.

Nichols's longest piece of nonfiction, her autobiography, *Wings for Life*, while nominally chronological in its narrative, largely parallels the themes and sequence of her shorter writings. Much of the account deals with her discovery of, and professional commitment to, aviation; an admiring foreword by Rear Admiral Richard E. Byrd emphasizes her desire to advance aviation and calls her "one of the outstanding women of our time." She is conscious of the place and role of women in the profession and stresses her support of their participation. Nearly as prominent as the aviation elements is her account of the importance of her Quaker beliefs, her growing interest in humanitarian causes, and the compelling sense of moral obligation behind that interest.<sup>24</sup>

The first overt expression of her expanded beliefs came early in 1937, when she joined the newly formed Emergency Peace Campaign, a program to keep the United States out of war. Stimulated by the activities of George Lansbury, a Labourite member of

the British parliament, and the encouragement of the peace division of the American Friends Service Committee, the Campaign was formally launched in April 1936. Under the leadership of Admiral Byrd, it quickly gained an endorsement by the General Conference of the Society of Friends and garnered support from such notables as First Lady Eleanor Roosevelt and the Reverend Dr. Harry Emerson Fosdick.<sup>25</sup>

The Campaign, at the outset, appealed to Nichols with its ambitions to instill world peace and “seemed the goal toward which [she] had been working, the solution to [her] inner conflicts.” It gave her an opportunity to barnstorm the Midwest and Northeast, speaking on the likelihood of a European war and the importance of maintaining American neutrality should that war come. Her efforts were satisfying but suffered a setback in 1939 when German forces invaded Poland. Faced with the reality of the war’s spreading across Europe, she determined to refocus her efforts on a project more directly linked to national security.<sup>26</sup> That project was the Relief Wings organization, which she established in 1940.

Relief Wings was a national federation of civilian pilots and light-plane owners intended to provide transport and other logistical support in the event of a national emergency or some other disaster. As the air war pummeled Europe, Nichols wanted to “demonstrate the humanitarian potentialities of the airplane,” saying that the formation of the group was an opportunity to combine “[her] great love for twenty years for aviation with constructive work for humanity.” The undertaking had the support of religious and industry leaders, and satellite chapters soon existed in thirty-six states. These enrolled the services of aircraft owners, business operators, and medical professionals throughout the country and made at least two training runs. The organization came to an abrupt end in 1941 when the immediate governmental restrictions placed upon civil aviation following the Pearl Harbor attack seriously curtailed its activities, and it subsequently merged with the newly created Civil Air Patrol (CAP).<sup>27</sup>

The CAP came about through the efforts of the National Aeronautic Association, which held that “private planes might be of great service to the defense of the country.” State governments soon began to take up the cause, and the CAP was officially established in late 1941. It quickly proved its worth. CAP units flew antisubmarine patrols along the coastline, took part in search and rescue efforts when needed, and supplied basic pilot training for aspiring fliers anticipating military service.<sup>28</sup> Standing by her Quakerism, Nichols limited her wartime participation in the organization to providing flight instruction, but she retained her affiliation with it until her death.

The postwar years brought her a new opportunity to involve herself in humanitarian causes when the United Nations created the United Nations International Children’s Emergency Fund (UNICEF). In 1949 UNICEF appointed her a special volunteer correspondent and she set out on a round-the-world flight with a team to investigate the conditions existing for children overseas. The flight took the group

to Japan, Thailand, India, Pakistan, Israel, and Greece, and on occasion the members met with world leaders such as India's Jawaharlal Nehru. Although she regularly took a shift as pilot of the four-engined UNICEF Douglas DC-4, her principal duties were earthbound. Nonetheless, the trip and its work remained for her a key moment in her life—a time when she had “found the crystallization of [her] life's desire and training—the use of aviation for a great humanitarian purpose.”<sup>29</sup> It was a fitting capstone to her humanitarian endeavors.

Whatever her dedication to humanitarian causes, Nichols makes clear that her first and dominant commitment was to aviation. She establishes this commitment in the opening pages of *Wings for Life*, declaring that “the freedom of the sky has been more necessary to me than food and drink, more important than the safe domesticity of marriage and children—though I wanted those too.” As she becomes more and more involved with the activities of aviation, she sees that it offers her a still greater opportunity, one that will allow her to communicate aviation's “new frontiers of the mind and heart for the people of the earth.” In her actions and in her writing, she strives to make the most of that opportunity, at last calling her attention to her part “in the development of aviation which I believed even then [1928] must better the lot of mankind.”<sup>30</sup> *Wings for Life* spells out just how she went about that pursuit.

The first benefit she discovers in aviation is freedom. Her own experiences, she writes, were ones of “heady exhilaration” and “complete and incredible freedom.” Unstated but no less present in these comments is her tacit rejection of the stiffly formal world of the debutante and the society woman; early on she establishes her preference for the grease-stained world of the hangar crowd over that of the gowned socialite. In these early years of her experience with flight she says, “I felt as if my soul were completely freed from my earthly body, with a new perspective on the immensity of the universe. . . . Through flight came joy, new perspectives, and help in blazing new frontiers of the mind and heart for the people of the earth.” In the air the flier finds a freedom unlike any available in mundane life, opening his or her vision to flight's personal, social, and humanitarian potential.<sup>31</sup>

While the exhilaration of flight is necessarily an individual response, it is shared by all in the community of pilots. Although each gender responds to flight in its own particular way, the commonality of the experience becomes the basis of a separate existence for both. For the woman flier, in particular, the experience is a formative one. It has its own language (“the language of pioneer women of the air”) and its own beneficent qualities—for Nichols, “the spirit of good fellowship and easy camaraderie that prevailed among the members of that exclusive society of airmen.” The key phrases here are “pioneer women” and “easy camaraderie.” Nichols considers herself and the larger community of women pilots to be pioneers in the American as well as the literal sense, necessarily sharing in the frontier-shaped adaptations experienced by

the nation's early settlers. She incorporates this interpretation of the flying experience into her unfinished novel, "Sky Girl."<sup>32</sup>

The "easy camaraderie" of which she speaks is equally important. She had grown up in a milieu emphasizing the attributes of high society, where wealth and status determined influence. In contrast, the community of the air was a meritocratic one. Members' acceptance depended on skill and achievement rather than wealth and prestige, and each new flight was a renewed test—and demonstration—of the pilot's ability. In the aviation world, individuals were judged by their mastery of the nature of flight and the natural laws of the air. The democratic and meritocratic elements of the airborne society, in Nichols's view, were the essential building blocks of the society of the future—one in which aviation played "a large part in any future unification of the nations of the world. Most flyers have an outlook instinctively international, and no matter what their nationality, they speak the same language. They share the freedom of the skies, they are familiar with height and distance, and they know how close together the air lanes can bring the most widely separated lands and oceans."<sup>33</sup> That future society would be a more cohesive one, and, as fliers' outlook broadens, it could become a better one.

The coming air age promised to be one in which the airplane and aviation worked as "miraculous new experiments which might change the customs of man." As those customs changed, moreover, the world itself would evolve in response. Human endeavors, shaped by flight, would "advance the science and understanding of aviation, and so are of eventual benefit to all civilization." Thus, Nichols anticipated fundamental, practical changes in human society, ones deriving directly from the practice of aviation. In their application, they may benefit the individual as much as the society.<sup>34</sup> She recognized the gap between the real world, with its sexism and other obstacles, and the open opportunity of the age of aviation. From its outset, aviation had been a male-dominated profession. It accepted a sometimes conscious, sometimes unconscious readiness among male pilots to denigrate women and their effort to join the enterprise. Until this handicap in particular was corrected, the ideal society of the air age would be delayed.

The first changes would necessarily come at the level of the individual citizen. Nichols sees those changes as begun in the first days of flight; "pioneer flyers," she remarks, "were not exactly average humans." These were folk whose "hopes were high, enthusiasm unbounded and energies almost limitless." Their enthusiastic optimism derived directly from their experiencing the attributes of the air and the adjustments that necessarily followed. Like the pioneers of American legend, these aerial pioneers found themselves shaped by the liberating qualities of flight.<sup>35</sup>

She has no difficulty in transferring the source of this inner guidance to the agency of flight. "*All life flies,*" she writes, creating "a good force" that propels the citizen of

the air “toward those higher realms.” Anticipating Joseph Corn’s “winged gospel” as she outlines her view of the ideal individual, she continues: “there is no living without flight. . . . You need but to feel the celestial wings in your heart, in order for them to fly you skyward.” Her optimism, moreover, is not limited to conventional flying, as her paean to spaceflight at the autobiography’s end demonstrates. Space will be a still newer frontier for the American flier to conquer, and the benefits of flight, now reaching into the cosmos, are destined to follow.<sup>36</sup>

If Nichols’s nonfictional and autobiographical writings give more or less equal space to the advancement of aviation, women’s roles in the undertaking, and the importance of her faith, her fiction portrays the development of aviation as a powerful shaper of American society. In this she picks up on an offhand remark made by Amelia Earhart. In a 1933 interview for a cinema magazine, Earhart took issue with the portrayal of women pilots in the popular media. She mildly chided the tendency of film and fiction to overdramatize characters and events and concluded that “the real romance of aviation is to be found—in the tale of its heroic beginnings and its growth and expansion—the way it has spread wings over America and dotted the country with airports and beacons.” She went on to say that “the more progressive thing would be legitimately to feature women” in such tales, using them to present a realistic portrayal of women’s contributions to aviation.<sup>37</sup>

Nichols heard the call. In 1933 she began writing “Sky Girl,” soliciting an introduction from First Lady Eleanor Roosevelt and seeking publication by the Putnam firm. (Neither, in actuality, materialized.) Her *intent*, she said in a 1934 letter to a motion picture director, was to address these questions: “‘What is a typical girl flyer like? What is she up against?’ And ‘What does she eventually gain?’” The authenticity of her treatment of these issues, she continued, would come directly from her own experiences, for she was one who “has herself been through most of it.” Thus, the text is, as one would expect, rich in authentic detail drawn directly from her own experiences.<sup>38</sup> The *story* she wrote, however, goes beyond a simple exploration of a woman pilot’s life in aviation. Unlike Louise Thaden, who in 1938 used the genre of fiction to make a compelling case for the capabilities of women in the military, Nichols makes “Sky Girl” a parable blending aviation’s inherent powers with some of the most deep-seated of American national myths.

She framed “Sky Girl” along conventionally romantic lines, blending familiar plot elements with her knowledge of the professional aviation scene. The setting is the Depression-era Great Plains, where seventeen-year-old Judy Anderson is the air-minded younger daughter of farmer Nels Anderson in Galesville, Nebraska. When Don Gault, an airmail pilot on the Chicago-Cheyenne route, makes a forced landing in the Anderson hayfield, Judy is dazzled by his dashing charisma and lured by his hints of an air-related job should she come to the airfield in Springdon, Iowa. Meanwhile,

she continues her association with a devoted friend, local grease monkey Jimmy Rand, who holds a limited commercial pilot's license and is building his own airplane in a nearby barn. When the ship is completed, Jimmy teaches her to fly and she achieves one of her fondest dreams.

With her father's grudging permission, Judy spends the summer with Jimmy (whom she has begun calling "Hawkeye") barnstorming throughout the region, drawing crowds with aerial stunts and selling rides to all comers. Then, over the protests of both Jimmy and her father, she sets out for Springdon and Don Gault. There she meets the first of many setbacks: Don has lied about the job and the airfield manager is implacably prejudiced against women pilots. Her love of flight, however, is unshaken. She finds a job at the switchboard of a local hotel and spends her spare time at the airfield. She befriends a cadre of mechanics and other aeronautical support staff and finally persuades the airport manager to let her use one of the field's airplanes in trying for a new women's endurance record.

The record does not come easily. Judy must first get funding for the flight, then see to the preparation of the aircraft, and finally make the flight itself. She is distressed by having to paint her soap company sponsor's name on the side of the airplane but accepts the reality of winning support in a cash-strapped society. The flight proceeds without undue incident, Judy sets a new women's record for endurance, and she returns to earth to find herself a celebrity. Bombarded by appeals for interviews and endorsements, and her head turned by Don Gault's seductive murmurings, she comes to think of herself as important. But she gets a shocking awakening when she sets out to find money for a transatlantic flight. Her celebrity means nothing to the executives in their offices, and the novelty of her being a woman flier if anything works against her. Spurned and disillusioned, she decides to return to Galesville.

Fate, in the form of Jimmy Rand, intervenes. Jimmy has become a celebrity himself, flying antitoxin to an isolated Arctic community experiencing a diphtheria epidemic, but unlike Judy he resists the lure of publicity; he's content with his job as chief pilot of a small airline based in Springdon.<sup>39</sup> Assigned a flight to Los Angeles, he takes Judy along, planning to drop her off at a refueling stop in Omaha, the airfield closest to her home. The flight, however, meets disaster: a storm forces the tri-motored liner to land, its wing is damaged, and Jimmy is badly injured. Judy, using the skills learned building Jimmy's airplane, repairs the wing and successfully flies the ship on to Los Angeles. Again she is feted as a heroine, but this time she sees through the tinsel world of publicity and rejects its offers, with one exception.

Solomon Bernstein, a wealthy manufacturer who had earlier declined to support her transatlantic effort, is a passenger on the ill-fated airliner. Now appreciating Judy's abilities, he becomes her backer, offering her \$100,000 to carry out the projected flight.



The new Judy, though, has other plans, and persuades Bernstein to let her use the money to establish a modern airfield on the transcontinental air route. This serves a dual purpose: it will give Jimmy Rand a chance to carry out his dreams of advancing the burgeoning world of flight as an independent entrepreneur, and it will constitute a major contribution to the advancement of American commercial aviation. When Jimmy is discharged from the hospital, he and Judy set out to survey possible sites for the airfield. They find the ideal spot just beyond the Sierra Nevadas, a spacious plain surrounded by majestic mountains—an Edenic locale where Judy recognizes Jimmy’s love for her and agrees to stay on as wife and business partner.

“Sky Girl” resonates with the details of the life of a woman professional pilot. It records the frustrations, rejections, and humiliations associated with seeking money for a record-setting flight. It vividly relates the diverse demands associated with record flying: the tedium, the physical discomfort, and the ever-present dangers of fatigue, weather, and mechanical failure. And it gives an authentic portrayal of the era’s whirlwind of publicity following a successful flight, with all its seductiveness—a whirlwind that Nichols describes as “an insidious poison” that brings only the illusion of meaning and substance.<sup>40</sup>

Even more pertinently, the manuscript overtly presents the ingrained and entrenched sexism common to airport culture. As early as 1929 Nichols had pointedly told an interviewer that aviation’s sexism was “a vestige of medievalism. . . . Tell women to ignore it.” Judy is less militant. At the Springdon airfield, a friendly mechanic urges her: “Use those lamps [eyes] of yours, Gal,” to cadge free flights from local airmen. Judy’s reaction is mixed: “A wave of repugnance swept over her as his meaning dawned. She would have to smile at the pilots, make friends with them, ingratiate herself into their good graces. . . . In other words, if she meant to get the necessary experience in handling big ships. . . , it was the only way open in a big airport to a girl who hasn’t the money to buy an expensive ship herself.”<sup>41</sup> To this point, flight has seemed an enterprise singularly free of the contamination of gender prejudice. Now, however, Judy’s idealized vision of flying receives a major setback.

Her frustration at being denied the cockpit simply because of gender prejudice causes Judy to turn on even the faithful Jimmy. Fuming to herself, she thinks:

Just because Jimmy was a man, he had, as a matter of course, the glorious opportunities that she could attain only by stooping to all sorts of manouvers [*sic*]. . . . There was something inherently distasteful in having to make friends with this one and that one so that they would slip her in, and not one of the other girls, when they had to ferry a plane over to Detroit, or Des Moines.

It was a darn shame. What she got for being a girl!<sup>42</sup>

In 1930s aviation, skill and capability are essential and generally are rewarded—but they still tend to play second fiddle to gender.

Although the manuscript gives a credible portrait of the real-life world of the American woman pilot, it goes beyond this endeavor to introduce some compelling national ideologies, then combines their influence with that of flight. The first is a deep-seated national belief in the power of the unspoiled natural world, especially as it is manifested in the American landscape. The belief builds upon “a confrontation of the American individual, the pure American self divorced from specific social circumstances, with the promise offered by the idea of America. This promise is the deeply romantic one that in this new land, untrammelled by history and social accident, a person will be able to achieve complete self-definition.”<sup>43</sup> The second is the formative influence of the American frontier. Many historians following Frederick Jackson Turner have held that the settlers moving westward across the United States were uniquely shaped by the adaptations forced upon them at the interface of civilization and nature. Nichols seems to accept this hypothesis, for she steepes Judy’s and Jimmy’s lives in the American frontier myth.

Nichols’s urban upbringing and her Seven Sisters education notwithstanding, “Sky Girl” radiates a singular regard for the power of American nature. This regard has long been a commonplace in American thought, and America’s national literature is replete with images of “an undefiled, green republic, a quiet land of forests, villages, and farms dedicated to the pursuit of happiness.” The novel’s opening page establishes the milieu for all that follows. Judy is alone atop Juniper Mountain, the highest point of the Nebraska countryside around her home. When the trials and confinements of the civilized world become too wearing, she finds solace in the openness of Juniper’s unspoiled surroundings: “She drew in deep breaths of air and stretched her arms out into space. The clean sharp fragrance of earth and sage and wind, the rustle of branches, the limitless sky, both soothed and stirred her spirit. Up here she was herself. Alive and—free!”<sup>44</sup> On Juniper’s slopes the grinding conformity of society surrenders to the liberating power of unfettered nature, and Judy, the *real* Judy, is free to think, speak, and act however she wishes.

Having established nature as a liberating power, Nichols expands her view to incorporate the entire American West—the last stronghold of unspoiled nature on the North American continent. As feminist historian Nina Baym notes, the West’s virgin openness allows “women to become capable, physically active, independent, honest, and forthright. Ideas of bigness and spaciousness, of freedom from convention . . . contribute to a sense of the western heroine as a new kind of person.”<sup>45</sup> In the region, the belief holds, surrounded by the purity of the open plains and the majestic mountains, the heroine must rely upon the basic resources that are hers and hers alone. After recording Judy’s comparable response to Western nature and its powers, Nichols moves on

to the second mythic premise, that of the directive power of the American frontier. This is the distinctive American encounter spelled out in 1893 by Frederick Jackson Turner in "The Significance of the Frontier in American History."

