Pioneers of Flight: An Analysis of Gender Issues in United States Civilian (Sport) and Commercial Aviation 1920-1940

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Abstract

The 1920s and ’30s have been identified as the ‘golden age’ for women who aspired to a career in the United States aviation industry. Despite their limited role in World War I, women pilots became significantly involved and highly visible in United States civilian (sport) and commercial aviation between 1920 and 1940. In contrast, by 1940 women pilots were excluded from the next stage of aviation development – that of passenger transportation. This study sheds light on the ways in which American women pilots during this period negotiated gender issues. Drawing on feminist standpoint theory, the researcher employs a critical feminist discourse analysis while utilising an historical narrative voice. Conclusions suggest that women pilots – in their attempt to gain a foothold in the male dominated field of aviation - used restrictive societal views on their flying abilities to their advantage.
This study is dedicated to all women pilots, past and present
Acknowledgments

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<tr>
<td>ATA</td>
<td>Air Transport Auxiliary</td>
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<tr>
<td>CTP</td>
<td>Civilian Training Program</td>
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<tr>
<td>FAI</td>
<td>Fédération Aéronautique Internationale</td>
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<td>NAA</td>
<td>National Aeronautical Association</td>
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<tr>
<td>RFC</td>
<td>Royal Flying Corps</td>
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<td>WAFS</td>
<td>Women’s Auxiliary Ferrying Squadron</td>
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<td>WASP</td>
<td>Women Airforce Service Pilots</td>
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<td>WIAA</td>
<td>Women’s International Aeronautics Association</td>
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<td>WFTD</td>
<td>Women’s Flying Training Detachment</td>
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<td>99s</td>
<td>Ninety-Nines</td>
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Chapter One

Introduction

… to fail to recognise the courage, the skill, and the achievement of the women who pioneered aviation - who took the same risks the men did, but who had to do so with fewer opportunities for training and less access to state-of-the-art equipment - is to ignore a significant part of the history of our world.¹

Elisabeth S. Bell, 1993

The 1920s and ’30s are often referred to as the ‘golden age’ for women who aspired to a career in the American aviation industry.² Although women’s roles as pilots in World War I had been minimal,³ women pilots⁴ became significantly involved and highly visible in United States civilian (sport) and commercial aviation between 1920 and 1940. Many women pilots participated in flying competitions, such as air races or record setting attempts, and several held positions in commercial aviation as test pilots, flight instructors, airplane salespersons, flying chauffeurs and aerial photographers.⁵ By the end of the 1930s, however, women pilots seemed to have disappeared from the aviation scene. In addition, World War II significantly curtailed civilian and commercial aviation activities. Although some women aviators managed to continue flying by transporting airplanes, the war put a definite end to many women pilots’ careers. The military refused to allow women to take part in combat missions and was reluctant to take on women for pilot training.⁶

According to historian Joseph Corn, women became highly visible in United States civilian and commercial aviation between 1920 and 1940, primarily as promoters of aircraft. The aviation industry needed a strategy to convince the sceptical public that airplanes were safe and easy to operate, and women’s involvement stemmed from this notion. Under the assumption that women were frail, timid, and ignorant of the mechanics
of aircraft, along with the motto ‘if a woman can do it, it must be safe and easy,’ airplane manufactures hired female pilots to promote their airplanes at aerial exhibitions. According to Corn, it was this socially constructed lady-flyer stereotype that created opportunities for women in American civilian and commercial aviation between 1920 and 1940. However, by the end of the 1930s, women pilots’ roles as promoters of the aviation industry seemed to be over. Airplanes’ safety and reliability had been proven and therefore manufacturers were no longer interested in hiring women pilots. Women who wanted to work as airline pilots, and thus transport passengers, had to deal with prejudices held by many men and women who were convinced that women should not fly professionally. Indicative in this context is that during the 1930s only one woman, American Helen Richey, found a place as a pilot with a scheduled airline, and even then discrimination by her male colleagues cut short her tenure.

Between 1920 and 1940 women pilots faced a paradox; women were more than ever welcomed in the field of aviation, but only if they conformed to feminine norms. Alternatively, their high visibility now allowed them to challenge the restrictive societal views on their flying abilities. However, their attempts to break out of these limiting social views seemed to be difficult and disillusioning. By the end of the 1930s women pilots were excluded from the next stage of aviation development - that of passenger transportation, and the curtailing of civilian and commercial aviation activities during war cemented their marginalisation.

It is in light of this paradox that the function of this research initiative must be understood. In this study the researcher investigates how women pilots between 1920 and 1940 negotiated gender issues in United States civilian aviation in the first place and in commercial aviation in the second. Drawing on feminist standpoint theory, the study
provides a critical feminist discourse analysis while utilizing an historical narrative voice. As feminist standpoint theory suggests, a thorough understanding of women’s perspectives on their realities can only be gained through studying these women’s experiences from their own unique perspectives. The researcher therefore places women, and in this case women pilots, at the study’s centre by focussing on the pilots’ own written accounts. Furthermore, primary source materials, such as personal correspondence, meeting reports, autobiographies, magazine and newspaper articles, are analysed to: (1) identify key individuals and their impact on the way in which women pilots negotiated gender issues; (2) investigate how the National Women’s Air Derby of 1929 provides insight into the way in which women pilots navigated issues of gender; and (3) generate an understanding of male perceptions of female involvement in aviation. A more thorough explanation of the theoretical foundation of this research initiative can be found in the methodology section of the thesis.

The considerable dearth of academic research, with regard to women pilots in general and the gender issues they encountered in particular, reveals the significance of this study. In addition, through the use of feminist standpoint theory’s general premises, this study adopts a unique perspective – that of the pilots themselves. Also, even though a fair number of works addressing sport feminism in a North American context have been published since 1970, to date very few if no researchers have addressed women’s involvement in aviation from a sport and/or feminist perspective. Thus, to obtain an in-depth understanding of gender issues in aviation sport in the first place, the researcher examines the National Transcontinental Women’s Air Derby of 1929. This event can be considered a milestone in North American aviation sport history. Not only was it the first time that women were allowed to participate in a transcontinental air race, it was also the
first time that women aviators from all over the United States met each other in person. Secondarily, the researcher focuses her attention on gender dynamics in commercial aviation. To allow the researcher to meaningfully use both categories of civilian aviation and commercial aviation, as well as to better inform the reader, insight into these terms’ histories – and thus their contexts – needs to be provided.

Civilian Aviation or Aviation Sport and Commercial Aviation

The term ‘aviation’ on its own refers to aviation as a skill, the ability to pilot a motorised airplane, and to aviation as a technology, the development of motorised airplanes. The first motorised airplane, or ‘heavier-than-air’ airplane, to make a successful flight was that of the Wright brothers in 1903 in North Carolina.14 Inspired by the Wrights’ performance, many aviation enthusiasts all over North America and Europe commenced or continued to experiment with self constructed airplane models. During these pre-war years flying was amateurish. Licensing standards for aircraft had not yet been established15 and anyone who could afford to build or purchase an airplane was allowed to fly. Airplanes were playthings and aviation was a sport for wealthy amateurs and enthusiastic professionals. Aviation also became a spectator sport. Several cities in the United States established Aero Clubs that created aerial exhibition teams. These teams competed in races and altitude competitions to entertain paying audiences, who in turn provided large monetary rewards and prizes to the winners of the competitions.16 Prior to World War I, the three main exhibition teams in the United States consisted of the Curtiss team, the Wright team and the Moisant team. The Wright team did not allow women pilots, whereas Blanche Stuart Scott flew for Curtiss, and Harriet Quimby and Mathilde Moisant flew for Moisant. Around 1912 the aerial performances evolved from simple
height, speed and endurance record-setting attempts into more spectacular routines. Katherine Stinson, for example, who could best be described as a stunt flying professional pilot, became the first woman to loop the loop and to skywrite.