Noting that the 1890 census had announced that there was no longer a discrete frontier line within the United States, Turner argued that the existence of such a line throughout the nation's early history had been a major influence in shaping the American character. Thus, he says, "the existence of an area of free land, its continuous recession, and the advance of American settlement westward, explain American development."<sup>46</sup> Along the frontier, where civilization met untouched nature, the American character underwent a "perennial rebirth." As settlers faced the distinctive frontier conditions, "American institutions [were] compelled to adapt themselves to the changes of an expanding people" so that "American social development has been continually beginning over again on the frontier." From the frontier experience, therefore, come "the striking characteristics" of the American character: "acuteness and inquisitiveness; that practical turn of mind, quick to find expedients . . . ; [and] the buoyancy and exuberance which comes from freedom."<sup>47</sup> The pull of the land and the encounter with the frontier create a uniquely defining national experience.

By 1890, however, the line of settlement had reached the Pacific Ocean and "closed the first period of American history." That closing posed new challenges, for the vital spirit that responded so vigorously to the frontier had to find new outlets for its expression. Nichols finds her frontier in the air. In 1931, well before she began work on "Sky Girl," an interviewer explicitly linked her with frontier ideals and the disappearance of the geographic frontier, saying that she "instinctively . . . longs for frontiers, for the thing that has not been done. Living in an age when frontiers are no longer matters of geography, she turned naturally to flying."<sup>48</sup> The linkage is a telling one, for it implies the familiarity of the frontier image in American culture *and* the possibility of frontiers other than the closed geographic one. Twenty years after Harriet Quimby was obliquely linked to the West and its qualities, Nichols openly embraces the mythic beliefs.

As Nichols's novel ends, Judy and Jimmy look forward to a blissfully self-directed life on the frontier. They find the site for their ideal airport just past the Sierra Nevada mountains, a "small, *natural* flat space, which can eventually become part of a mile square airport." It sits in a bowl formed by the mountains—the "gorgeous snow-capped mountains of America's *old west*—stretching on both sides until they seem to actually wall in and protect the future airport *from all inroads of the commercial world beyond*." To cement the image, Nichols provides the two with ready-made accommodation, couched in one of the most enduring images of frontier life, "a *log cabin* ranch house built snugly on the side of one of the nearby hills," seamlessly blending the frontier, the West, the natural wonders surrounding the field, and the liberation of flight. The site is, she writes "immense, inspiring, soothing—all that Judy had felt

for Juniper—plus something more.”<sup>49</sup> That “something more” is the presence of aviation. Judy and Jimmy, a new Eve and Adam in an unspoiled Eden, have the pure freedom they have sought for so long.

So powerful is the setting that, even though the airport is to be a practical, money-making venture, Nichols implies that the combination of the frontier presence and the powers of aviation will protect it from the threat of commerce’s corruption. Nature, progress, the independent individual, and the American West come together, tempering the hard-bitten realism of the mercantile world with *the* essential myth of American identity. In this context, Jimmy’s nickname of Hawkeye takes on new resonance. The original Hawkeye, the frontiersman Natty Bumppo, who moves through James Fenimore Cooper’s Leatherstocking saga, was a determined individualist and natural preservationist who opposed the temptations of settlement. Jimmy, however, finds no contradiction in reconciling commercial aeronautical dreams with the opportunity and independence the frontier offers. Aviation is a “pure” occupation in the eyes of an adoring public and sanitizes the mercantile world of commerce. The two together lay the foundation for Nichols’s next step.<sup>50</sup>

That step is her extension of the national myths of American nature and the frontier to the mythic power of flight and “the winged gospel.” At the heart of the gospel lies the widespread conviction that the coming of the airplane and an air-minded society would “foster democracy, equality, and freedom . . . ; improve public taste and spread culture . . . ; purge the world of war and violence; and even . . . give rise to a new kind of human being.”<sup>51</sup> European views of aeronautics and the airplane in the 1920s and 1930s were overall darker and less optimistic, shaped perhaps by German rearmament and growing political tensions across the Continent. England, France, and Germany had experienced the effects of aerial bombing during World War I and were understandably wary; that wariness was only enlarged by their governments’ endorsement of Giulio Douhet’s *The Command of the Air* (1927), with its advocacy of ruthlessly spreading “terror through the nation and quickly [breaking] down [all] material and moral resistance” by means of preemptive air raids and the unrestricted bombing of civilian populations.<sup>52</sup>

For Americans, however, such old-world dubiousness was driven away by a pervasive national exceptionalism. Europe had long ago lost any contact with its frontiers, if indeed it had had any at all. *America’s* vital frontier experience, however, gave the United States a unique optimism and purity, making it receptive to the winged gospel. In an *American* milieu, the gospel would lead “airminded men and women . . . to demonstrate their faith in the airplane, to convert others to that faith . . . , to promote aeronautics in whatever way possible [and] to hasten that glorious day when the promise of wings would be fulfilled.”<sup>53</sup> Her knowledge of the mundane, even degrading realities of flying notwithstanding, Nichols wholeheartedly embraces aviation’s gospel.

The gospel of the air, with all its implications of pioneering and progress, touches even Nels Anderson, Judy's taciturn father. Judy breaks the news of her having learned to fly at the family dinner table one evening, the shock causing Mrs. Anderson to overturn her brimming glass of iced tea. Nels, however, applauds her gumption. "The Andersons," he tells the family assembled, "have always been pioneering fools. My grandfather's father was the first captain in Norway to change from sails to steam. Judy here is going to make the switch from rubber tires to wings."<sup>54</sup> His endorsement tacitly acknowledges the gospel's contention that flight is to be the next step in the ongoing evolution of modernity. By using the vocabulary of pioneering, moreover, he reinforces the idea of flight as a natural extension of the unspoken American commitment to progress. Every generation has its own frontiers, he and Nichols imply, and the challenge of each contributes to the nation's progress.

Nichols also embraces the gospel's message that the spread of aviation can bring about what Corn calls "a new type of human being." In its simplest form, the belief presents aviation as "the paramount catalyst working for beneficial social change," ultimately creating an air-minded populace that will evolve into a new and exalted society.<sup>55</sup> The first stirrings of the belief appear early in the book, as Judy stands yearningly upon Juniper Mountain watching the passage of the daily airmail plane: "To her imagination the song of the propeller had become the beat of giant wings. . . . High and serene, completely indifferent to the faraway speck of a girl on the earth beneath him, [the pilot] would sweep past. And when his silver rudder faded into the west, she would stand on tiptoe with arms lifted skyward, reaching for the unknown—for adventure,—experience. If a stiff breeze came along she wished it would pick her up. And fly her into space."<sup>56</sup> The detached, aloof serenity of the airmail pilot, the angelic imagery of the airplane's beating wings, the westward movement of the aircraft itself, and Judy's prayerful posture foreshadow the reformed society to come. Judy envisions the future as a world of freedom and flight, one holding adventure and experience far greater than her mundane existence.

To Judy, the flier is a person wholly unique. She papers her room with pictures of flying's aristocracy, including Charles Lindbergh and Amelia Earhart, their faces constituting a "bright galaxy of flying stars, smiling down upon the world spread beneath." The celestial imagery Nichols uses in describing the "greats" prepares readers for the apotheosis that follows. Judy looks upon aviation's idols as a "close-knit brotherhood of flyers. *They were a race apart*, she *worshipped* these men and women of the sky. Keen-eyed, single-minded, every sense alert and keyed to the highest pitch." Pilots, whether men or women, are a new and exalted race—one in which the shared experience of flight creates a unique class of person devoted and dedicated to the endeavor and sanctified by the pursuit. That person, as he or she appears throughout the literature of American life, is "a radically new personality . . . ; an individual standing alone,

self-reliant and self-propelling, ready to confront whatever [awaits] him with the aid of his own unique and inherent resources.”<sup>57</sup> The “winged gospel” requires that fliers be a race of individuals necessarily different from—and superior to—the run-of-the-mill persons who remain wedded to the ground. The American experience with the frontiers of flight promises to produce those, and Nichols embraces the prospect unhesitatingly.

By its very nature, aviation is a liberating force that, for the true believer, prepares the way for a new identification with the world below *and* the world above. Judy’s epiphany comes as she sets out on a solo cross-country flight. Her immediate concerns with the details of preparing the aircraft and shepherding it off the ground give way to a full-blown transcendence. In the course of the journey she experiences the rapture of flight: “Irresistible preoccupation permeated her complete being—that lassitude, combined at frequent moments with the thrill of space, wind, freedom—that comes from submersion of self with the air; so that *she felt in complete harmony with nature fundamental.*” Here is Nichols’s most explicit expression of the hope preached by the winged gospel. Like other fliers before her, real and literary, Judy at last escapes the limitations of earthly technology and personal ego. In spirit if not in physical fact, she becomes an organic, integrated part of the fundamental essence of nature.<sup>58</sup>

As a full-fledged initiate into the exalted community of air-minded individuals, Judy has figuratively transcended the limitations of mundane life and entered an ideal society in which gender labels play no part and a person’s worth is judged solely by her or his skill. That she has done so through the agency of a machine is of little consequence; in fact, it makes her transition all the more “American.” The frontier movement of which Frederick Jackson Turner wrote early on made its peace with the machine. The pioneers of the land readily accepted and exploited the axe and the long rifle, the plow and the threshing machine, intuitively recognizing that these machines made possible, even enhanced, the distinctive qualities of the frontier experience.<sup>59</sup> The airplane differs only in dimension. Whereas the rifle and the plow contributed to growth on the earth’s surface, the airplane allows its users—if they are responsive—growth in the ultimate expression of nature’s realm, the air.

“Sky Girl” is not a good novel, and no amount of protestation can make it one. Its romance is creaky, its language is often wooden, and its characterizations are cardboard. Yet, though amateurish as literature, its sincerity is evident as it offers a thought-provoking glimpse of one woman pilot’s view of the place of aviation in American society in the 1930s. It offers a capable (albeit romanticized) female protagonist. It shows that protagonist readily mastering the most modern of technologies. It shows her making her way—and her mark—despite the gender-linked roadblocks she encounters in a profession dominated by men. It links her and the technology she employs to some of the most deeply seated and compelling of American beliefs. And it expresses Nichols’s conviction that aviation is a powerful, unifying,

purifying, and liberating force that in time will lead to a reevaluation of women's place in American society.

Taken together, the national ideologies incorporated into "Sky Girl" form the authentic voice of a particular point in time. They give a valuable insight into at least one person's vision of the 1930s-era United States. The nation was in the depths of the Great Depression. Nichols herself, her chance at setting a transatlantic record frustrated by Earhart's crossing of 1932, was trying futilely to gather backers for a round-the-world flight. Her intent in the flight was to demonstrate that "ever since the inception of aviation woman has shown that she can equal man in that field of activity providing she is given the opportunity," but her efforts brought only rejection.<sup>60</sup> Despite disappointments personal and professional and despite the economic hardships of the time, however, she in many ways continued to accept, embrace, and endorse some long-standing ideals of American thought. She was then able to couple them with a far newer and equally idealistic faith in the far-reaching effects of aviation upon humanity. That both could seem viable for this person at this time speaks volumes about their power and longevity.

Whether writing articles, autobiography, or fiction, she suppressed her encounters with male sexism and viewed aviation with optimism and hope. Her views, however, received a cruelly ironic setback in the late 1950s. Learning of the beginnings of America's space program in 1959, she prevailed upon authorities to include her in the early stages of testing. At age 58 she was an unlikely candidate, but she underwent several days of testing at Wright-Patterson Air Force Base, with her tests marking "the first real scientific interest in testing a woman's physiology for space worthiness." The tests included one to establish the candidate's tolerance for high g-forces, another to test her responses to weightlessness, and a third to see how a woman might deal with total isolation and sensory deprivation.<sup>61</sup>

Nichols took all three in stride. The test for high g-forces, which involved being spun in a large centrifuge, she found no more demanding than the forces she had encountered during aerobatic maneuvers. Similarly, having experienced weightlessness during those same maneuvers, she had no difficulty with the mechanical simulator; she quickly mastered the gyroscopic controls and opined that "there was nothing to it." Only the isolation test, which involved floating in total darkness in body-temperature water with all external light or sound shut out, gave her pause. As she later said, "I don't think the average person realizes what blackness is, until you're in a place of that sort." Even there, however, she was able to handle the deprivation once she established her orientation in the larger environment of the chamber.<sup>62</sup> Meanwhile, other plans for women in space were taking shape.

In 1958 the military's Air Research and Development Command (ARDC), headed by Brigadier General Donald Flickinger, working with the Lovelace Foundation for

Medical Education and Research in Albuquerque, New Mexico, undertook to seek and screen applicants for possible participation in the Women in Space Earliest project (Project WISE). This was an initiative to study the ability of women to work in space, funded in part by Jacqueline Cochran in hopes of female astronauts' joining the space effort. The medical side of the program was headed by Dr. W. Randolph Lovelace, who had shared in the 1939 Collier Trophy for his work on oxygen systems for high-altitude flight, and the tests were to be carried out at Wright-Patterson Air Force Base in Ohio. Plans were proceeding when others of the ARDC voted to end the program. The cancellation, Flickinger reported to Lovelace, was caused by a premature and unauthorized announcement of Nichols's participation.<sup>63</sup>

Her performance in the tests only confirmed her belief that women were as suited for space travel as men. Proclaiming her scores, she contended that Project WISE authorities "knew nothing about a woman, physiologically," and went on to urge "that women be used in space flight." There should be, she said, "a crash program to find out how a female reacted and felt." Noting that, even at her age, she met the physical requirements of a commercial pilot, she maintained that limiting the program to younger applicants was unnecessary. "One should consider physiological rather than chronological age," she said, and strongly hinted at her suspicion that NASA's setting an age limit of thirty-five was in part to keep her from further testing.<sup>64</sup>

Whether because of her age, her outspoken partisanship for adding women to the space program, or political pressures operating behind the scenes, Nichols's hopes for astronaut training went no further. Officials higher up in the program reportedly viewed her presence and performance "with horror" and authorities made no effort to include her in any further testing. In other circumstances, she might have been able to take the rejection philosophically, blaming it on the still-powerful sexism of the aerospace establishment. She could tell an interviewer in early 1960 that she continued to hope that she might at "some time have the opportunity of being in space," but she was less resilient than in the past. One of her most deeply held ideals was frustrated by the forces of a faceless governmental agency, and her belief in individual promise at last fell victim to the ruthlessness of corporate collectivism. Less than a year following her testing, she was dead—her death ruled a suicide and attributed by friends to despondency over having her skills and her ideas trivialized by the authorities.<sup>65</sup>

Nichols's death in many respects marks the end of the boundless optimism of aviation's finest hours. Living into the start of the space age, she saw the institutionalizing of aviation, the imposition of still greater controls upon private flight, and the coming of an aerospace technology that, unlike the simpler technology of the aircraft of her times, required a vast corporate complex to produce and special education and training to master. The circumstances of her death also give an ironic twist to the last years of her life, particularly in light of her argument in "Sky Girl." The 1931 interview linked



her to Turner's "closed frontier," remarking that in the absence of a physical frontier, she turned to an aeronautical one.<sup>66</sup> She reaffirmed her belief in the frontier myth as late as 1957, stating in her autobiography that "there will always be pioneers of the sky, for this is our last frontier."<sup>67</sup> And what more obvious frontier in the late 1950s was there than that of space? The vision of her future piloting of a spaceship that closes her book is wholly in keeping with her belief in the frontier myth.

Her interest in space is understandable, and one can sympathize with her thinking of it as a still newer frontier holding exciting potential for women. She understood that space exploration was in its earliest days. The Soviet Union's Sputnik I flew in October of 1957, followed by NASA's Explorer I in January of 1958. Manned spaceflight would not become a reality until almost a year after her death, when Yuri Gagarin orbited Earth in April 1961. Piloted spacecraft, however, were already on the drawing board, the first American astronauts were named in April 1959, and the prospects for space experimentation and exploration seemed endless. Yet the space frontier quickly came to appear as closed (at least to women) as the geographic frontier. Nichols's alleged part in the closing down of Project WISE only enhanced the irony, with NASA's wholesale rejection of women astronauts suggesting an overwhelming corporate resistance to the idea of female competence.

Aviation has always depended on the technologists and the manufacturers. Even so, the era of its youth and early maturity offered opportunities to the private citizen. Individuals of relatively modest means could afford aircraft, while those who could not buy an airplane could realistically consider the possibility of building one. Aviation seemed within the grasp of everyone. Within the aeronautical undertaking itself, the most prominent of the celebrities enjoyed ample coverage by the media; from Harriet Quimby to Charles Lindbergh and Amelia Earhart, the media's publicizing of individual fliers shaped much of their stature in the public eye. Publicity and hype notwithstanding, however, the activities of the era were still acts of individual achievement. The celebrities and their deeds were accessible and comprehensible to all. Even if they had the backing of wealthy sponsors or large corporations, they still worked at a personal level, carrying out their achievements in ways at least theoretically available to the general public. They were truly democratic heroes.

Spaceflight, on the other hand, was from the outset an enormous, complex corporate undertaking, and the great bulk of the operation was largely hidden. The astronauts and their flights made up the general public awareness of the program, but behind the scenes this visible expression of the space adventure was carefully controlled. The aristocracy of the space program, the handful of the astronauts privileged to take part in the endeavor, were themselves initially little more than moderately active passengers. They appeared to the public as NASA wanted them to appear, their identities shaped and controlled by the organization's image-makers.<sup>68</sup> The irony of the contrast between

the achievements of aviation's between-the-wars heroes and those of the created celebrities of the 1960s is inescapable.