In April 1917 the United States declared war on Germany, and American pilots, such as Katherine Stinson and Ruth Bancroft Law, expressed the wish to serve their country as pilots. Since the United States government still tended to characterize aviation as a sport rather than a technology with military potential, the country found itself completely unprepared to produce the numbers of aviators and airplanes that its entry into the First World War required. In 1908 every nation’s aeronautic power was proportionally smaller than that of the United States, but by 1913 many countries had experienced significantly larger increases in their aviation industries. However, despite the lack of male pilots and the women pilots’ flying experience, both Stinson and Law were turned down by the American army because they were women.

After World War I, civilian aviation in general and stunt flying in particular resurfaced. To thrill the crowds, pilots performed highly dangerous stunts. Barnstormers, mostly men, would attempt to fly as low as possible over farmers’ barns, while wing walkers, mostly women, would walk or dance on airplanes’ wings and hang by their legs from the landing gear or by an arm from a bar underneath the plane. War, however, had demonstrated that airplanes could serve military and commercial as well as civilian purposes. During the 1920s and ’30s new opportunities for aviators opened up and many women pilots abandoned their aerial stunting career for a much safer option – commercial aviation.

As noted earlier, airplane manufacturers welcomed women to promote their crafts’ safety and reliability and thus to convince the public that flying was a safe way to
The promotion and demonstration of airplanes comprised various positions. Pilot Louise Thaden, for example, was an airplane salesperson; Blanche Noyes flew as a company pilot for Standard Oil of Ohio before accepting a piloting position with the United States Department of Commerce; and Amelia Earhart sold airplanes, piloted aircraft on publicity tours for manufacturers and also promoted airlines.

Another way of promoting aircraft was the organization of aerial exhibitions during which air races and record setting attempts took place. It is in this context that aviation sport and commercial aviation intertwined and that the organization of the National Women’s Air Derby of 1929 must be understood. From 1920 onwards, transcontinental air races became a major part of the aerial exhibitions that were held all over the country, but until 1929 only men were allowed to participate in these races. Cross-country flying was considered too dangerous for women, and when the first Transcontinental Air Derby for women took place in 1929 in Cleveland, Ohio, the all-male organizing committee as well as the general public expressed their scepticism about the women’s flying capabilities.

The National Transcontinental Women’s Air Derby consisted of an eight day cross-country race, which began in Santa Monica, California and ended in Cleveland, Ohio. Twenty women - eighteen American, one German and one Australian - competed in the derby. Prior to as well as during the race, the derby participants encountered several difficulties that emphasize the strong prejudices held by many male aviators and reporters at the time. Moreover, the widespread belief that innate biological factors restricted the capabilities of women as pilots handicapped the participants even before they had taken off. Therefore, this first women’s derby, which has never received a full scholarly examination, serves as an excellent means through which gender dynamics in
United States aviation sport and in commercial aviation can be studied. The National Transcontinental Women’s Air Derby of 1929 not only fanned the debate on the proper role of women in aviation, it also resulted in the establishment of the first women pilots’ organization, the Ninety-Nines (99s). The organization was established primarily to allow female pilots from all over the country to share their experiences, to encourage other women to take up flying, and to work towards women pilots’ acceptance as professionals. However, female pilots faced a disillusioning future. As noted, before World War II, only Helen Richey managed to become employed as an airline pilot.