A still crueler irony is that Nichols, despite her optimistic view of aviation's exalting powers, could (perhaps *should*) have anticipated such a reaction. She had delineated fliers' sexism in "Sky Girl" but appeared to hope that the emerging realm of spaceflight might be at least somewhat more progressive than that of aviation. Even the termination of Project WISE did not daunt her public statements, whatever her innermost reactions may have been. NASA, however, easily assimilated the "boys only" milieu of the flying fields and extended it to the spaceport. The Soviet Union's Valentina Tereshkova would orbit the Earth in 1963. American women would not fly in space for twenty more years, until astrophysicist Sally Ride made her pioneering flight in 1983. They would not *pilot* a spacecraft for another ten years, until Eileen Collins, a lieutenant colonel in the United States Air Force and an experienced test pilot, at last took the controls of the space shuttle in 1995. When that advance came about, Nichols had been dead for almost four decades.

## VI

# Anne Morrow Lindbergh and the Twilight of the Aviation Age

EIGHT YEARS AFTER Ruth Nichols's death, Anne Morrow Lindbergh (1906–2001) accompanied her husband to Cape Canaveral to observe the launch of the Apollo 8 circumlunar mission. This was not her first brush with either rocketry or space travel. Charles Lindbergh, learning of Robert H. Goddard's experiments with liquid-fueled rockets, had met with the scientist in late 1929. Impressed by what he saw, Lindbergh arranged grants from the Carnegie Institution and the Daniel Guggenheim Fund for the Promotion of Aeronautics that allowed Goddard to take his research to Roswell, New Mexico. There he worked until the onset of World War II, developing his rockets and thinking of the possibilities of spaceflight. The Lindberghs visited him in New Mexico and, although Anne never witnessed a launch, she was aware of Goddard's vision of future space travel and the lore and language of rocketry.<sup>1</sup>

Where Nichols found only frustration in her vision of space travel, Anne found metaphor. She saw spaceflight as a means of gaining a still greater understanding of life on earth—*all* life, not just that of humans. She saw the space program of the 1960s as the next step in humanity's moving into the cosmos, seeming to find in it many of the attributes that Nichols and the earlier women fliers found in aviation. While her writings on aviation often echo, at times even expand, those of the earlier fliers, her views on astronautics are less well-defined and she seems unaware of some crucial differences between aviation and astronautics. The differences are telling, as well as evocative, for they reflect her movement to a personalization of flight rather than a universalization.

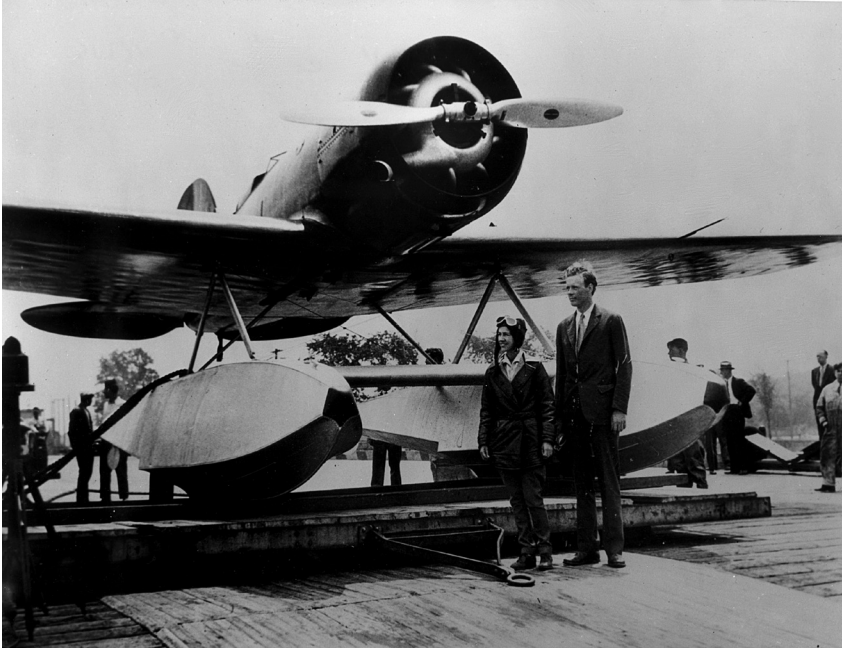
Anne Morrow Lindbergh, even more than Ruth Nichols, was born to learning, wealth, and privilege. Her father, Dwight Morrow, a Phi Beta Kappa graduate of Amherst College, was a senior partner with the J. P. Morgan banking firm, was United

States Ambassador to Mexico from 1927 to 1929, and served in Congress as Senator for New Jersey. Her mother, Elizabeth Morrow, a Smith College alumna, had studied at the Sorbonne; she was actively involved with charitable and other causes, chaired the Smith Board of Trustees, and later served briefly as the institution's acting president.<sup>2</sup> After graduating from Miss Chapin's School in midtown Manhattan in 1924, Anne herself attended Smith, where she distinguished herself as a writer and won the college's two most prestigious literary prizes.

She did not meet Charles Lindbergh until December 1927, when he was a guest of the Morrors at the American Embassy in Mexico. She had her first flight that same month, with Charles piloting a Ford Tri-Motor. The two found a mutual attraction; more formal courtship followed, and they announced their engagement in February 1929. They married in May 1929.<sup>3</sup> From 1929 until 1937 they made numerous flights together, all related to the development of American commercial aviation. Charles, like Pan American Airlines chairman Juan Trippe, recognized that "transoceanic routes constitute the last major problem in the development of the airlines of the world," and his survey flights, sponsored by Pan American, "were for the purpose of studying the bases which might be used and the conditions which would be encountered along the various possible air routes between America and Europe." Of particular concern were coastal areas near cities, with easy access to calm, deep harbors for the company's luxurious flying boats.<sup>4</sup>

Anne's growing involvement with aviation was inevitable. Under Charles's tutelage, she earned a glider pilot's license in 1930 (the first American woman to receive such a license) and a private pilot's license in 1931. As early as 1930 she was studying celestial navigation, tutored by Harold Gatty, who would navigate for Wiley Post during a record-setting round-the-world flight in 1931. In 1931 she began radio studies and in midyear received her license as a third-class radio operator. Charles had opened a membership at the Long Island Aviation Country Club among the notables listed by Ruth Nichols, and much of Anne's early flying took place there.<sup>5</sup>

In 1931 the couple embarked in a Lockheed Sirius floatplane on a three-month survey flight through Canada to the Soviet Union and Japan. A second, five-month flight in 1933 took them from the United States through Greenland to Europe and the Soviet Union, then on to Africa and across the South Atlantic to Brazil and back to home. The Sirius, built in 1929 to Charles Lindbergh's specifications and the first of its kind, was a single-engined, low-winged monoplane powered by a 680 hp Wright Cyclone engine. Its wingspan (42 feet, 10 inches) was slightly less than that of Lindbergh's *Spirit of St. Louis*, but, cruising at 185 mph, it was faster and capable of carrying a heavier load. Like the earlier Lockheed Vega, it had a molded wood fuselage and fixed landing gear (later replaced by floats). One innovation, suggested by Anne, was the addition of sliding, transparent canopies to cover the open cockpits.<sup>6</sup>



Charles and Anne Lindbergh look on while their Lockheed Sirius, *Tingmissartog*, is readied for the circum-Atlantic survey flight of 1933. COURTESY OF SMITHSONIAN NATIONAL AIR AND SPACE MUSEUM (NASM A-48532-L)

These flights were the foundation for all but one of Anne's writings on aviation. For her participation in the flights, she received the Hubbard Medal of the National Geographic Society, the tenth person and first woman to receive the award. In the accompanying commendation, the Society took note of how, with "hard, persistent work [she] mastered the intricate problems of aerial navigation and radio communication from airplanes," and asserted that her work "encouraged millions of people to appreciate that air travel can be safe, comfortable, and enchanting." She and Charles were to make only two other extended flights together, one in 1937 from England to India and another, at the behest of the American military, in 1938 to the Soviet Union. She allowed her flying license to expire in 1937 following the family's move to England, "having decided to close that chapter in her life," one of her biographers remarks, seemingly because she was "unable to reconcile the dual roles of author and aviator." A move to France followed, and permanent expatriation seemed possible.<sup>7</sup> With the onset of World War II, however, they returned permanently to the United States in 1939.

For all her determination to write, Anne published nothing until 1934, a realization that seemed to weigh heavily on her. In her diary, shortly before the circum-Atlantic

flight of 1933, she chided herself: "I haven't stopped to breathe or think or live consciously or write in the last two months. And it wakes me to the fact that with all my talking I've never got a thing published, and I could do it—I *could*, but I haven't got the guts. Oh, I want the recognition."<sup>8</sup> Yet, despite her self-recrimination, she did not attempt to publish until an invitation from the National Geographic Society prompted her to write "Flying Around the North Atlantic" for the Society's magazine. With the urging of British novelist Harold Nicholson and the publisher, Alfred Harcourt, she expanded the article into a book for the Harcourt Brace firm, and, with publication effectively assured, now had her incentive to write.<sup>9</sup>

To have her first widely published work appear in *National Geographic* magazine was a happy circumstance, for it instantly put her name before a widespread and informed audience. Established in 1888, *National Geographic* magazine, the official publication of the National Geographic Society of the United States, had by 1934 won recognition as a reliable outlet for popularly written yet scientifically accurate accounts of worldwide exploration. While its focus necessarily was on terrestrial exploration, it had expanded the concept of exploration to include natural history, folkways, and manifestations of technology. Paramount among the latter was aviation. (Alexander Graham Bell, a founder and early president of the Society, had worked closely with Glenn Curtiss in early aircraft development.) From 1903 onward stories traced the development of "the geography of the air," until the editor, speaking in 1936, proclaimed that "the *Geographic* has published more about aviation than any other magazine of general circulation."<sup>10</sup> Anne's essay was only the latest expression of aviation's continuing presence in the magazine. The Hubbard Medal had already given her an authoritative cachet, and her article, published six months later and coupled with her association with Charles Lindbergh, confirmed her celebrity.

Charles Lindbergh's presence in her experiences was apparent from the article's start, for he introduced the essay with a two-page foreword sketching out the background of their flight and tying it firmly to the advancement of worldwide commercial aviation. He established his premise early on, noting that "the development of aircraft has now reached a point . . . which makes commercial transoceanic flying feasible." At the same time, airlines necessarily recognized the shortcomings of their technology, which required "frequent bases and refueling facilities" along the routes; economic realities, moreover, dictated that "every additional mile which must be flown without refueling means that more fuel and less payload are carried." For a transoceanic airline to be both practical and commercially viable, therefore, factors such as "climate, harbors, airport locations, [and] floating bases" had to be considered "in relation to practicability and economy of operation."<sup>11</sup> For all its exoticism and local color, the Lindberghs' flight was driven by practical commercial concerns.

Those concerns play their part in the essay, but, for all its practical introduction by Charles and the mechanically chronological organization it follows, "Flying Around the North Atlantic" foreshadows the individualistic and emotional elements that would characterize Anne's longer works to follow. It is a personalized account in which Anne's voice regularly interrupts the flow of chronological narrative, injecting glimpses and insights that reflect the mind behind the report—a highly personal perspective, but one that enhances the work's subtext of personal growth.

The idiosyncratic view is evident in the account of the flight's takeoff from Bathurst, Gambia. Whereas the Lindberghs had found too much wind in Porto Praia in the Cape Verde Islands, here they encountered too little; without at least a measurable amount of wind to augment the heavily loaded airplane's own generated speed, flight was impossible. After two failed efforts, they managed a takeoff, and Anne's individual voice speaks out on its own: "Yes, we're off—we're rising. . . . We're up above you—we were depending on you, just now, River, asking you for favors, for wind and light. But now we are free of you. . . . We can toss you aside—you, River—there below us, a few lights in the dark silent world that is ours—for we are above it."<sup>12</sup> Hers is the voice of more than a chronicler; it is the voice of a person who is engaged with her milieu.

While the flight itself furthered the development of commercial aviation, Anne's essay reminded readers of the advances being made in aircraft technology and their potential effects upon mankind. Technology, in fact, rather than travel, opened the essay, as Anne devoted nine of the first eleven paragraphs to a careful description of her cockpit—the controls that enabled her to fly the craft if necessary, the engine monitoring and navigational instruments, the radio equipment, the necessary support equipment of maps and related materials, and the parachutes that doubled as cushions. All of these are a part of flight, and she establishes their importance before the aircraft even lifts off. Aviation requires the intermeshing of several forms of technology, and all are present in the cockpit.<sup>13</sup>

Anne's homage to technology continued as the flight leaves Bathurst. Her relief over the successful takeoff is matched by that of the anthropomorphized airplane. The aircraft had taken on its own identity when a Greenlander christened it *Tingmissartog* ("one who flies like a big bird"), and now its personality blends with hers: "The engine smoothed out into a long sigh, like a person breathing easily, almost like someone singing, ecstatically. . . . The plane seemed exultant, then, even arrogant. We did it—we did it!" Here, for the first time in the essay, she presents the airplane as something more than an assemblage of parts. It is a willing participant in their flight and an entity capable of feeling emotion, even pride. The image is initially surprising, given the factual nature of the bulk of the essay, but is also revealing. The uniqueness of aircraft technology sets it apart as offering a new means for humanity to interact with nature, even

overcome it.<sup>14</sup> *Flight*, as fliers before and after Anne have noted, gave its participants a feeling of exaltation, even transcendence. For the machine that makes all this possible to share in the experience is not at all surprising, and the aircraft's arrogance at its triumph is its own expression of victory.

With the experience of her *Geographic* article behind her, Anne completed what was to become *North to the Orient* (1935), turning for her material to the earlier flight from the United States to Japan. She broke away from the strict, chronological format of the article and, using the device of a narrative frame, created a more nuanced story within a story. She set the opening and closing elements in the objective present, enclosing a longer narrative couched in the historical present. The device let her offer contemplative meditations in the present while relating a retrospective account of the flight, making the book that emerges an outwardly simple yet internally complex work.

The first words of the book set the stage, introducing both of the principal themes: "I have not written a technical account of a survey flight on the great circle route from New York to Tokyo. I do not know enough to write one." She limits her narrative to the basic nature of the flight and her own initial ignorance of all that aviation technology might entail. She then goes on to expand the premises, reflecting that while the flight had its undeniably practical purposes, it also allowed her to ruminate on the confrontation of personality and technology. Thus, just as the technical side of the book becomes an account of "the collision of modern methods and old ones," the personal side records the comparable collision of her "old" self and her new one. The result is a record of her self-discovery as well as the record of a flight.<sup>15</sup>

Self-discovery begins with the past. As the flight sets out, she reflects upon the locales she and Charles have left, her family experiences, and the comfortable domestic rituals of the past: "I had great pleasures in straightening these confusions [activities of the past] in my mind, in clarifying the complexities of my childhood world." In sorting and clarifying the "confusions" of the past, she turns from outward to inward, considering herself—a woman of a privileged and insulated milieu now absorbed in a new and radically different milieu—"as though I were looking back at my own life from some high point in the future."<sup>16</sup> This, of course, is exactly what she is doing as she proceeds with her story within a story, and she makes some telling discoveries.

Early on, Anne confesses that, as a woman in a man's world, she feels somewhat of a misfit. On the occasions when she is allowed to "join the club" of technically competent men, she can respectably acquit herself. Even so, her insecurity remains. She is the neophyte, painfully conscious of her inferior status. The press coverage of the trip's beginning only strengthens her feelings. Prompted by a reporter's question as to where the couple stowed their sandwiches, she muses: "I felt depressed, as I generally do when women reporters ask me conventionally feminine questions. . . . I feel slightly insulted. . . . Still, if I were asked about steely technicalities or broad abstractions, I



would not be able to answer, so perhaps I do not deserve anything better.” When the radio fails in the early hours of the flight, she is further humiliated; although she holds a radio operator’s license, she cannot recognize a fuse amongst the circuitry. After Charles shows her one, “I took out the fuses and sat subdued for the rest of the flight. Someone had once told me that I was incredibly stupid in mechanical things. Everyone would say it was because I was a woman. Perhaps it was.”<sup>17</sup> She begins the journey put in her place by both social conventions and personal technological ineptness.

As the trip proceeds she finds that, in her husband’s mind at least, she is approaching (if not already having attained) parity. Even here, though, she feels a sense of theatricality, a sense that, somehow, things are not yet settled: “My husband never answered any questions about radio, even when he knew the answer far better than I did. He would just turn to me with the expression half proud and half anxious that a mother wears talking to her performing child, ‘Speak up now, Anne, say your piece for the gentlemen.’” But, if there is an element of condescension in Charles’s looking upon her as a performing prodigy, he also works to establish her as a full-fledged participant. Warned by a consultant that *he* would not take his wife over a particularly risky leg of the journey, Anne reports, Charles replies: “‘You must remember . . . that *she* is crew.’ And I felt even more flattered. (Have I then reached a stage where I am considered on equal footing with men!)”<sup>18</sup> The evolution has begun—externally in her public status as “crew,” internally with her speculation that she may be approaching a degree of gender equity.

Her self-examination continues in the Soviet Union. There she encounters a governmentally proclaimed atmosphere of social progressivism and a professed equality unaffected by age or gender—“modern men, modern women, modern children.” Yet, for all the progress she has made in her own mind, she still finds herself a misfit: “I did not fit in there. Was I a modern woman? I flew a modern airplane and used a modern radio but not as a modern woman’s career, *only as the wife of a modern man.*” She imagines herself being questioned by some of the modern Soviets and believes she can explain herself only in terms of her marriage: “‘What do you do to justify your existence?’ ‘I don’t know.’ ‘Occupation?’ ‘Married.’”<sup>19</sup> The technical, “real-world” skills that she has mastered notwithstanding, she still thinks of herself conventionally as an adjunct to her husband and cannot yet see herself as a freestanding, self-defined individual.

The end of the process fittingly comes in the closing frame. There, safely back from the trip and flying with Charles to Washington, D.C., she reconciles her feelings and the world. “We were flying again, several years after our trip to the Orient,” she says. “It was for me simply flying, divorced from its usual accompanying responsibilities and associations. . . . Contented, I could look at that calm clear world below.” Though she has surrendered the flight controls to Charles, she is content in her place, more confident of her ability as a detached observer to look at the world and evaluate it in her own terms. She feels as if she has “a glass-bottomed bucket with which to look through

the ruffled surface of life far down to that still permanent world below.”<sup>20</sup> There is no distinction between her perspective and a man’s, no societally imposed roster of responsibilities and associations to color what she does or sees. Flight equips her, instead, with the detached, empirical vision of the pilot, whether male or female, and her individual experiences make it one that is peculiarly her own.

The second principal theme of *North to the Orient*, Anne’s discovery of, and response to, the emotional power of flight, also appears early on. Flight, she discovers, brings about a liberation of the personal vision, leading to perceptions that are new, even unique. In flight, she says, “there was no limit to what the eye could seize or what the mind hold—no limit, except that somewhat blurred but inescapable line of the horizon ahead.” From the air, old angles and old perspectives change. The horizon, so limiting to an earthbound observer, remains “inescapable” but becomes “blurred,” no longer the rigidly confining boundary of the distance. Anne’s fears that flight might desensitize the participant’s perceptions are unfounded. Instead, one sees from the air patterns, forms, and an otherwise imperceptible “outstretched beauty.”<sup>21</sup> The restrictions of time, space, and perspective that unconsciously limit an earthbound person’s grasp of reality are gone, swept away by the magical power of flight.

All of Anne’s themes converge in the final paragraphs of the book, as she reflects on where she has been, what she has done, and the part that flying has played in all her discoveries. “One could sit still and look at life from the air; that was it. And I was conscious again of the fundamental magic of flying, a miracle that has nothing to do with any of its practical purposes—purposes of speed, accessibility, and convenience—and will not change as they change.”<sup>22</sup> Aviation has practical applications with practical ends, as the trip demonstrates, but it possesses more profound qualities as well.

The world *is* going to change: Anne’s experiences throughout the trip teach her that. The mechanisms of aviation are going to change as well. Aircraft will fly faster, grow larger, fly higher, and span greater distances. This ongoing change means that any given flight becomes a fixed moment in one’s experience that can never again be duplicated. Like Louise Thaden she presents *flight* as a special activity that, however dependent upon mechanisms, instills an ongoing sense of the miraculous. An unnatural undertaking it may be, as she says in her opening pages, but it has life-changing power. In opening horizons and changing perspectives it can make those individuals who participate in it more awakened, more enlightened, and more understanding of themselves and the world.

Reviews of the book were largely positive, echoing the earlier reception of her article. John Chamberlain, writing in the *New York Times*, confessed to “misgivings, having no preliminary guarantee that the author was a born writer in addition to being the daughter of one famous man and the wife of another.” He overcame his doubts, however, concluding that Anne was “a personality in her own right . . . [with] the seeing

eye and the memory that relates new things to the remembered old." He saw the book as gaining impact by building upon "the omnipresent contrast between new and old," becoming an account of one who "[lives] for [herself], not for any fictitious Public."<sup>23</sup> C. G. Poore's longer review in the *New York Times Book Review* picked up on several of the qualities Chamberlain identified, calling the book a work of "uncommon sensibility" that reveals its author's determination to step away from "the tumult of the crowd." Equally meditative was Clifton Fadiman's review in the *New Yorker*. The book, he said, "pretends to no scientific value" but was instead "personal" and singularly "unbusinesslike, reflective, and appreciative of the trivia . . . that marked the journey." His most telling judgment, however, came at the end of the review, as he asserted that "there is more of the fascination of flight in it than in most aviation stories I have run across."<sup>24</sup> Anne's awakening to flight's uniqueness has come through.

The favorable reviews and substantial sales of *North to the Orient* encouraged Anne to begin a second book, one based on the 1933 circum-Atlantic flight. Her first book, as its title implied, was global in scope—global in a literal sense in that it involved a linking of East and West for commercial purposes, but global also in that it traced the flight from start to finish, recording objective events and personal insights along the way. The new book, *Listen! The Wind* (1938), was an equally personal narrative, but one more tightly focused than the first book. The reasons for the circum-Atlantic flight were no less commercial than those of the flight to Asia, but she now wrote only of a ten-day segment of the endeavor and the importance of a single episode within the flight.

Like *North to the Orient*, *Listen! The Wind* utilized a frame structure—but one notably different from that of the earlier book. This frame is a double one. It begins with a foreword written by Charles tying the flight to the development of commercial aviation and transoceanic flights and ends with an appendix, also by Charles, detailing the mechanical elements of the journey. The book, he writes in his foreword, is "a true and accurate account of various incidents which occurred in flying from Africa to South America." The flight, he continues, was "to study the air-routes between America and Europe. . . . The countries had already been crossed and the continents connected. It remained only for the oceans to be spanned. Their great over-water distances constituted the last major barrier to the commerce of the air."<sup>25</sup> Commercial aviation is an engine of progress, and that progress must not be obstructed.

At the same time, he is concerned with the future of flight in general, injecting an element of nostalgia and seeming to recognize the inevitable changes that accompany progress. Their flight was made in a single-engined, open-cockpit float plane, incorporating the latest aeronautical developments of the time. By 1938, however, the craft is obsolescent if not obsolete. Thus, the book becomes "about a period in aviation which is now gone, but which was probably more interesting than any the future will bring." It was a time that offered the flier an unprecedented intimacy with the forces

of nature and the world at large, but one that was fading quickly: "As times [*sic*] passes, the perfection of machinery tends to insulate man from contact with the elements in which he lives." The flier of the future, insulated by the technology about him or her, "will be aloof from both the problems and the beauty of the earth's surface. . . . Wind and heat and moonlight take-offs will be of no concern to the transatlantic passenger. His only contact with these elements will lie in accounts such as this book contains."<sup>26</sup> Commercial aviation will supply ease of travel, but at the cost of insight and understanding. Charles's appendix continues the aeronautical elements, giving a detailed technical description of the airplane—and the stoical observation that the craft "now hangs in the Hall of Ocean Life at the American Museum of Natural History."<sup>27</sup> An era that represented the high point of American aviation and an airplane that was once the leading edge of technology have reached their limits, their relics consigned to museums.

Charles Lindbergh talks of the historic sweep and applications of aviation; Anne Lindbergh takes a more abstract approach. The second frame opens and closes the book with the wind: a tail wind at the outset, a general, unexceptional wind at the end. Each plays its part. The tail wind speeds *Tingmissartooq* on its way, boosting its speed as it overcomes distances. The more general wind is moderate, steady, and exactly what a flier desires—but now is of no consequence, for the Lindberghs have successfully crossed the Atlantic and landed at their base in Natal. They have reached a desired conclusion, as the narrator of the book has herself arrived at a similar, personal conclusion. Thus, the opening frame links the book to the external forces of technology and commerce; the inner one evokes the abstract, indifferent forces of the natural world.<sup>28</sup>

Within the double frame Anne opens a dialogue with herself, considering the place and defining the roles of commerce, technology, and humanity within the larger context of the flight. More than one airline was eyeing transatlantic service, and Pan American Airlines' competition with these companies underlies the text. France's flagship airline, Aéropostale, had established a route along the western coasts of Europe and Africa in 1929, extending from France through Spain and Morocco until reaching Dakar. There passengers boarded a steamer for the trip to South America, then resumed the aerial portion of their trip on Aéropostale routes along the eastern coast of South America. The company's finances were precarious, and in 1933 it declared bankruptcy and became part of the newly formed Air France. It left a string of derelict bases throughout Europe and Africa, and their presence, like Anne's references to Deutsche Luft Hansa's twelve-engined DO-X flying boat, was a reminder of the commercial forces driving the Lindberghs' flight. When Pan American began transatlantic service in 1934, its superior aircraft and more rigorously operated bases made it "France's most dangerous rival."<sup>29</sup> That competition and Aéropostale's failure are important elements in Anne's narrative.

A second part of Anne's dialogue is her ongoing reflection on the individual's relationship with external reality. In *North to the Orient* she was concerned with personal evolution. In *Listen! The Wind* she takes up the greater matter of the individual person in an empirical world. What part, she asks, do the forces of nature play, and what part the forces of society and commerce? Where, within this confluence of forces, does the power of technology come into play, and what is its influence? And how is an individual to deal with the consequences of these matters, as he or she sets out to become an integrated part of the larger world and society? Her questioning makes the book even less a travel narrative than *North to the Orient* and far more an introspective meditation on experience and life.<sup>30</sup>

The first of the overarching themes that Anne introduces is mankind's desire to subordinate the world to technology and commerce. She and Charles embraced a technologically sophisticated modern world, making their way aboard one of the latest creations of aeronautical technology. Their technology has triumphed in the past, and they see no reason for it not to continue to triumph. This is the perspective that opens the book, as Anne reflects on the flight at hand: "With the great strides of the summer's flight behind us, and the wide limitless sky ahead, there was no end to our powers." Her confidence leads her to a hubristic moment of omniscience as they view the harbor at Porto Praia: "Like gods still we were, looking down from our great height at the . . . minute ripples glistening far below, the toy boats bobbing in the water. . . . Leaving our Olympian heights we began to circle down, the engine breathing more easily in a glide."<sup>31</sup>

Equally reassuring is their expectation that, at the Aéropostale base at Porto Praia, they will find all of the sustaining attributes of a modern, technological world: "How comforting to see the broad roof and great open door of a modern hangar, the concrete pier with a big derrick at its edge, the . . . two tall radio towers. Here was the world of Aviation. Here was efficiency; here was comfort." Their first impressions on land seem to confirm their assumptions. Walking toward the Aéropostale hangar, she muses: "On first sight the building had the familiar air of any big hangar at home. The same criss-crossing of steel rafters above our heads; the same ribbed look of the long walls . . . all symbols to me of the competence and facilities of a modern aviation base."<sup>32</sup> Within minutes of this inference, however, they learn otherwise.

The French airline has abandoned the station, leaving behind only deteriorating facilities and a skeleton crew to tend them. Neither spare parts nor repair facilities are available, and the base cannot provide even simple supplies to pull the airplane from the water. In addition, they learn, the massive DO-X had been stalled in Porto Praia for a month, grounded because "something was not quite right."<sup>33</sup> The DO-X, operated by Deutsche Luft Hansa, had embarked on a circum-Atlantic flight in 1930. Plagued

by mechanical and other problems, it did not return to its home base until 1932. The entire operation was bleak testimony to the failings of both commerce and technology.

Those failings lead Anne to consider the impotence of technology in the face of nature. In Porto Praia the wind is too strong and the sea too rough to permit them to take off, and they willy-nilly must wait. As they prepare for their departure they are, Anne writes, "all ready. Everything ready, everything under control of man—except the wind." The wind is so steady and so powerful that being stranded like the DO-X becomes a reality: "Listening to that wind roaring above us distantly, I had a sudden feeling of panic. . . . We here, on this island, were caught in an eddy, a backwater, out of the stream," where imprisoned fragments "never made any progress, never won their way out again to the whirling current."<sup>34</sup> Anne's sense of their relationship to nature has advanced since her remarks on Porto Praia in "Flying Around the North Atlantic."

The perspective changes yet again when they at last reach Bathurst, for there they face the opposite problem; there is too little wind. Bathurst, a prosperous British community, initially offers all that Porto Praia lacked: "Life was going on here; it meant something. Time counted; we were in the stream again."<sup>35</sup> Yet ironically, for all the comforts of commerce and technology, Bathurst cannot supply the help of nature. Several failed takeoff attempts follow, each accompanied by a progressive stripping of the aircraft—clothing, tools, supplies, even unneeded parts are discarded—but to no avail. Then, at last, the wind briefly becomes strong enough to help the takeoff (a dubious local official describes it as "almost a dead calm") and the Lindberghs make their try. In language and imagery echoing the same episode in "Flying Around the North Atlantic," Anne paints the takeoff as a struggle between nature and technology. When technology at last triumphs, she is ecstatic: "The plane seems exultant now, even arrogant. We did it, we did it. . . . ! We were dependent on you just now, River, prisoners fawning on your for favors. . . . But now, we are free. We are up; we are off. We can toss you aside."<sup>36</sup> Technology has triumphed and the progress of commerce can resume, but she now sees that triumph in a new and more informed light.

Anne's newly sensitized understanding opens the way for the second central theme of her work, the individual's relationship to reality. In her newly awakened state, she comes to understand that, rather than a *single* external reality, there exists instead a multiplicity of realities, each with its own demands and requirements. Within this surfeit of worlds, the unaware individual runs the risk of isolation or estrangement. This is a theme that concerns her throughout the work, reflected in her later comment in her journals that total freedom is in great part a myth. Life becomes a circumstance in which "we usually only exchange one set of restrictions for another. The second set, however, is self-chosen." In her case, she continues, she "exchanged the insulation of . . . a cloistered life of books for the insulation of fame," as set apart from the world as she had ever been.<sup>37</sup>

*Listen! The Wind* offers a succession of similar discoveries. The first is the realization that, as a flier and technologically competent person, she is set apart from the world of conventional social formulas. Soon after they arrive in Porto Praia, the Portuguese governor invites them to a meal. “We were,” she thinks to herself, “going to the Governor’s for lunch. (The cool verandas, the brocade sofas, the women in summer dresses and lipstick.) How far removed I was from that world—I, in my dusty trousers climbing up this hill.” That removal, moreover, is a telling one: “Even if I changed my trousers for a cotton dress . . . , outwardly conforming to the code of civilization, could I ever really get back to that world?” This reflection, in turn, leads her to grasp a larger point: “I felt we were separated from the Governor’s house in Praia by a great gulf which could not be bridged . . . , of our own choosing.”<sup>38</sup> For all their fame and fortune, the Lindberghs are not a part of the governor’s social existence; *their* deliberately self-selected world sets them apart.

The individual faced with this isolation has little recourse but to turn inward: “Sometimes while I waited, I had tried to live more intensely in the little things imprisoned with me.” Finding little comfort in this response, she arrives at another: “Waiting could only be linked to life by accepting it, by seeing value in it for itself.” Like a farmer waiting for a crop or a pregnant woman awaiting a birth, the individual must depend “on things outside himself; but still, having faith in those things, in the slow but inevitable process before him.” From that faith comes an altered vision, disclosing that “in this apparent vacuum something was growing; that . . . everything was converging into the pattern of our lives.”<sup>39</sup> A multiplicity of worlds moving at a multiplicity of speeds forces the individual at last to rely on faith in one’s self and one’s abilities—an amorphous and intangible conclusion at best.

The recognition and appreciation of self and ability leads to Anne’s synthesis of all that has gone before. One must take comfort in the mastering of one’s own role and activities. When those activities build bridges to the other worlds of reality, the outcome is happy. She hints at this synthesis in 1936, as the book was in progress. Writing to her sister, Constance, she says that she has come to see that the outcomes available to a woman working in a male-dominated, predominantly technological world, are real, but different from those available to men. The woman who works in this realm “has got to be content with a different kind of result—not a tangible one, not one you can weigh. But perhaps one that is bigger, broader, more general, more intangible—but nevertheless a whole.”<sup>40</sup>

This conclusion anticipates those of *Listen! The Wind*. Gaining understanding, she tells her sister, requires each person to develop “something wheel-like, with the essence of you at the center.” At the heart of this wheel-like, outreaching construction “there must be a concentrated core, a hub at the center that is specialized, in order to hold all those diverse spokes together. And each person must find her own specialized core.

But she must never fool herself into thinking that the core is the whole. It is just there so that the wheel can go round—to keep the whole going.”<sup>41</sup> She thus combines the personal and the global, calling for each person to connect with the outer worlds in ways dependent upon his or her unique capabilities.

Anne’s fullest statement of this synthesis emerges near the end of *Listen! The Wind*. As she prepares for the projected sixteen-hour flight across the Atlantic, she settles snugly into the rear cockpit of *Tingmissartog*, surrounded by the radio and navigational equipment that she has mastered. This is *her* place, an “all-important world” that gives “a sense of security, no matter how precarious it may actually be—even hurtling blindly through the air.” There follows an inventory of the cockpit equipment similar to the one that opens “Flying Around the North Atlantic,” but now she invests the equipment with a special meaning that the earlier work lacks, gaining security and confidence from its familiarity and her mastery of its function.<sup>42</sup>

The cockpit is her “little room,” and she writes of its equipment with new insight. The cockpit seat, for example, becomes “the center of my world.” That world, the cockpit, is one in which things are known intimately by touch as well as by sight: “Everything was within arm’s reach. . . . Everything obeyed my hand.” She is in command of her world, and paramount among the equipment is the radio transmitting key that connects the flight with the other worlds: “It fitted lightly between my fingers, as comfortable, as familiar, as a pencil; obedient as any tool, and, as a tool, giving one a sense of pleasure to use it, play with it, master it.” She has become the “concentrated core” that she described to her sister. The spokes that radiate outward are her radio calls, and she, as woman and as master, works to keep the entire flight going. The recognition gives her a comfortable feeling of competence as she accepts her role: “My work had begun. . . . How nice to be in your own little room, to pull your belongings around you, to draw in like a snail in his shell, to work!”<sup>43</sup> She thinks of herself as a fully formed individual, secure in a world of her own making, ready to confront and deal with the other worlds of life.

The critical reception of *Listen! The Wind* was as positive as that of *North to the Orient*. An early review in the *New York Times* called it “a nearly perfect little book,” while a fuller review three days later called it “sensitively and nobly written” and “attuned also to the very ripple of time across the surface of the passing moment.” Clifton Fadiman, again writing in the *New Yorker*, quipped about writing versus literature but went on to praise the book for combining “the miracle of flying” with flight’s “emotional quality, what it does to a person.”<sup>44</sup> The critics’ approval was a fitting conclusion to the three works growing out of the survey flights and confirmed Anne Lindbergh as a writer deeply concerned with individuality and life.

Eleven years after the last of the survey flights and six years after the publication of *Listen! The Wind*, Anne turned to fiction to continue her exploration of emotional



and personal evolution. In 1937 the Lindberghs had flown to India in a light plane, a single-engined Miles Mohawk. En route they became lost for a time in heavy clouds over the Alps and a crash was a real possibility. She recalled the episode six years later, using her powerful emotions, now recollected in tranquility from records in her diary, to create an account of one woman's road to self-knowledge.<sup>45</sup> *The Steep Ascent* (1944), she says in a brief preface, contains "everything that those ten years [of flying] taught me." These lessons, combined with the consciousness of World War II swirling about her, lead her to conclude that "the world of flying provides in a most compact and tangible . . . form that exceptional circumstance which permits one to realize the intersection line of two planes of existence." For her, the intersecting planes allow her to tell "the story of a woman's life and ordeal—*any* woman and *any* ordeal."<sup>46</sup> Where once she was concerned solely with individual growth and evolution, she now moves on to speak of and for *all* women.