As the introductory statement to this chapter implies, the main purpose of this study is to put woman pilots, who played a major role in the United States aviation industry’s development, in the limelight and to draw attention to their remarkable accomplishments. Given that few studies have focussed on these women pilots’ personal written accounts and on their early involvement in aviation sport, this investigation aims to offer an insightful contribution to existing knowledge on the history of women in general and the history of American women pilots in particular. The primary focus of this research initiative is civilian aviation or more specifically aviation sport, and secondarily, commercial aviation. To provide an understanding of gender dynamics in aviation in the United States between 1920 and 1940, the National Transcontinental Women’s Air Derby of 1929 serves as the study’s focal point. Moreover, since many women pilots, such as the members of the 99s, had hoped that the derby would create more opportunities for women who wanted to become airline pilots, the study also addresses the ways in which women pilots negotiated gender issues after the first women’s derby had taken place.

The next chapter presents a more thorough literature review, which focuses on the period 1920 to 1940 and offers a more profound understanding of American women
pilots in general and the National Transcontinental Women’s Air Derby in particular. In addition, a brief review of literature pertaining to feminist standpoint theory is presented. Chapter Three discusses the methodological underpinnings of this research initiative and provides an outline of the research method employed. Chapter Four presents the findings, which are reviewed and put into a broader historical context in Chapter Five. This last chapter also includes recommendations for future research.
Endnotes


2 Susan Ware, Still Missing. Amelia Earhart and the Search for Modern Feminism (New York: W.W Norton & Company, 1993), 61. Throughout this thesis the term ‘aviation industry’ refers to both civilian and commercial aviation.

3 During World War I, the United States army refused to allow female pilots to participate in combat flying. However, American pilots Katherine and Marjorie Stinson contributed to the war effort as flight instructors. Even before the United States became involved in the hostilities, the Stinsons started to train aspiring pilots from Canada for service in Britain. They trained about thirty Canadians to become pilots in the British Royal Flying Corps (RFC). However, after the United States joined the Allies in 1917, the government banned civilian flying and the Stinson sisters had to close their school. For further reading, see Mary Cadogan, Women with Wings: Female Flyers in Fact and Fiction (Chicago, Ill.: Academy Chicago Publishers, 2002), 58-59.

4 As female aviators most often referred to themselves as “women pilots,” the researcher chose to adopt this term and to use it on a frequent basis throughout her thesis.


7 The statement, ‘If a woman can do it, it must be safe and easy,’ is not a quotation but rather an assumption on which Corn’s reasoning is based.


9 Ibid., 562-63. For a more thorough explanation of the discrimination Richey encountered, see Chapter Four: Findings.

10 Bell, “A Place in the Sky,” 43.

11 Susan Ware, Still Missing. Amelia Earhart and the search for Modern Feminism, 61-62.


15 Cadogan, Women with Wings, 18.

17 Ibid., 52, 77.

18 In 1915 in Los Angeles, Stinson flew at night with magnesium flares attached to her aircraft and drew the letters “CAL,” which referred to the State of California, in the sky. This performance made her the world’s first nocturnal skywriter. For further reference, see Lori Burrup, “Katherine Stinson: Pioneering Aviatrix, American Aviation Historical Society (2003), 264.


20 Millward, “To Sweep Away the Cobwebs of the Woman’s Sky,” 108.


23 Ibid., 29.

24 Amongst the manufacturers for whom women pilots at the time flew were: Havilland Moth; Lockheed; Wright Bellanca; Beechcraft; Travelair, etc. For further reference, see Claudia Oakes, Unites States Women in Aviation 1930-1939 (Washington: Smithsonian Institution Press, 1985).


26 Blair, The Roaring Twenty, 29.


28 Blair, The Roaring Twenty, 32-38.

29 Brooks-Pazmany, United States Women in Aviation 1918-1929, 34, 37.


31 Ibid., 285.

32 For a more detailed account of the 99s, see Chapter Two and Four.

33 Brooks-Pazmany, United States Women in Aviation 1918-1929, 51.
Chapter Two

Literature Review

This literature review consists of two sections. The first section addresses the historical component of the study by offering an overview of the existing literature pertaining to American women pilots in general and gender issues they encountered between 1920 and 1940 in particular. As the researcher attempts to closely examine how the National Transcontinental Women’s Air Derby of 1929 provides insight into the way in which women pilots negotiated issues of gender, the derby receives considerable attention. The second section deals with the sociological component of the study by providing a brief introduction to feminist standpoint theory and its underlying assumptions.