The novel's protagonist, Eve Alcott, five months pregnant with her second child, sets out in a light plane piloted by her husband, world-renowned British racing pilot Gerald Alcott, on a trip to Egypt. As they approach the Alps, they fly into an unexpected zone of clouds and become lost. They have two choices: continue onward through the clouds, hoping at last to fly out of them before exhausting their fuel, or descend through them in search of clear air below the cloud deck—both dangerous choices. Eve's fears, already substantial, grow when Gerald strays off course while tracing a valley pass through the mountains. Although she can accept fear in the abstract, her thoughts increasingly focus upon her own life and that of her unborn child. When Gerald elects to risk penetrating the clouds, Eve confronts her fears. The aircraft descends, Gerald inches his way to a safe bottom to the cloud layer, and they make their way through the mountains to land safely in Italy.<sup>47</sup> The epiphany of rebirth that Eve feels upon their safe arrival speaks eloquently of the essence of life and how such a passage to understanding becomes universal.

Three complementary elements shape *The Steep Ascent*, each giving depth and resonance to the others. The first is the time's (and Eve's) sense of "the place" of women. As she prepares to say goodnight to Peter, their five-year-old, Eve recalls the caretaker of their rented cottage showing her and Gerald the bedroom the child was to use. It was "hardly a room, a tiny rafted hall of their old English farmhouse," but he pointedly speaks of it as "His Master's dressing room." To her, the American, the intent is clear. In wry retrospection she recalls that he was overtly "breaking her in . . . to what an Englishman's wife should know."<sup>48</sup> In a dozen words Anne lays the foundation for Eve's development throughout the story. Although he never overtly expresses any such feeling of masculine dominance over Eve, Gerald, a Britisher, is steeped in the culture, and the reader's awareness of that culture and its conventions prepares the way for the tensions developing later in the story.

Other tensions develop from Eve's pregnancy. She is beset with advice and attitudes that relegate her to a preconceived role, consigned to a conventional and diminished condition by a Mother's Aid manual. Why, she asks herself, is she going on the flight to Egypt, when a "normal" woman would stay at home: "Avoid all stress and strain," said the Mother's Aid book and "The pregnant woman should not travel." Yet she is, she concludes, making the trip "for herself, . . . because of something very strong in herself. A feeling for life, she guessed it was."<sup>49</sup> Though she cannot yet articulate it, she senses the beginning of her evolution. The conventional view of pregnancy sets "the woman" apart, creating an "other being" that somehow is a lesser entity: "'The pregnant woman.' Dreadful phrase. She had always hated it. How it cheapened life, and she hated anything that cheapened life. . . . It left out the child."<sup>50</sup> She is harboring a new life, and the awareness heightens her sense of worth and self-knowledge. She can disregard the cheapening that society puts upon her and accept her place as a part of an onward-moving, exalting process. Her pregnancy, therefore, gives her the first impetus toward her imminent self-discovery.

The course of that self-discovery, the second principal element of the book, comes to the fore once the Alcotts' flight is underway. Just as physical flight creates new perspectives on the ground beneath, Anne suggests, when the human spirit is removed from earth by flight, it gains a new perspective on itself. For Eve, that perspective is a greater understanding of the preciousness of existence. Initially considering herself a creature of the earth who "loved this earth and earth things," Eve first tastes fear as she reflects on "the fear of losing earth that made you love it so much." The fear grows as the flight becomes more hazardous. As they pick their way among alpine peaks, Eve recalls that their lives are dependent upon the machine in which they are sitting. They are precariously "balanced on a needle's point, balanced on the blast of an engine, on the flutter of a wing," yet the realization gives her a greater sense of reality; "the nearness to death made life more alive, and beauty more beautiful."<sup>51</sup> She has taken the first step in her progression.

Eve's consciousness of their danger strips away her illusions and advances her progress. "All the mists of fear, dreams, and self-deception," Anne writes, "had been burnt clean by the blinding flash of realization of what faced them." In this newly sensitized state, Eve comes to see that life and death are an organic whole. They are complementary elements of a new existence. For her, "there was no space, no room in her heart for anything but this new and overpowering sensation which filled her to the brim. What was it? Not resignation. . . . No, it was a kind of positive acceptance and she reposed on it in complete peace and calm, like the maple seed on the shaft of air." With this greater understanding comes "a sudden sense of luxury. All those petty details of life were attended to. Now, at last, [she] can turn to the big thing before [her]."<sup>52</sup> She is, at last, equipped to view and examine her life with tranquility.

The final element of *The Steep Ascent* is flight itself. However deeply she may be concerned with societal views of women and the inner growth of self-knowledge, Anne never lets the reader forget that *all* of these deliberations are tied to the larger milieu in which Eve exists—that is, that of an airplane, in flight, with all of the exaltation and all of the fear that such an experience carries. In the airplane Eve enters another world, one as distinct as any of those Anne invokes in *Listen! The Wind*. Here she perceives, examines, and at last understands the diverse feelings that dominate her thoughts and self-reflection. These are matters that have not concerned her during her mundane, earthly days; only after she enters the airplane and ascends into the sky do they emerge to energize her own meditations and conclusions.

As Eve and Gerald prepare to take off for their flight across the Channel and through the skies of France and Switzerland, she takes comfort from the power—literal and spiritual—of the aircraft engine. “The roar of the motor blocked off the outside world. Vibrations surged through the plane in a gigantic current of power. It shook confidence into Eve and she felt like bowing before it as to some mighty pagan god. How could anything go wrong with such a power on their side?” Technology creates an apotheosis: sound and vibration, in one sense simply physical consequences of internal combustion, here become spiritual entities so compelling that Eve is tempted to bow before them. Her human existence is, for the moment, subordinate to the power of the airplane.<sup>53</sup>

Anne broadens her metaphor by next linking the airplane to the act of birth, explicitly tying it and its flight to Eve’s pregnancy and the coming child. An airplane’s takeoff, she writes, is a process whereby the airplane reaches “some indefinable point [at which it] shifts its allegiance from earth to sky.” When it reaches that point, the machine itself is reborn, becoming an entity of the air rather than one of the ground: “It may still be traveling along the earth’s surface, apparently tied to it, but in reality it has *severed its cord*; it has acknowledged, secretly somewhere, that its element is air.”<sup>54</sup> The severing of a baby’s umbilical cord marks the child’s transition from life *in utero* to life in the external world. The takeoff process, like that of birth, is a mechanical one, but, when the transition at last occurs, the airplane is reborn. The mechanical becomes the transcendent.

Once in the air, in its proper element, the airplane has new power. As their flight proceeds across the Channel, towns, ships, even people become toylike in her vision, and Eve feels herself freed from the demands of the mundane world: “This was the joy of flying. . . . There was a freedom about it, a limitless feeling of space and time. The day and the world stretched before them, endless. . . .”<sup>55</sup> An epiphany of flight occurs near the book’s end, paving the way for the new sense of self that she has achieved. She and Gerald, in their airplane, a “flimsy bit of plywood and steel,” confront the Alps, majestic, natural giants that stand between them and their goal of Italy. Physically flimsy though it may be, however, the airplane has a transcending power: “They were equal to the giants, then,” Eve thinks. Then, returning to the metaphor of thread/cord/

umbilical, she makes an explicit statement of flight-borne ecstasy: “Eve tingled with excitement. Ah, this, this was flying—to leave the clouds below; to let go of earth, to touch it no longer, not even with your fingertips; no Ariadne thread to guide you, no silken skein to join you to earth. To *abandon earth utterly* and climb into the upper reaches of sky; to meet the mountains eye to eye.”<sup>56</sup> She is no longer a thing of earth. Like Judy Anderson in “Sky Girl,” she believes she has broken the thread of conventional existence as surely as the airplane severed *its* umbilical to the earth, and now can leave the mundane and ascend to the heights of pure existence. She has, as much as any of the pilots and persons of whom Joseph Corn writes, wholly embraced the winged gospel. She now more fully knows herself and her relationships to time and the world, and that knowledge has come through the exercise of aviation.

Reviewers acknowledged that the novel was an advance beyond *North to the Orient* and *Listen! The Wind*, just as the earlier books had advanced beyond conventional flying narratives. Some responded to its language, calling it “excellent imagist poetry, a sensitive evocation of certain feminine reactions to an adventurous flight.” Others saw past the language to the content. Beatrice Sherman, writing in the *New York Times Book Review*, stated that “its charm and grace are rooted in the fabric of the author’s mind and in the fruit of her philosophy,” while Edmund Wilson in the *New Yorker* called it “a series of *pensees* [*sic*] on such varied subjects as England, France, life, death, and fear, . . . [and] one of the most arresting short novels of recent years.”<sup>57</sup> More intensely personal than the two flying books preceding it, the novel was a farewell to Anne’s writings on conventional aviation.

Anne wrote nothing further of flight and flying for a quarter of a century. Then, when she and Charles were invited to the Apollo 8 launch in 1968, *Life Magazine* commissioned her to report on the event. The resulting essay, “The Heron and the Astronaut,” appeared in the 28 February 1969 issue of *Life*. She subsequently paired the work with an essay of four years earlier, “Immersion in Life,” and published the two together as *Earth Shine* later in 1969. The essays, she said in her preface to the compilation, were unified by their focus on global interrelatedness. When one viewed Earth from a spacecraft, she wrote, “it is the earth which is the miracle.” Thirty years earlier she had viewed technology as a miracle; now her sense of the miraculous has moved to viewing the planet terrestrially rather than “hemispherically.”<sup>58</sup> She makes a leap from the personal to the global without further thoughts of the intermediate society that might come about.

The Lindberghs’ evolving environmental consciousness lies behind *Earth Shine*, giving a context for Anne’s reactions to the space program and the Apollo mission. The airplane, she says, allowed early fliers to “discern more clearly the bones of earth and [become] aware, as Saint-Exupéry was, of how ephemeral is the flesh that clothes it.” When the planet is viewed from space, however, “the sense of the earth as a whole, as a

planet, is with us inescapably.”<sup>59</sup> Thus, the view from space creates for her a new vision of the planet as a unified ecosystem; she never uses the phrase “Spaceship Earth,” but she understands its implications. The worldwide unity revealed by the vision of the planet’s atmosphere and oceans transcends the puny geopolitical matters that obsess countries and peoples.

She acknowledges that this new vision is possible only through the workings of an enormous, complex enterprise. As she and Charles tour the NASA facilities at Cape Canaveral, she begins “to be overwhelmed and rather oppressed by the complexity, weight, and detail of what the astronauts lightly call the ‘hardware’ of rocketry.” And yet, despite the “sheer weight and cold intricacy of this computerized, electronic, machine-oriented world” so unintelligible to the layman, its goal is “the advancement of knowledge for all mankind.”<sup>60</sup> The discoveries of the space program will benefit not the individual, not the community, but “all mankind.” She cannot say what those benefits may be; she only knows that they will advance the human race.

While three men made the flight to the Moon in 1968, behind the flight was a vast, largely unseen pyramid of technology and effort, with the astronauts at the apex. Anne acknowledges the existence of the pyramid, saying that “it is the men above all that matter, the individuals who man the machine, give it heart, sight, speech, intelligence, and direction; and the men on earth who are backing them up, monitoring their every move, even to their heartbeats.”<sup>61</sup> She does not consider, however, that the pyramid creating them also isolates the astronauts from those helping them and those watching them. Recognition of the Apollo pyramid, in the simplest sense, came from an awareness of the 400,000 persons and 20,000 civilian corporations constituting the material side of the project. In another sense, however, it was a manufactured construct described by two marketing scholars as “the largest, and we believe the most important, marketing and public relations case story in history.” To support that case story, NASA created a public affairs office that, by the late 1960s, comprised “a team of some sixty people, including thirty-five regular Public Affairs staffers and thirty-five ‘special assignment’ contract employees.” These were the persons charged with the task of interpreting the Apollo program for the American public, and the image they created easily overshadowed the reality.<sup>62</sup>

The magnitude of the publicity challenge was mirrored in the magnitude of the machines involved. As Scott and Jurek note, “the Saturn V alone consisted of more than 3,000,000 parts, ranging from nuts and bolts to circuit boards, washers, and transistors. The command and service module had nearly 2,000,000 parts; the lunar module, 1,000,000.”<sup>63</sup> This machine was a construct far beyond the means and abilities of a single person. It of necessity *had* to be the product of a collaborative effort and it, rather than the thousands of individuals involved, was the focal point of the process. Charles Lindbergh only confirmed this reality when he cabled his congratulations to

the Apollo 8 astronauts: "THE GREATEST FEAT OF TEAMWORK IN THE HISTORY OF THE WORLD."<sup>64</sup>

The astronauts may indeed have experienced the ecstasies of space flight, but for the rest of the world those ecstasies are only vicarious. Whereas Ruth Nichols sought to open the astronaut corps to women, making it at least somewhat more inclusive, Anne accepts (perhaps does not understand) the program's elitism and, unavoidably, its covert sexism. She admires the astronauts' intelligence, skill, and courage but says nothing of their limited number or gender exclusivity. In reality, only they, a tiny, aristocratic society among the technological elect, will experience space. Everyone else will be only an observer.

At the start of the U.S. space program, the nation's attention was focused on the Mercury 7—the seven male astronauts who were to fly in the Mercury capsule and, in time, achieve Earth orbit. Six of them flew, with John Glenn, the third to be launched, becoming the first American to orbit the Earth. By the time of the Apollo 11 launch, the astronaut corps had been expanded to five groups totaling fifty-five men. From these groups, thirty-two astronauts (including the three killed in the fire aboard Apollo 1) participated in active training for Moon launches. Of the thirty-two, only twelve walked on the Moon.<sup>65</sup> These twelve became a special aristocracy within a culture of elites.

Here is where Anne Morrow Lindbergh reveals a blind spot. She sees ecstatic, uplifting results from the space program, but she fails to see that those results will—and *can*—be directly experienced only by an elite few. Becoming an astronaut involves a grueling, exhaustive selection process, one that eliminates many more than it passes. Arbitrarily excluding women along the way, the process restricts spaceflight to only the elect few who can pass its arbitrary hurdles. That she does not see this reflects her times as much as her origins; she is indeed thinking globally, even aristocratically, and she bypasses the part played by the mundane individual in the process.

Conventional aviation, like spaceflight, rested on a similar (albeit smaller) pyramid of development and effort, but gaining its apex was far more attainable. Even if airplane ownership became beyond the means of much of the populace, the *dream* of flight, with all its benefits, was accessible to all. Individuals could reasonably aspire to becoming a pilot and owning an airplane. To build an airplane in one's garage seemed at least *possible*; to build a spaceship in one's garage was ludicrous. The democratic optimism of flight, as utopian in its nature as the ecstasy of space, reached farther and deeper than the vicarious attractions of space.<sup>66</sup> That Anne overlooks the distinction reflects the vanishing of the dreams of the Golden Age of Aviation.

When Anne Morrow Lindbergh took up flying, it was still a fascinating novelty—a time, she noted in her diary in 1932, when "flying was an art." It had substantially advanced by the time she wrote of the flights described in *North to the Orient* and

*Listen! The Wind*. Airplanes were larger; engines were more reliable; speeds and ranges were greater. She was also present at the creation of American commercial flight, accompanying Charles when he piloted the inaugural eastbound flight of Transcontinental Air Transport in 1929.<sup>67</sup> In those years she absorbed the excitement of flight that foreshadowed exciting developments for the individual and the society alike. Aviation, however, was not standing still. By 1943, when she published *The Steep Ascent*, commercial flight had entered the stratosphere with the 1938 introduction of the four-engined, pressurized Boeing Model 307 Stratoliner, transcontinental and transoceanic travel was commonplace, and the airplane itself had new prominence as a weapon. Long-range, four-engined bombers such as the Boeing B-17 and the Consolidated B-24 were flying in all theaters of World War II. The Boeing B-29, the first fully pressurized, high-altitude bomber, was beginning to enter service, and the light plane of the book seems oddly quaint.<sup>68</sup>

Her view of the world was altered by other events as well. After Anne surrendered her pilot's license in 1937, the Lindberghs' lives took on a new and public coloration. Charles, having favorably evaluated German aeronautical development for the U.S. military in 1936 and 1937, became increasingly pro-German in his views and, in 1938, received a medal from the Third Reich, the "Service Cross of the German Eagle, with Star." He seemed to find in much of Hitler-era Germany "the embodiment of his values: science and technology harnessed for the preservation of a superior race." As the likelihood of a European war grew, he vocally opposed United States involvement; he spoke widely for the right-wing America First movement and was staunchly pro-German and anti-Semitic in his pronouncements. Whatever her innermost views may have been, Anne went along, in 1940 publishing a brief book, *The Wave of the Future*, that, as she wrote to her mother, attempted "to give a *moral* argument for Isolationism." Readers saw the work as "a recapitulation" of Charles's more extreme views and it became "one of the most despised books of its day." When Charles then gave an unequivocally anti-Semitic speech in Des Moines, Iowa, in September 1941, the two found themselves reviled by the media and politically (and, occasionally, socially) shunned.<sup>69</sup> Their change in national status was a blow to one so self-engrossed as Anne and so once-adulated as Charles, and it did not fade until long after the end of World War II. The world Anne had experienced by 1943 was far removed from that she and Charles had experienced in the 1930s.

Faced with dramatic changes in life and in the realm of aviation, she looked backward in *The Steep Ascent*, drawing upon her experiences of flight to shape one last story about a woman and an airplane. In it she metaphorically made herself a spokesperson for *all* women, using the airplane as the vehicle that helped her on her way to new insights and understandings. Anne wrote of a time that in 1944 no longer existed but revived the exalting elements of flight as she had earlier perceived them. There is no

evidence that she read, or was even aware of, any of her predecessors in women's flight (excepting only Amelia Earhart, whom she considered a friend). Indeed, as a biographer observes, Anne "never earned a reputation as a true flyer" among the "small coterie" of notable women fliers, and was seen by many of them "as an appendage to Charles." Yet, like them, despite living in a world far removed from the one that most of them enjoyed, she believed in flight's ability to further self-discovery.<sup>70</sup>

The popular historian David McCullough, writing forty years after *The Steep Ascent*, observed: "The airplane offered a spiritual pilgrimage in ways other machines had not before. . . . Aviators wrote of being lifted out of themselves by the very act of flight, of becoming part of something infinitely larger than themselves."<sup>71</sup> Anne expressed this sense to a degree but could not move beyond her own "spiritual pilgrimage." That pilgrimage was a profound one, enhanced by what one reviewer called her "clear individuality and unusual gifts." It empowered her to step out of a world of aloof aesthetic contemplation and into that of technology and commerce. It was a revelatory undertaking that made possible a perception of life and self that without aviation she likely would not have attained, and it led her, in 1943, to state that, in flight, "this is my country, my life, my vision. I am at home again in the air."<sup>72</sup> It removed her from the mundane and the muffling, sensitizing her to the larger intersections of human existence—those of male and female, personal and social, birth and death. Her life was hers to live, still detached, still privileged, and still wholly human, but with a fuller understanding of the spiritual and social forces working outside her realm.

For those who could experience them, flight's qualities encouraged the development of a vision enabling one to confront life with new clarity and new determination; in 1939, after effectively having given up flying, Anne observed in her diary: "It is strange that aviation, the newest and most modern of activities, should bring one back into close contact with the elements again."<sup>73</sup> In that elemental contact was one of the reformative powers of flight. For herself, she understood the extent (and limits) of her growth as a person of the Golden Age of Aviation. Thanks to flight, she was at last equipped to confront the harsh realities and transcendent joys of a broader existence. Those joys, however, she kept for herself. When she returned one last time to describe the experience of flight, she dealt with spaceflight, not aviation. She struggled to extend the joys of aviation to spaceflight but ignored the crucial, limiting differences between the two undertakings. Aviation, at least in the popular belief, could raise the individual to new levels and new achievements. Spaceflight, if viewed dispassionately, could not, and in embracing it Anne Lindbergh stepped away from previous generations' vision of flight as a potentially redeeming power.

The apex of aviation's developmental pyramid offered individuals at least the *dream* of sharing in the ecstasies of flight. That of space does not, but Anne found in it a cosmic apotheosis to which less privileged individuals might or might not respond.



The world that Anne posits at the end of *Earth Shine* is an organic one in which “the heron and the astronaut are linked in an indissoluble chain of life on earth.”<sup>74</sup> She envisions an ideal chain and an ideal existence, but it is one lacking the compelling, vigorously democratic optimism that the winged gospel offered to the populace at large. Edenic nature and ecstatic spaceflight are laudable ideals—but they are equally unattainable for most in the contemporary world, and Anne’s embracing of them marks the end of the Golden Age of Aviation.

# Epilogue: Requiem for the Aviation Age

WHEN WORLD WAR II ended in mid-1945, the capabilities and potential of aviation dazzled the public mind. Aircraft were more durable, more versatile, and more reliable. The diversity of aircraft flown during the war—single-engined light planes, two-, three-, and four-engined transport and bombing planes, high-speed fighters and low-speed helicopters, jet- and rocket-propelled vehicles manned and unmanned—enhanced old applications and offered fascinatingly unexpected new ones. An entire generation of young men and women had seen at first-hand how aircraft lent themselves to applications civil as well as military, and the possibilities aviation offered were lost on few. Globe-spanning commercial air routes seemed imminent, new technologies were available for application to general aviation, and even the most cautious of aeronautical prophets anticipated extraordinary advances.

One legacy of the prewar years was the continuing assumption that war's end would bring a nationwide desire for personal aircraft. A 1930 survey carried out by the Curtis Publishing Company projected that, if certain design, manufacturing, and pricing criteria were met, within fifteen years "there should be 1,000,000 privately owned planes in operation with an annual market of 250,000." A corresponding poll conducted in 1946 concurred, estimating that almost a third of adult Americans hoped to own an airplane and nearly 10 percent of the populace intended to buy one; the American public, the survey concluded, realized that "the air age is here."<sup>1</sup> The popular media did their part as well. In "Five Acres and a Plane," *House & Garden* magazine announced in early 1945 that citizens planning new homes should include a runway in their designs. "Whether or not you are sky-minded now," the text proclaimed, "tomorrow your friends and your children will be flying." A month later *Ladies' Home Journal* joined the discussion,

publishing Nell Giles's "I Gotta Fly." Giles soloed after only five hours of instruction and ended her article by asserting that "flying is something anybody can do." The democratic accessibility of the airplane seemed alive and well.<sup>3</sup>

Many of those polled in the second Curtis survey came from the hordes of returning servicemen and women, individuals who had a firsthand experience of flying and could anticipate the ready integration of flight into the workings of the larger society. That population, in 1945 generally aged from twenty-two to thirty-five, formed a distinctive, possibly even unique group. They were the ones of whom *Scientific American* said in 1930: "There is no one to whom the romance of aviation makes more of an appeal than it does to the boy between seven and 15 years of age."<sup>3</sup> Their generation could reasonably be called the Lindbergh progeny, individuals in their preteen and early teen years in 1930 who would have fed their interest in flight with the aviation-related series books of the era.

The books, stimulated by the excitement of Lindbergh's flight, appeared in wholesale quantities, fanning the fires of aeronautical zeal with each succeeding volume. Typical of the boys' series was Franklin W. Dixon's Ted Scott series for the Stratemeyer Syndicate. The first volume appeared a scant three months following Lindbergh's arrival in Paris in 1927 and the fifth title, *The Search for the Lost Flyers or Ted Scott Over the West Indies*, appeared in May 1928, almost exactly a year later. (The series ultimately ran to twenty titles.) In *The Search for the Lost Flyers*, Dixon (actually John W. Duffield, principal author of several other Stratemeyer series) presented an extended, detailed vision of America's air age future: "The time will come [Ted says] when the skies will be fairly black with machines, the same as the roads now are full of automobiles on Sunday or a holiday. It will be thought a disgrace, or at least a sign of poverty, not to own an airplane. . . . And mind, I'm not talking of a hundred years from now. I'll give ten years, twenty years at most, before this becomes a reality."<sup>4</sup> The twenty-year upper limit Ted postulates takes him to 1948—a likely year for the postwar renaissance in private ownership of aircraft.

*Scientific American's* article said nothing of girls but could easily have included them; girls' airplane-model-making clubs were an accepted part of the adolescent scene in the 1930s, and publishers turned out individual tales and series books that, if less numerous than those produced for boys, were no less visionary. The earliest girls' series, Margaret Burnham's Girl Aviators stories and Edith Van Dyne's Flying Girl books, appeared in September 1911, soon after the meets of 1910 and the Nassau meet of 1911. Both series show their young heroines as independent, capable, intelligent, and in every way the equal of their male counterparts. Burnham's series, which ran to four volumes, relates the adventures of two girls, Peggy Prescott and Jess Bancroft, and their brothers, Roy and Jimmy, as they develop a successful flying machine, thwart the machinations of a scheming banker, win a lucrative military contract, and handily defeat a troupe of

professional air show fliers. The two volumes of the Flying Girl tales, pseudonymously written by Oz books author L. Frank Baum, follow Orissa Kane and her brother, Stephen, as they too develop a successful aircraft, compete in the second Dominguez International Air Meet, and prepare for Orissa to fly a radically new flying boat in a scheduled competition in San Diego. Both series ended abruptly in late 1912, almost certainly influenced by Harriet Quimby's death in July of that year; neither mentions Quimby by name, but both include background characters reflecting her appearance and activities.<sup>5</sup>

Aviation books for girls disappeared during World War I but came back to life following Amelia Earhart's 1928 flight. Edith Lavell's five-volume Linda Carlton series, begun in 1931 and typical of the post-Earhart books, traced the life of a socially prominent teenager who wins both a transport license and an airframe mechanic's license, flies the Atlantic, and at last settles on a Pitcairn PCA-2 autogiro for her personal aircraft. Echoing Earhart's *Cosmopolitan* comments of August 1931 concerning the autogiro, Linda calls it "the plane of the future," and a friend gushes that they will "probably see one perched on everybody's roof within the next five years." Betty Baxter Anderson's *Peggy Wayne, Sky Girl: A Career Story for Older Girls* (1941) takes a slightly different tack. Peggy, a newly graduated registered nurse, joins the Skylines Airline Company as cabin attendant. In her spare time she learns to fly, becomes fascinated by flight, attracts the attention of company executives through her skill, and nurtures a dream: "Why shouldn't women, one day, pilot the big transport planes? Why should the highest goal in commercial aviation be limited to two thousand men . . . ? So—Peggy dared to dream. Perhaps, in the immediate future, women would have a chance to prove their right to an equal place in airliner cockpits."<sup>6</sup> Male or female, the teens and preteens of the 1930s were ready to reenter civilian life in 1945, air-minded young persons who were prime candidates to fuel the coming revolution in aviation.

Few observers challenged the prewar vision of a society shaped by an all-pervasive popular aviation. Well before war's end, the aviation community was considering the future. Reginald Cleveland and Leslie Neville, writing in *The Coming Air Age* (1944), observed: "It is true that the airlines will change our civilization as the railroads did, and to an even greater degree; but, while the railroads were once an outlet for fortunes, the airlines are still an outlet for faith." They spoke as well of "the vision of two helicopters in every garage," noting that "only infrequently does one see a popular magazine or Sunday supplement in which some advertisement or article does not picture the sky commuter in his private machine."<sup>7</sup> Aviation still retained its implicit message of a better society through technology.

That message was bolstered by a later work, William Fielding Ogburn's *The Social Effects of Aviation* (1946). Ogburn, a sociologist at the University of Chicago, set out

to provide “a responsible and useful study of a problem which immediately confronts us.” His premise was simple: “In 1905, the world stood on the threshold of the automobile age; at present we appear to stand on the threshold of the airplane age.” Since “the individual, as well as society as a whole, profits from the foreknowledge of approaching change,” he offered a series of inferences from available population, economic, and social data to make a projection of American aviation’s socioeconomic future.<sup>8</sup>

Ogburn’s conclusions supported a social and emotional view of flight unchanged from the prewar years. Thus, for example, he posited that “religions may become less parochial and ethnocentric . . . [and] it may be that the airplane will help to bring about the understanding of the principles of Christianity, namely, the brotherhood of man.” He extended this view to the possibility of direct effects upon the individual flier: “Flying brings at times an ecstasy, a sense of power, or achievement and mastery. It appeals to the imagination. There is a sense of rapid flight, of going to new places, and of being out in the open spaces. Thus, airplane travel may be a pleasure and a recreation in itself.”<sup>9</sup> Warfare and technological progress may have altered the airplane’s role in the larger society, but, for Ogburn, its power at the individual level seemed unchanged. Flying was “a recreation in itself,” he said, reminding readers that the activity implied a *re-creation* of the individual spirit. That re-creation of persons paralleled the re-creation taking place in aviation technology, and the two together implied a revived age of aviation.

By the end of 1946, all the pieces of a new air age were in place. A new awareness of flight permeated the nation. Flight-conscious consumers were returning to civilian life, their appetites for personal aircraft whetted by their wartime experiences. Manufacturers were turning from military production to civilian production, their new designs pitched to the hypothetical needs and interests of the air age generation of the immediate postwar years; Piper Aircraft, for example, produced over seven thousand of its familiar Cubs in 1946 and anticipated building ten thousand in 1947. A *Fortune* article from 1946 neatly summarized the overall atmosphere, remarking that “the golden age for private flying will not dawn this year or next year. But the trend is in the right direction—toward cheaper, safer airplanes, many more air parks, and much less governmental red tape for pilots. The outlook is good.”<sup>10</sup> There was just one problem ahead.

For all its promise and all its optimism, the revival was frustrated by hard realities. Postwar life had compellingly urgent needs. The soldiers, sailors, and fliers returning to civilian life needed homes, jobs, schools, and consumer goods more than they needed airplanes.<sup>11</sup> The matter of supply and demand also played a role. Just as the light-plane manufacturers were hitting their stride after the war, the War Assets Administration released one hundred thousand surplus military aircraft for sale at bargain-basement prices. Over thirty thousand of these were training planes well-suited for the private

market, and high-winged, fabric-covered light planes reminiscent of the past could not compete with sleek, modern, all-metal airplanes offered at extraordinarily low prices. The market for light airplanes collapsed.<sup>12</sup>

If social, economic, and technological developments in the aftermath of the Second World War effectively quashed a second Golden Age of Aviation, they did no better for women in aviation. The early days of flying held out the same promise for women that they held out for aviation generally; women could—and would—become as much a part of civil and military aviation as were men. In 1927 an article in *Literary Digest* observed that “just as women motorists proved their usefulness and dependability in many emergencies of transport service during the World War, so, it is predicted . . . commercial aviation promises to afford them opportunities for peaceful and successful careers in the air.”<sup>13</sup> The prospects of a woman’s becoming a professional pilot were perhaps limited, but aviation by 1940 offered numerous other opportunities: airport management, aircraft sales, demonstration flying, student instruction, publicity work of various sorts, ticket sales, and even some forms of manufacturing and maintenance. The burden of seeking and preparing for these jobs rested with the individual. Education was a necessity, some degree of technical expertise was desirable, and a pilot’s license was an asset as the individual prepared for her job search. For the motivated and dedicated woman, “aviation [offered] glamour, the lure of travel, excitement, interesting contacts.” Opportunities galore awaited the woman willing to look beyond the cockpit.<sup>14</sup>

One distinctively aviation-related occupation coloring the Golden Age was that of airline stewardess, the label initially applied to female cabin attendants. The work originated in 1930, when Ellen Church proposed that Boeing Air Transport add women cabin staff to their flights. These employees should be registered nurses, Church stipulated, reasoning that nurses conveyed an air of professionalism that would calm nervous travelers, and their medical discipline would equip them to deal capably with emergencies. The innovation proved popular with airlines and passengers alike. Other lines added comparable attendants and the women involved quickly became a “cultural elite among working women,” commanding respect for their skill and professionalism.<sup>15</sup>

The start of World War II seemed to create still more opportunities as men were drawn into the military and women began to fill the gaps in the workplace.<sup>16</sup> Women were soon accepted into diverse industrial roles, their contributions reflected in the image of the iconic Rosie the Riveter. New opportunities for women in aviation extended even to the flight line, where women mechanics and technicians became an accepted part of the scene. The industry’s incorporation of women became so extensive that Dickey Meyer, writing in *Girls at Work in Aviation* (1943), concluded that women were finding that “their future has been placed squarely in their own hands. . . . They have learned that there are no remaining doors closed to them simply because they are

women.” The debate over women working within aviation, whatever the task might be, seemed settled.<sup>17</sup>

Changes were soon to come. Within six months after war’s end, the number of women in the general workplace had fallen by 20 percent. So dramatic was the drop that, some nine months following the peace, Frieda S. Miller, director of the Women’s Bureau of the Department of Labor, could ask, “What’s Become of Rosie the Riveter?,” remarking on the wholesale dismissal of women workers and the pressures for women to return to traditional roles in the homeplace.<sup>18</sup> Circumstances were somewhat different for the women working in airliner cabins. Job responsibilities had expanded and the job had become one of the most prestigious of women’s non-piloting occupations. That prestige, however, lasted only until the onset of the war, when the military’s need for medical personnel caused airlines to drop the nursing requirement. The end of the war and the rapid expansion of airlines brought about a further change. The new airliners being introduced were larger and faster than their predecessors, more attendants were needed, and the nature of cabin responsibilities changed. Whereas attendants were once considered professional adjuncts to the flight crew, the women of the postwar years increasingly became marketing tools. Airlines stressed cabin attendants’ attractiveness alongside other in-flight enhancements designed to attract more male passengers, and a job rooted in professionalism became one based on glamour.<sup>19</sup>

A singular rejection of women in aviation came with the termination of the Women’s Airforce Service Pilots (WASP) program. Created in 1943 by Nancy Harkness Love and Jacqueline Cochran, the WASPs took over the domestic flying of military aircraft, shuttling machines from the plants to their bases, towing targets for gunnery practice, serving as second-string test pilots, and flying as check pilots for male cadets. By the end of the war WASPs had flown in every type of aircraft then in service, from high-performance fighters and multi-engined bombers to the XP-59, the air force’s first jet-propelled airplane. They performed as well as (and often better than) their male counterparts in the same aircraft, yet, for all its merits, the WASP program ended abruptly in 1944. Its supporters attempted to secure the WASPs equal status with the other women’s military divisions but were blocked by pressure on Congress exerted by a coalition of male pilots and aviation cadets who claimed to have been displaced from flying assignments by the women pilots. The WASP veterans were not accorded military recognition and benefits until 1977.<sup>20</sup>

With the war over and women’s status in flux, one might legitimately ask, What became of the women fliers who helped to shape the nation’s view of flight?<sup>21</sup> The aviation community had to deal with far-reaching social changes, as millions of veterans, almost all newly aware of aviation, returned to civilian life. It had to deal with accelerating technological changes, as new aircraft designs entered the commercial as well as the military sphere. The very technology of postwar aviation, pursuing developments in

jet and rocket power, limited opportunities for women pilots. And it had to deal with a fading of the role and presence of women in its ranks. There were no women pilots returning from war: only the WASPs had flown, and they had been disbanded in 1944. There were no female fliers who caught and fascinated the public eye, as Quimby, Law, the Stinsons, Earhart, Thaden, Nichols, and Lindbergh had, each in her own time. The immediate postwar era was one of uncertainty, change, and confusion for fliers of both genders, and it did not bode well for the coming of a second Golden Age of Aviation.