The Historical Component: Women Pilots and the United States Aviation Industry (1920-1940)

The writing of women’s history in general\(^1\) and that of American women pilots in particular can be considered a relatively recent phenomenon. Joseph Corn’s article “Making Flying “Thinkable”: Women Pilots and the Selling of Aviation, 1927-1940”\(^2\) and his book *The Winged Gospel: America’s Romance with Aviation, 1900-1950*, written in 1979 and 1983 respectively, together with the three volumes published by the Smithsonian Institution, *United States Women in Aviation 1919-1929* by Kathleen Brooks-Pazmany (1983), \(^3\) *United States Women in Aviation 1930-1939* by Claudia M. Oakes (1985), \(^4\) and *United States Women in Aviation 1940-1985* by Deborah G. Douglas (1990), \(^5\) can be viewed as the solid base from which research on women pilots in the United States started to develop over the past three decades. Between 1993 and 2007...
several books, journal articles, theses and dissertations have been written on American women pilots’ history. However, few authors have extensively addressed gender dynamics between 1920 and 1940. Moreover, as Melodie Andrews notes, the National Transcontinental Women’s Air Derby of 1929 has never received a full scholarly examination. Therefore – and as previously noted – the researcher attempts to provide a meaningful contribution to the writing on women pilots’ history by investigating the gender dynamics within American aviation between 1920 and 1940 while focusing on the 1929 National Transcontinental Air Derby.


The 1920s and 1930s were a time of change for many women in the United States. Women had supported the war effort as nurses, ambulance drivers, administrative workers or factory workers and now the marketplace seemed more welcoming to them. Moreover, in 1920 women in the United States finally gained the right to vote, which, in theory at least, contributed to their increased independence. Although women’s roles as pilots in World War I had been minimal, women aviators became strongly involved and highly visible in American civilian (sport) and commercial aviation between 1920 and 1940. According to Margaret Whitman Blair, two trends that emerged at the same time were responsible for this strong female involvement; the augmented interest in aviation that World War I had created and the increase in women’s independence. The ability to fly was often associated with characteristics such as independence, freedom, liberation and empowerment. In this context Corn notes, “The attraction of women to aviation was a strong one, for no better activity symbolised the freedom and power which was lacking in their daily lives.” However, Corn continues that the “rush to the cockpits” by women in the 1920s and 30s stemmed primarily from the peculiar needs of an industry in transition.

During the early post-war years, the aviation industry was searching for its identity. Aviation had played a major role in World War I, but its central role in world affairs and its public attention drastically decreased with the end of the hostilities. Although war had stimulated the technological development of aircraft, commercial aviation was slow to develop. The evolution of aerial commerce rested heavily on the pioneering routes of the United States Air Mail Service, launched in 1918. Airmail
service remained a federal monopoly until 1925, when the air mail act transferred government air operations to commercial carriers, providing revenues that launched civil air transport companies all over the United States. In addition, the Air Commerce Act of 1926 generated an important step forward in respect to safety and uniform standards for manufacturers. Also, the successful transatlantic flight from New York to Paris, by Charles Lindbergh in 1927, stimulated widespread interest in aviation and triggered a flow of investments in aviation businesses and stocks.

During the 1920s, development of the aviation industry in the United States often unfolded against an international background of high-speed races and long-range flights, as manufacturers sought ways to demonstrate the potential of this new technology. Often governments became involved since aeronautical record setting was interpreted as a barometer of national aviation prowess. The Schneider Trophy for example, a seaplane race organized by the Frenchman Jacques Schneider and held at different venues in Europe and the United States between 1913 and 1931, contributed to the enhancement of aircraft designs and development. The American postwar leaders in aviation consisted of a group of young companies who emerged from existing enterprise, or found venture capital, or somehow scrambled successfully and survived with outstanding designs. The origins of Boeing, Douglas, Grumman and Lockheed reflect the diversity of the period.