In many respects the activities of Jacqueline Cochran (1906–1980) personified the changing status of women in aviation. Interviewed in mid-1940 by Adelaide Hardy of the *New York Times*, she began as a defender of traditional femininity, as befitted a manufacturer of cosmetics: “Women have won their social and political independence at the sacrifice of the old-fashioned homage to femininity enjoyed by their grandmothers.” She went on to maintain, though, that women’s search for equity had frustrated their pursuit of recognition. Changes in the public attitude toward independent women, she acknowledged, had nonetheless benefitted her flying efforts, “but we’re carrying the idea of parity too far. It’s getting so a woman just about has to do a head-stand on Forty-second Street to receive any attention. There was a time when it was quite a thing just to be a woman.”<sup>22</sup> Her comments were an ironic reversal to the efforts made by her predecessors (and contemporaries) in women’s aviation, but they prefigured what was to come.

At the time she made her observation, Cochran was at the first of her several peaks of prominence. Licensed as a pilot in 1932, she won her transport license in 1933 and immediately set out to make her name as a flier. The next three years carried one failure after another, as crashes and mechanical problems forced her out of a succession of competitions, including the Bendix and MacRobertson races of 1934. She was not, however, idle in other realms. In her pre-flying days, Cochran had supported herself as a beautician and hair stylist. In 1935, with support from financier Floyd B. Odlum, she established the Jacqueline Cochran Cosmetic Company, adopted the slogan “Wings to Beauty,” and opened offices on New York’s Fifth Avenue. Within a year she had opened outlets in upscale Ohio and California department stores and by 1937 had added shops in comparable stores in Pennsylvania and Washington, D.C.<sup>23</sup>

She took a second major step in 1936, when she married Odlum. (The two had had a relationship dating from 1933, leading to Odlum’s divorcing his wife in 1935.) Now backed by wealth to a degree denied her professional contemporaries, she began to make her mark in aviation. She set her first records in 1937, flying a Beechcraft D-17 Staggerwing, placing third in the Bendix race and setting two international speed records for women. She followed these records with four more, all accomplished in a Seversky P-35 and in one instance besting a record set by Howard Hughes. For its time, the P-35 was a superior airplane (it evolved into the later Republic P-47 Thunderbolt,



one of the outstanding fighters of the war) and the first of several first-line military aircraft to which Cochran would ultimately gain access.<sup>24</sup>

Cochran had the recognition she sought—at least in aviation circles—by the start of 1938. In December 1937, the trade journal *National Aeronautics* publicized her in its On the Up and Up column, dubbing her “one of the world’s outstanding feminine pilots.” (Previous issues during 1937 had featured, among others, Juan Trippe, founder of Pan American Airways; racing pilots Roscoe Turner, Jimmy Doolittle, and Eddie Rickenbacker; and the designer Alexander Seversky.) This notice was followed by the January 1938 issue of *U.S. Air Services*, which featured her picture on its cover and in the accompanying article hailed her as “one of the outstanding women flyers in the world.” She cemented her standing by winning the 1938 Bendix race flying a Seversky AP-7, a civilianized version of the P-35 adapted for racing with a more powerful engine, and receiving the Harmon Trophy as outstanding woman pilot of 1937. She would go on to win the Harmon Trophy thirteen more times.<sup>25</sup>

Cochran won prominence, but not affection. In mid-1937 an article in the *New York Journal and American* considered her briefly as a candidate to replace Amelia Earhart in the public eye but concluded that Louise Thaden was a far more plausible contender. In the same article, Jack Seeley, editor of the Ninety-Nines’ journal, *Airwoman*, suggested that spectacular flying achievements by women would soon lose their novelty “because there’s no point to it any more. . . . To do something because it’s difficult and nobody else has done it no longer has much meaning.”<sup>26</sup> Earhart was gone, as was the glamour, excitement, and distinctiveness associated with women’s achievements in flight.

Cochran’s subsequent career validated Seeley’s remark. By 1940 she was widely known in aviation and business circles but attracted little widespread popular attention. During World War II she headed the WASP program, receiving the Distinguished Service Medal for her efforts. At war’s end she returned to civilian life and the managing of her burgeoning cosmetics empire, but she remained determined to continue her efforts as a record-setting pilot. She began barely a year after the end of the war, placing second in the 1946 Bendix race in a demilitarized North American P-51 Mustang and setting a new women’s speed record (420.828 mph) in the process. In 1948, again flying a P-51, she outstripped an air force jet-propelled Lockheed P-80 to set a world record of 447.470 mph. She continued her record-setting into the mid-1960s but did so flying a succession of increasingly complex and sophisticated aircraft. In these records lay one sign of the changes that had taken place—in flying generally and in women’s flying in particular.<sup>27</sup>

The earliest women aviators generally flew in aircraft that they owned as individuals. That they were able to do so quietly suggested the democratic accessibility of the airplane; it was a machine that any person of reasonable means might own. Thaden and Nichols, to be certain, used borrowed or leased aircraft for their records—Thaden an

advanced Travel Air model and Nichols a Lockheed Vega. Even so, the machines were production aircraft intended for the general aviation market. For her part, Cochran from 1934 onward owned outright a number of high-performance airplanes—among them a Northrop Gamma 2G, a Gee Bee QED, a Beechcraft D-17W Staggerwing, and a twin-engined Lockheed Lodestar corporate transport—all of which were available to affluent pilots. Her postwar records, however, were set in first-line military aircraft wheedled from the air force through her husband's political connections.

Technological advances necessarily played a part. The days of high-speed, propeller-driven aircraft were clearly numbered as jet-propelled ships appeared on the scene. These were, without exception, aircraft developed for the military and machines prohibited by law for sale to civilians. Commercial jet-propelled service began in 1952, when the British Overseas Airways Corporation (BOAC) introduced the four-engined de Havilland Comet on its London to Johannesburg route, but was not offered by U.S. carriers until 1958, when Pan American Airways began transatlantic service with the Boeing 707—the first of the 7\*7 dynasty of airliners. The last record-setting craft that Cochran owned outright reflected the transition: it was an obsolescent P-51 Mustang that she bought in 1946 at a government disposals sale. Between 1946 and 1948 she used it to set five international women's speed records. She did not resume record-setting flights until 1951, and from that point on used only military jet-propelled craft.<sup>28</sup>

From 1950 onward Cochran set records using aircraft to which few if any civilians would have had access. In 1952 she set her first jet-powered record in a Canadian-built North American F-86—the product of a subsidiary of a company in which Floyd Odlum was a major stockholder. Her coach in learning to fly the high-performance airplane, Chuck Yeager, the first person to fly faster than sound, was provided by the military. The next year she used a military-issue F-86J from the United States Air Force. In this aircraft she became the first woman to pass Mach 1 (the speed of sound), again tutored by Yeager and flying on the highly restricted grounds of Edwards Air Force Base. Her subsequent records followed the same practices. Between 1953 and 1964 she flew a Northrop T-38 supersonic training plane, a Lockheed TF-104 owned by the Lockheed firm (a two-seated trainer version of the transonic F-104 Starfighter), and a Lockheed F-104G. In the latter airplane she passed Mach 2, again at Edwards AFB, becoming the first woman to fly at twice the speed of sound.<sup>29</sup>

Cochran's records were substantial, but they did not electrify the general public. She was flying aircraft obtained through her political connections, her wealth, and the corporate power wielded by her husband, and she was flying them at sites effectively closed to civilian pilots. (When details of her flights were published in the trade journal *Aviation Week*, an air force spokesperson reluctantly acknowledged that they had “[disrupted] day-to-day flight testing at Edwards.”) As her biographer points out, although Cochran was “a fearless and superb pilot,” it was “the woman with influential

friends in high places [who] had acquired the plane and the use of an air base.”<sup>30</sup> Her actions demonstrated that at least one woman pilot could handle the latest in aeronautical technology but offered few if any encouragements to other women in the field. She won distinction, but her achievements gave no indication that other women pilots might equal or surpass them. The door to women’s aerial achievement was effectively closed, blocked by technological complexity and military regulations.

The career of Jacqueline Cochran encapsulates some of the problems the earlier women pilots faced. Their circumstances were as varied as the women themselves. All had left competitive, exhibition, or exploratory flying, and their ties with the field were tenuous at best. Two, of course, were dead. Harriet Quimby had been gone for a third of a century, remembered in the 1940s and 1950s for the most part only by aviation enthusiasts, and Amelia Earhart, having disappeared in 1937, was presumed dead.<sup>31</sup> Others among the shapers of women’s Golden Age of Aviation were no longer actively involved with aviation. Neither of the Stinson sisters took a significant part in the developing profession. Katherine stopped flying in 1928 when her health failed. Married to a New Mexico state official, she built a reputation as an architect specializing in the rehabilitation of old buildings and the designing of new ones in what came to be called the pueblo revival style. Stinson was interviewed for the Columbia Oral History Project in 1960 and died in Santa Fe in 1977.

Like her sister, Marjorie gave up flying after World War I. She closed the Stinson training school and joined the Navy Department in 1919 as a draftsman. She later transferred to the War Department, where she worked in the same capacity until her retirement in 1936. She did not take part in the Columbia University project, and her relations with her sister were often strained and at best distant; even so, she vocally defended her family’s reputation as aviation pioneers. She participated in organizing the Early Birds professional association and briefly held a modern pilot’s license, but she was not otherwise active in the flying profession. She died in 1975.<sup>32</sup>

Ruth Law retired from active flying in 1922 and moved with her husband to California, keeping as mementos only the propeller from one of her aircraft and the strip map she had used on her Chicago-New York flight of 1916. Journalists sought her out for interviews from time to time throughout the 1930s, and she was interviewed for the Columbia Oral History archive in 1960. She died in 1970, her obituary citing as her principal achievements her Chicago to New York flight of 1916 and her operation of Ruth Law’s Flying Circus.<sup>33</sup>

Two of the later figures were tangentially involved with aviation, doing some flying but generally focusing their efforts less on setting records than on advancing aviation at the national level. Both also continued to write, publishing autobiographies notable for their nostalgic accounts of a time “when [they] flew along a fringe of dreams not yet born [and] knew the ecstasy of discovery.”<sup>34</sup> Shortly before her

retirement from competitive flying in 1938, Louise Thaden joined Blanche Noyes, Helen Richey, and a handful of other women pilots in the National Air Marking Program. Created by Phoebe Omlie and Earhart and sponsored by the government's Bureau of Air Commerce, this was an initiative to persuade towns and cities throughout the country to have the town name, the distance to the nearest airport, and the direction of the airport painted prominently on the top of a major building. These markings would help pilots who might not have access to the national network of directional radio signals to identify their location. The project was well-received, but the coming of war prompted officials to remove all such markings as protection against hostile air raids. Improvements in postwar avionics made further expansion of the program unnecessary.<sup>35</sup>

Thaden did not join the WASP program, instead devoting her wartime energies to working with her husband's engineering firm; she went on to manage it following his death. In *Fly Girls: How Five Daring Women Defied All Odds and Made Aviation History* (2018), Keith O'Brien portrays her as spending her post-flying years as guilt-ridden and insecure as to her identity as pilot, wife, and mother. Nonetheless, when sport flying resumed following the war, she joined the Civil Air Patrol (CAP), a still-new organization. The Patrol was open to women as well as men and, during the war, had engaged in "courier services, coast and forest patrol, and ferrying operations with the United States, in order to release aviation personnel of the Army and Navy for active war service." Its peacetime activities evolved into flying search-and-rescue missions around the country and supplying basic pilot training for young people. Thaden took an active part in CAP operations, rising to the rank of lieutenant colonel before retiring from all flying. She died in 1979.<sup>36</sup>

For her part, Ruth Nichols, as previously noted, had established Relief Wings just before the war. This was an organization comparable to the CAP but stressing humanitarian services. The group was unique in being organized and operated by women, and it built a network of "private airplanes, volunteer medical professionals, and a network of medical facilities" to offer air ambulance service alongside search-and-rescue operations like those of the CAP. It had the backing of several airline executives, including C. R. Smith of American Airlines and Eddie Rickenbacker of Eastern Airlines, and by late 1941 it had active units in thirty-six states. When World War II regulations severely restricted civilian flying, the operation was absorbed by the CAP.<sup>37</sup>

In *Fly Girls*, O'Brien paints a dismal picture of Nichols's last years, a succession of futile quests for funding and a slow fading from the public eye. Whatever the reality of her disappointments, she continued her humanitarian efforts following the war. After serving as a special volunteer correspondent for UNICEF in 1949, she resumed active work with the CAP. In 1954 she agreed to oversee CAP development of a program "for recruitment and training of flight surgeons and nurses . . . [and] for the medical

operation of services pertaining to air evacuation, air rescue and air ambulances.” The program began in the New York State CAP and within two years was expanded to include CAP units nationally. She subsequently began her futile campaign to persuade NASA to open astronaut training to women. She died in 1960, shortly after participating in an interview for the Columbia Oral History archive.

Among the surviving women only Anne Morrow Lindbergh completely divorced herself from aviation. She was the only one uncommitted to flying as a profession and the only one who did not make a significant contribution to aviation *by her own flying*. Although she listed her occupation as “Flying” on Charles Lindbergh Jr.’s birth certificate in 1930, her diaries and letters make clear that she always thought of herself first and foremost as a writer. In philosophy and in practice she was only secondarily a pilot. Could she, she asked herself, be both, and, if not, which should she choose? As early as 1933, well before her first publications, she was asking in her diaries, “Where is my world, and will I ever find it? Yes, but you won’t just *happen* on it. You must work for it.” Two years later, writing to her mother, she conceded, “I certainly have no career as a pilot or radio operator.”<sup>38</sup> The outcome was a steady and ultimately final distancing of herself from aviation.

As a prelude to that distancing, she let her flying license expire in 1937; thereafter she flew only as a passenger with her husband or on commercial airliners. Her writing moved away from aviation as well, with *The Steep Ascent* of 1944 her last work incorporating conventional flight. Only once in the succeeding years did she return even sketchily to the theme of flight, writing her account of her meeting with the Apollo 8 astronauts for her *Earth Shine* of 1969. Her break with aviation was accompanied by a new direction in her writing as she became more and more self-absorbed. She had hinted at her longing for her own identity as early as 1936, writing in her diary, “I want my own life . . . , I want my own work.” After an enforced separation from Charles Lindbergh during the war years, and a growing distance between them as he threw himself into airline and military consultancies in the postwar years, she turned her back on the aeronautical world and its technology and began instead to explore the intricacies of the female self. The first result of this was *Gift From the Sea*, published in 1955.<sup>39</sup>

Susan Hertog, Anne’s biographer, has described *Gift From the Sea* as “the product of a quest for faith and harmony” that led Anne to “her only authentic rebellion . . . to become herself—to shed the expectations of her parents and her husband, and to find the space and time to write.” Its origins, in many respects, lie in a journal entry of 1937, when Anne wrote that it is impossible for a person “to live up to women’s standards and men’s standards at the same time.” While many women succeed in fields traditionally assigned to men, “they deny themselves the special attributes and qualities of women,” and the result is a pernicious surrendering of self and identity. This she acknowledged two years later, admitting that in her efforts to join Charles Lindbergh’s

world, “I tossed aside my own [life] as worth nothing and I struggled to lose myself in his.” The enforced isolation, personal as well as artistic, of the war years led her to a period of intense introspection. From it came the determination to reject the world that had made her what she was not and seek out the world that reflected what she was.<sup>40</sup>

Anne’s determination extended as well to her views on technology and the technological world. The coming of the machine age, she believed, had cost the individual—and the female individual in particular—the privilege of solitude and the right to determine, introspectively, just what one’s genuine self contains.<sup>41</sup> There was no greater symbol of the machine age than the airplane, and her distancing of herself from its technology was an admission that where she had been and what she had become had derived wholly from her association with her husband and his technological celebrity. Now, she concluded, if she was to become her own person, she must step away from that shared world. Like her aerial writing colleagues she had been made what she was by the airplane, but she lacked their degree of commitment to it. Unlike them, she found in it no compelling avenue to advancing her personal and professional identity. The time had come to set it aside and seek her own voice and her own identity.

There is no evidence that her ecstatic observations on flight, as expressed in her diaries and her books, were insincere. She considered the exaltation of flight as a part of the ongoing process of self-discovery. As she did so, however, she came to realize that she had no real engagement with flight—certainly not to the extent of her predecessors and flying contemporaries—and her personal commitments rested elsewhere. She came at last to a moment of decision, and that decision was for self-discovered art over aviation. Flying had helped to create her *public persona* just as flying had opened doors for her first publications; of that there was no question. The *genuine persona* she sought, however, would come only from self-defined and self-expressive writing, and with that realization she turned her back on aviation. She died in 2001.

A great irony of these lives is that these women, as Susan Ware (like Cochran before her) has suggested, were victimized by their own success. They had striven to be judged as the equals of men, yet, willy-nilly, had benefitted from their distinctiveness. As that distinctiveness eroded, their prominence faded as well.<sup>42</sup> What once had been extraordinary had increasingly become commonplace. The feats achieved by women pilots—the speed and altitude records, the long-distance flights, the transoceanic flights—no longer commanded the novelty in the public eye they once had, whether for their distinctiveness as new accomplishments or for their being accomplished by women.

A second blow to the prominence of women in aviation came with the disappearance of a readily accepted, nationally identifiable spokesperson who dominated the popular public scene. Harriet Quimby first filled this role at the distant beginnings of flight, as did Earhart and Anne Morrow Lindbergh (at least until Charles Lindbergh’s loss of favor thanks to his political views) in the middle years, but they

had no postwar counterparts. Neither Jacqueline Cochran nor later officers of the Ninety-Nines possessed the national prominence of their predecessors. This, too, was in part the result of women's gaining success in the profession. As Ware notes, "it is much harder to point to the kind of larger-than-life role models like Amelia Earhart who inspired such strong loyalty and identification."<sup>43</sup> As they became more and more an accepted part of the field, too many women were operating too competently in too many realms for any one to establish a widely acclaimed image. The newsworthy figures that did appear and the voices that spoke for them to the public at large seemed anonymous and mechanical, as in the publicity accorded the original Mercury 7 astronauts in the late 1950s.

Women came to the American space program only slowly, and even then only after the Soviet Union launched Valentina Tereshkova into orbit in 1963. The pressures of Cold War politics and the growing influence of the women's movement combined at last to break down NASA's resistance to women, but even so, the transition took fifteen years.