The impact of the Great Depression between 1929 and 1939 was not particularly devastating for the aviation industry. Sales and production of aircraft for the civil and commercial market declined, but the technological momentum achieved in the 1920s and early 1930s continued to influence aeronautical development. In his book *The American Aerospace Industry. From Workshop to Global Enterprise* (1996) Roger Bilstein explains that the survival of many companies during the Great Depression had
much to do with exports, especially military sales. In addition, the production of military aircraft accelerated before America entered World War II due to orders from abroad.\textsuperscript{17}

While the North American aviation industry was expanding, the public remained sceptical about flight. Fear of the unknown and the recollection of aviation’s early decades, when planes were fragile and unpredictable, kept potential passengers out of the air.\textsuperscript{18} The aviation industry needed a new strategy\textsuperscript{19} and women’s involvement stemmed from this notion. Women had to counteract the ‘intrepid birdman’ stereotype\textsuperscript{20} and convince prospective passengers that modern airplanes were safe and easy to operate.\textsuperscript{21} Accordingly, the belief that, ‘if a woman can do it, it must be safe and easy,’ assumed that women were frail, timid and ignorant of the mechanics of aircraft.\textsuperscript{22} However, according to Corn – and as previously noted – it was also this socially constructed lady-flyer stereotype that created opportunities for women in aviation during the inter-war period.\textsuperscript{23} Most female pilots became involved in demonstrating and selling planes for the private market.\textsuperscript{24} Airplane manufacturers hired female pilots to fly or race their planes and thus to demonstrate the planes’ safety.\textsuperscript{25} A female aviator generated greater publicity for a manufacturer than a male pilot, and in addition, women pilots received significant media attention.\textsuperscript{26} Nevertheless, women encountered other instances of prejudice. Male pilots could often defray the costs of their flying lessons by working at an airfield, whereas women seldom had a mechanical background and were not welcome around the hangars. As a consequence, women often had to pay cash for their lessons.\textsuperscript{27}

**Prejudices and Opportunities: A Paradox**

As both Joseph Corn and Melodie Andrews note, women played an active, highly visible but controversial role in American aviation between 1920 and 1940.\textsuperscript{28} A woman
who wanted to become involved as a pilot in the aviation industry had to navigate between restrictive societal views on her flying abilities and the advantages she hoped a job as pilot would offer her. Many women pilots used these restrictive views to their advantage to obtain and maintain a place within the male dominated field of aviation. Indicative in this context is a statement by pilot Louise Thaden: “Nothing impresses the safety of aviation on the public quite so much as to see a woman flying an airplane.” If a woman can handle it, she continued, “the public thinks it must be duck soup for men.”

Aviator Ruth Nichols stated that the public would believe that flying was safe and easy when they saw the fragile sex setting records just like men. These comments assumed that women were weak, timid, unathletic and unmechanical, which was the very antithesis of the courageous birdman stereotype. In the same context Susan Ware notes, the reinforcement of notions of women’s inferiority was an unfortunate by-product, but at least this strategy allowed a sizeable minority of women who held pilots’ licenses to make a living out of aviation-based activities.

A concrete example of how women pilots exploited gender stereotypes can be observed in the way Amelia Earhart promoted flight to prospective female and male passengers and to prospective female pilots. In order to recruit female passengers, she was forced to rely on traditional gender stereotypes that exaggerated the differences between women and men. When addressing a female audience, she would stress the comfort of flying and how easy it was to travel with children. She would try to convince a male audience by emphasizing the safety, convenience and costs associated with air travel, which were presumed to be more on men’s minds. However, when Earhart addressed prospective women pilots, she would take a more feminist stance by downplaying gender differences.
With regard to other ways in which American women pilots used gender stereotypes to their advantage, Corn notes that women pilots deployed ‘aerial domesticity’ as one way to secure their place in the aviation industry. In order to make flight seem easy and reliable to the public, women pilots, such as Amelia Earhart, communicated that their jobs as pilots were not extraordinary, but rather extensions of their duties as nurturing mothers and wives. She would also emphasise that women did not fly for their own sake solely, but to set an example for later generations of aviators. In addition, Corn notes that the flying wife proved a powerful domestication symbol in aviation by herself, but through marriage to a male pilot, her impact often grew. In 1932, for example, one in five female flyers was married to a pilot.33

Another way in which women pilots conformed to general beliefs about femininity was through their clothing and thus their physical appearance. Women pilots, such as Louise Thaden, Amelia Earhart and Ruth Nicols, attempted to dress fashionably and differently for every single flight.34 According to Burman, the way in which early female aviators were dressed linked women with frivolity, helplessness, compliance and inaction, whereas male pilots’ clothing would display power, authority and action.35

The National Transcontinental Women’s Air Derby of 1929

To us the successful completion of the derby was of more importance than life or death. Airplane and engine construction had advanced remarkably near the end of 1929. Scheduled air transportation was beginning to be a source of worry to the railroad. Nonetheless, a pitiful minority were riding airlines. Commercial training schools needed more students. The public was sceptical of airplanes and travel. We women of the derby were out to prove that flying was safe, to sell aviation to the layman.36

Louise McPhetridge Thaden, winner of the 1929 Women’s Derby

**Preparation and Organization**

During the interwar period air races became the main events at aerial exhibitions in the United States, which were organized primarily to stimulate public interest in aviation. A major air show, including air races, was scheduled to be held 24 August to 2 September 1929 in Cleveland, Ohio. The main events comprised cross country races for men, starting from Los Angeles, Miami and Toronto and timed to arrive in Cleveland on
different days of the show, as well as a cross country race for women - the Women’s National Air Derby. It was the National Exchange Club, a men’s service club that had elected to sponsor a women’s race as their national publicity project for the year. Cliff Henderson, organizer of the 1929 men’s races in Cleveland, agreed to manage the event along with an all-male committee. However, one woman, Elisabeth Lippincott McQueen, who founded the Women’s International Association of Aeronautics (WIAA), was also involved in the derby’s organization by recruiting the contestants. She had never been a pilot herself, but she had always supported women pilots’ activities.

The small group of women licensed to fly airplanes in 1929 received the plan to organize a women’s race with enthusiasm, and the actual participants seemed even more determined than the Exchange Club to make a good showing. The committee indeed seemed to have underestimated the participants’ enthusiasm and seriousness about the race. Initially, the committee did not want the women’s race to be cross country. They feared that flying over mountains was too dangerous for women and therefore suggested that the participants start in Omaha, Nebraska, which was situated much closer to the point of arrival in Cleveland. However, derby participant Amelia Earhart, who would often speak in favour of female pilots, insisted the race would have to start in California if it were to be billed as a truly cross-country race. The committee suggested that if the women pilots wanted to fly cross-country, they might need the assistance of men who were mechanics. As a reaction, the derby participants sent a telegram of protest to both the National Air Races Committee and the committee organizing the women’s event, as well as a statement to the press. Race manager Cliff Henderson convinced the committee to agree to the women’s demands. The rules were changed so that the women pilots would have to fly from San Bernardino to Cleveland. If they had mechanics, they would
have to follow in separate planes or by car and service the planes at the scheduled stops. However, the idea that a woman would be flying alone for long stretches over mountains and desert, especially in the dark with poor visibility, still concerned the race committee members. Therefore they decided that the participants would only fly during daytime and they would have to land at regular intervals to eat, rest and have their planes refuelled.