With commercial aviation in the hands of the accountants and the conglomerates, the space program inching along under the weight of political ideologies and competing priorities, and civil aviation increasingly burdened by regulations, weighed down by costs, and generally an enterprise no longer easy to undertake, flight no longer carries the cachet of democratic accessibility that it once had. Familiarity with aviation has made flying simply another part of life—a mundane convenience no more romantic and no more distinctive than driving the interstate highway system. Airports figure in the news mainly when neighbors complain of the noise of arriving and departing flights, and to enter an airport, once an exalting experience to be anticipated, becomes an exercise in delay, tedium, and frustration. No longer do advertisements sing the praises of the ease and comfort of flight, and no longer do writers rhapsodize over the exotic cleanliness of air terminals.<sup>44</sup> The activities of flight have become ordinary.

Even in the face of the ordinary, however, the mythic appeal of aviation endures. As late as 1950, the respected aeronautical trade journal *Aviation Week* published an in-house advertisement for itself, addressed to "The kid that once was you . . ." The left-hand page featured the face of a preteen boy, gazing dreamily into the upper middle distance. On the right-hand page was a text that began:

The boy in the window looks upward. His eyes are shining . . . his attention riveted on a plane in the sky.

You watch him, you know he is not with you at all. . . . He is no longer earth-bound—but a man with wings.

You know what he is thinking, for once you stood somewhere—in a window, at a school desk, on a hill—and had the same dream of glory.<sup>45</sup>

To this point, the text might have been written in 1920, 1930, or even perhaps 1940—but it now appears in 1950.

Chronological disjunctions begin in the later paragraphs. The text goes on: “Chances are your first love affair was with a wire-strutted Jenny, or later, with a Winnie Mae, or a Spirit of St. Louis.” The copywriters are writing in 1950, yet their images are those of the Golden Age of American Aviation, fifteen to twenty years earlier. The Curtiss JN-4 Jenny trained countless fliers in their trade and was the basic vehicle of barnstormers following World War I. Winnie Mae, a white Lockheed Vega, was Wiley Post’s craft for his round-the-world flight of 1931 with Harold Gatty, his solo round-the-world flight of 1933, and his experiments in stratospheric flying in 1934 and 1935. The silver *Spirit of St. Louis*, forever linked with Charles Lindbergh’s 1927 transatlantic flight, was perhaps *the* iconic aircraft of the Golden Age, emblematic of personal courage and technological progress. All three resonate with the freshness, the excitement, and the romance of the era, yet all three are oddly out of sync with the aeronautical atmosphere of 1950.

Having evoked memories of notable aircraft of the past, the advertisement plausibly looks to the aircraft of the present and near future: “Today’s youngsters are enchanted with a Buck Rogers world come true—sleek, streamlined rocket planes . . . , jet-propelled planes that fly faster than sound.” The image is jarringly shattered, however, in the next paragraph: “All of these are a part of modern aviation. It is a world fantastic beyond belief. And it becomes bigger and more incredible by the day.” The icons of the past may yet retain their glory in the imagination, but that glory is increasingly subordinated to a bustling industrial world dominated by size and impersonality. Perhaps unwittingly, the text offers its own obituary for the now-lost air age in its penultimate paragraph: “Almost ten million dollars a day are being spent . . . to satisfy commercial, private and government needs.”<sup>46</sup>

The advertisement implicitly communicates the sense of a male-dominated industry that holds no place for women pilots. Moreover, its proud trumpeting of the millions required by 1950s aerospace development poignantly dramatizes the passing of the Golden Age’s individual entrepreneurial aviators and their endeavors. One tenth of one day’s national air and space expenditures would have underwritten the Wright brothers’ entire development work, Lindbergh’s 1927 flight from New York to Paris (\$15,000), Ruth Nichols’s proposed transatlantic flight of 1932 (\$51,000), and Amelia Earhart’s 1936 Lockheed 10-E Electra (\$80,000), not to mention Harriet Quimby’s Blériot XI, Ruth Law’s Wright Model B (\$5,000–\$7,500 each), and the Lindberghs’ Lockheed Sirius (\$23,000), with money left over for incidentals. The contrast between the air age envisioned by earlier generations and the corporate nature of the present could not be more explicit.<sup>47</sup>

The editors of *Aviation Week*, individuals who almost certainly had grown up during the Golden Age of American Aviation, understood the era’s “glory” and its



sense of wonder and sought to capitalize upon it. Their choice of words says as much, as they speak of the flier's "love affair" with flight and the dream of becoming "no longer earth-bound" and "a man with wings." This is the imagery of the earlier time, and the editors work to apply its romance to the impending space age. They fail. When the wonderful becomes ordinary, the sense of wonder fades. The wonder of Golden Age aviation came from "its glamour, its danger, its adventure, the bravery of the pilots, and the mystery of aviation in general." Although the advertisement evokes these thoughts with respect to aviation, it looks only at men. The eight women discussed here also participated in that glamour, that danger, that adventure, that bravery, and that mystery.<sup>48</sup> Their successors no longer share the same perceived opportunities.

Each of the eight, in her own distinctive way, strove to communicate those qualities to the larger public. Each succeeded, to one degree or another, during her times. Each, however, eventually gave up her writing or turned her efforts to other causes. Ruth Nichols and Louise Thaden alone among the group continued to speak for women and aviation until the 1960s and 1970s, but their voices commanded less and less notice. Even as the world of flight inexorably and irretrievably changed about them, they strove to remind readers of a time when the newness of flight made it fresh and exciting, when women took up its challenge to participate as readily as men. Their convictions were sincere but their opinions seemed quaint.

Women now routinely fly in commercial and military cockpits and take part in the space program; to that extent, the efforts of these eight women and their contemporaries in the women's movement succeeded. The eight argued consistently for the inclusion of women into a field traditionally dominated by men, and their contributions were substantial. They contributed just as much—and perhaps more—as social historians, observing and writing of the times in which they lived, for they gave firsthand evidence of their eras' technological developments *and* of the developing efforts of women to become participating members of that technological society. Their goal was an acceptance of women working on a level with their male counterparts, serving as equals but not striving to dominate. In their achievements and in their writings they helped to build the foundations of a lasting vision of aviation, and they chronicled its development and decline.

Along the way they carried out a valuable service. They familiarized a long-neglected segment of the public with a new technology. Whereas conventional thought deemed women as less technologically perceptive than men, the eight argued that women would understand and comprehend flight's merits. They broadened and strengthened the public's growing sense of that technology's potential (speed and the conquest of distance, new applications for recreational and commercial flight). They made the new technology of aviation seem even more accessible, their emphasis on its possibilities for women suggesting its possibilities for men as well. And they conveyed to

the public their sense of the ecstatic qualities of flight. Through the act of flying, the utopian dream of a clean, progressive, and democratic society for all seemed at least for a while an attainable goal.

The Golden Age of American Aviation spanned barely twenty years, from 1925 to 1945, but the eight women of this study were part of—even essential to—its development. In their writings they documented its origins, its apogee, and its decline. Each spoke in her own voice and each pursued her own particular concerns, but all of them embraced the magical spirit of flight. Their lives spanned nearly a century, but, one and all, they wrote of “a time of growth and exploration, when all ‘firsts’ were *really* firsts, a time when camaraderie existed because words were not always necessary between fellow pilots, a time of instant friends and a spirit of cooperation, and most of all, a sense of something shared.”<sup>49</sup> Coming from diverse social and economic backgrounds, they wrote of not *one* Golden Age but of eight, each communicating her version of the wonders of flight, the potential of aviation, *and* the important place of women in the public mind. They recognized and shared in the romance and majesty of flight when it was a far more personal enterprise, and their words serve to remind us of how so much of what we take as commonplace had its origins in the wonderful.

# Notes

## INTRODUCTION

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## II. "MACHINERY KNOWS NO SEX"

Portions of this chapter were originally published in Fred Erisman, "'Machinery Knows No Sex': Ruth Law, Women's Abilities, and World War I Aviation," *Women's Studies* 47, no. 4 (2018): 415–26, <https://doi.org/10.1080/00497878.2018.145505>.

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#### IV. LOUISE THADEN

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45. Frank T. Copeland, "The Women's Air Derby and Why," *Aeronautics* 6 (May 1930): 412; "Women Are Held Back, Miss Earhart Finds," *New York Times*, 30 July 1929.
46. Thaden, "Noble Experiment," 239.
47. Studies of the Vietnam era are numerous and, not surprisingly, diverse in their interpretations. Two works by Robert D. Schulzinger, *A Time for War: The United States and Vietnam, 1941–1975* (New York: Oxford University Press, 1997) and *A Time for Peace: The Legacy of the Vietnam War* (New York: Oxford University Press, 2006), are reasonable starting points for historical perspective.
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49. Douglas, *American Women and Flight*, 55.
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51. Thaden, "Women and Aviation," 17.
52. Thaden, "Records in the Clouds," 1.
53. Thaden, "Famous Woman Flier Tells Experiences," 14.
54. Thaden, "A Message From Louise Thaden," 95 (italics added).
55. Louise Thaden, *High, Wide, and Frightened* (1973; repr., Fayetteville: University of Arkansas Press, 2004), xi–xii (italics added).
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67. Thaden, "Shall I Let My Child Fly?," 31; Louise Thaden, "Hours," *American Magazine* 123 (January 1937): 11.
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69. Thaden, "Hours," 11.
70. Thaden, "Hours," 11.
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#### V. RUTH NICHOLS

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  12. Frank Luther Mott, *A History of American Magazines, 1885–1905* (Cambridge: Belknap Press of Harvard University Press, 1957), 545–46, 551.
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  30. Nichols, *Wings for Life*, 18–19, 50. Nichols never married but describes a thwarted romance in the book.
  31. Nichols, *Wings for Life*, 19, 36–37.
  32. Nichols, *Wings for Life*, 99, 37.
  33. Nichols, *Wings for Life*, 259.
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  35. Nichols, *Wings for Life*, 219, 52.
  36. Joseph J. Corn, *The Winged Gospel: America's Romance With Aviation, 1900–1950* (New York: Oxford University Press, 1983), 48–50; Nichols, *Wings for Life*, 142–43, 308, 314. Italics and ellipsis in the original.
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  38. Ruth Nichols to Clarence Brown, 16 March 1935, TS, Ruth Nichols Collection, series 6, folder AU-25, International Women's Air and Space Museum, Cleveland, Ohio. Quoted courtesy of the IWASM.
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  48. Turner, "Significance of the Frontier," 38; Mildred Adams, "Woman Makes Good Her Claim for a Place in the Skies," *New York Times Sunday Magazine*, 7 June 1931, SM 6.
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  52. Giulio Douhet, *The Command of the Air*, 2nd ed., 1927, trans. Dino Ferrari (New York: Coward-McCann, 1942), 57, 189.
  53. Corn, *Winged Gospel*, 44, 50.
  54. Nichols, "Sky Girl" MS I, 30, Nichols Collection.
  55. Corn, *Winged Gospel*, 34, 42.
  56. Corn, *Winged Gospel*, 47; Nichols, "Sky Girl" MS I, 3, Nichols Collection.
  57. Nichols, "Sky Girl" MS I, 18–19, Nichols Collection (italics added). Judy comes from Nebraska, Lindbergh from Minnesota, and Earhart from Kansas. They would all be "Western" to a New Yorker like Nichols, thus sharing in the region's ties to nature and the frontier. See Lewis, *American Adam*, 5.
  58. Nichols, "Sky Girl" MS I, 35–36, Nichols Collection (italics added).
  59. Marx, *Machine in the Garden*, 238–39.
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  61. Weitekamp, *Right Stuff, Wrong Sex*, 69.
  62. Weitekamp, *Right Stuff, Wrong Sex*, 69–71; Nichols, "Reminiscences of Ruth Nichols," 39–42.
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66. Adams, "Woman Makes Good Her Claim," 4.
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#### VI. ANNE MORROW LINDBERGH

Portions of this chapter were originally published in Fred Erisman, "Ruth Nichols, Anne Morrow Lindbergh, and the Intersecting Planes of Aviation and Life," *American Fiction* [Korea] 20, no. 3 (2013): 147–68.

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3. Olson, *Those Angry Days*, 37–40; Susan Hertog, *Anne Morrow Lindbergh: Her Life* (New York: Anchor Books, 1999), 65–105, *passim*; "Anne Morrow Makes It 'We Three,'" *Literary Digest* 100 (9 March 1929): 38, 43, 46.
4. Charles Lindbergh, Foreword to Anne Morrow Lindbergh, "Flying Around the North Atlantic," *National Geographic* 66 (September 1934): 259.
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  9. Winters, *Anne Morrow Lindbergh*, 182, 188–89.
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  11. Charles Lindbergh, Foreword to "Flying Around the North Atlantic," 259.
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  13. Lindbergh, "Flying Around the North Atlantic," 261.
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  16. Lindbergh, *North to the Orient*, 26.
  17. Lindbergh, *North to the Orient*, 17, 21.
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  26. Charles Lindbergh, Foreword to *Listen! The Wind*, viii–ix.
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  28. Lindbergh, *Listen! The Wind*, 3, 262.
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30. Vaughan, *Anne Morrow Lindbergh*, 50–51; Elsie F. Mayer, *My Window On the World: The Works of Anne Morrow Lindbergh* (Camden, CT: Archon, 1988), 41–43.
  31. Lindbergh, *Listen! The Wind*, 9, 90.
  32. Lindbergh, *Listen! The Wind*, 11, 22. The whole of chapter 4 (pp. 28–37) is devoted to the Lindberghs' futile search for cable and shackles.
  33. Lindbergh, *Listen! The Wind*, 29–30, 53–54, 73–74. The stay of the DO-X at Porto Praia was actually only five days; Anne's expanding the time to a month helps to heighten her theme of technology versus nature. See Davies, *Fallacies and Fantasies*, 37.
  34. Lindbergh, *Listen! The Wind*, 72, 49.
  35. Lindbergh, *Listen! The Wind*, 117, 125.
  36. Lindbergh, *Listen! The Wind*, 215, 217.
  37. Lindbergh, "Introduction," in *Hour of Gold*, 4, 7.
  38. Lindbergh, *Listen! The Wind*, 75–76.
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  40. Anne Morrow Lindbergh to Constance Morrow, September 1936, *The Flower and the Nettle: Diaries and Letters of Anne Morrow Lindbergh, 1936–1939* (New York: Harcourt, 1976), 109–10.
  41. Lindbergh to Constance Morrow, September 1936, *Flower and the Nettle*, 110.
  42. Lindbergh, *Listen! The Wind*, 222–23.
  43. Lindbergh, *Listen! The Wind*, 224, 227–28, 229. The imagery of the "little room" is almost certainly an echo of Virginia Woolf's *A Room of One's Own* (1929). Anne was familiar with Woolf's works; see Hertog, *Anne Morrow Lindbergh*, 231, 430, and Winters, *Anne Morrow Lindbergh*, 192.
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51. Lindbergh, *Steep Ascent*, 45–46, 74–75.
52. Lindbergh, *Steep Ascent*, 105–6, 108.
53. Lindbergh, *Steep Ascent*, 37.
54. Lindbergh, *Steep Ascent*, 38 (italics added).
55. Lindbergh, *Steep Ascent*, 42.
56. Lindbergh, *Steep Ascent*, 71–73 (italics added); Vaughan, *Anne Morrow Lindbergh*, 70.
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58. Lindbergh, *Earth Shine*, xii, viii.
59. Lindbergh, *Earth Shine*, ix, vii.
60. Lindbergh, *Earth Shine*, 8–9. The plaque left on the Moon by the Apollo 11 astronauts in July 1969 ends: “We came in peace for all mankind.” Tom D. Crouch, *Aiming for the Stars: The Dreamers and Doers of the Space Age* (Washington, DC: Smithsonian Institution Press, 1999), 216.
61. Lindbergh, *Earth Shine*, 23. See also Laurence Goldstein, *The Flying Machine & Modern Literature* (Bloomington: Indiana University Press, 1986), 219–20.
62. David Meerman Scott and Richard Jurek, *Marketing the Moon: The Selling of the Apollo Lunar Program* (Cambridge: MIT Press, 2014), ix, 36.
63. Scott and Jurek, *Marketing the Moon*, 51.
64. Quoted in Christopher Potter, *The Earth Gazers: On Seeing Ourselves* (New York: Pegasus Books, 2018), 297.
65. Scott and Jurek, *Marketing the Moon*, xiii; National Aeronautics and Space Administration, “U.S. Astronaut Selection by Groups,” *Information Summaries: Astronaut Fact Book* (NP-2013-04-003-JSC), [https://nasa.gov/pdf/740566main\\_current.pdf](https://nasa.gov/pdf/740566main_current.pdf).
66. In contrast to the millions of parts contained within the vehicles of a single Apollo launch, a typical single-engined airplane of the World War I era contained (apart from the engine) just over 9,600 metal parts, 335 linear feet of wood, and 207 square yards of covering. These are substantial numbers but still easily obtained by a determined individual. See “Mass of Material to Construct an Airplane,” *Scientific American* 118 (9 March 1918): 213; Joseph J. Corn, *The Winged Gospel: America’s Romance With Aviation, 1900–1950* (New York: Oxford University Press, 1983), 135–46.
67. Lindbergh, 19 September 1932, *Hour of Gold*, 317.
68. For the Boeing Model 307, see Peter M. Bowers, *Boeing Aircraft Since 1916*, 1966, 2nd ed. (New York: Funk & Wagnalls, 1968), 201–6.
69. Hertog, *Anne Morrow Lindbergh*, 325, 384; Anne Morrow Lindbergh, quoted in Berg, *Lindbergh*, 405. The entire course of Charles Lindbergh’s isolationism, political and military ostracism, and eventual rehabilitation is traced in Olson, *Those Angry Days*.

70. Hertog, *Anne Morrow Lindbergh*, 230–31.
71. David McCullough, “Aviator Authors,” *New York Times Sunday Magazine*, 12 October 1986, SM 82.
72. Woods, “A Tale of Pioneers,” 1; Anne Morrow Lindbergh, 1 May 1943, *War Within and Without: Diaries and Letters of Anne Morrow Lindbergh, 1939–1944* (New York: Harcourt Brace Jovanovich, 1980), 345.
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74. Lindbergh, *Earth Shine*, 45.

## EPILOGUE

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