Further rules determined that the pilots’ starting and landing times would be recorded and the amount of time they spent in the air would be added up. The winner of the race would be the pilot with the shortest landing time\textsuperscript{47} on route to Cleveland. The route itself would consist of a series of short-distance flights starting in Santa Monica, with eight overnight stops in San Bernardino, California; Phoenix, Arizona; Douglas, Arizona; Abilene, Texas; Forth Worth, Texas; Wichita, Kansas; East St. Louis, Illinois; and a last night in Columbus, Ohio, before the final victory lap into Cleveland. There would also be additional in-between stops for refuelling, resting, eating and, of course, for the Exchange Club-sponsored social events. To make an all-women cross-country race less frightening to the public, as well as to ensure the safety of the pilots, there would be an attempt to keep the women flying together as much as possible. The committee hoped to accomplish this by having the last woman to fly in at the end of the day be the first one to take off in the morning. Moreover, each woman had to wear a parachute strapped to her body while flying and she was required to carry a gallon of water and enough food to survive for three days, in case she crashed in the desert.\textsuperscript{48}

The race initially attracted seventy participants. However, due to several requirements imposed by the organizing committee, their number was reduced to forty. Each entrant was required to have flown one hundred hours solo, twenty-five of which had to be cross-country flights of more than 40 miles from the starting point. Besides
being licensed by the United States Department of Commerce, each participant had to hold a Fédération Aéronautique Internationale (FAI) licence and an annual sporting licence that was issued by the contest committee of the National Aeronautic Association (NAA). Furthermore, each entrant’s plane had to carry an Approved Type Certificate and hold a license issued by the Department of Commerce. In addition, the race committee decided to divide the race into two separate sections, one for the lighter planes with smaller engines, and one for the heavier planes with bigger engines. As a result, the prize money of $8,000 dollars would have to be shared between the winners of the two divisions. Of the initial forty pilots who met the derby requirements, only twenty women - eighteen American, one German and one Australian - competed in the derby.

**Difficulties along the Route: Technical or Biological?**

The many instances of prejudice that the derby participants encountered prior to the race could also be observed in the way the derby evolved. On 18 August, the first day of take off, commentator Will Rogers nicknamed the derby “Powder Puff Derby,” which belied the women pilots’ serious commitment to aviation. However, the name would stick, and even in later years several women’s air races would be referred to as powder puff races. Furthermore, prior to take off, German Thea Rasche received a telegram that warned her of possible sabotage during the race. When she showed the message to the race manager, he told her not to worry.

Despite the race manager’s reassurance that sabotage would not occur, several race participants’ planes suffered from mechanical deficiencies they had not encountered previously. On the first day of the race, for example, Amelia Earhart and Mary Von Mach developed engine trouble, necessitating a return to Santa Monica. Furthermore, a
mechanic poured oil in the gas tank of Keith Miller’s plane. Later in the race, mechanics found sand in Thea Rasche’s gas tank, gas line, and carburetor. According to Andrews, contemporary newspaper accounts suggested that one third of the participants encountered inexplicable mechanical problems, ranging from cut brace wires to twisted altitude adjustment connections and drained gas tanks. The sabotage became hard to ignore when Marvel Crosson, one of the most experienced pilots in the race, died in a crash on the second day of the race. However, Andrews notes that since no guards were placed around the airplanes during stops until after Crosson’s death, some of the damage reported by the flyers was probably attributable to overly inquisitive bystanders and curiosity seekers, rather than to human malice. Although several newspapers called for the race to be stopped, the derby participants decided to go on.

The possibility of sabotage and Crosson’s death left the derby managers with a potential scandal and public relations disaster. If the tragedy stemmed from mechanical failure, the resulting publicity could further erode public confidence in flying. Therefore, the race organizers immediately attempted to smother rumours. At the organizers’ request, the San Bernardino District Attorney questioned sixteen mechanics and gas company employees, but they all denied tampering or seeing suspicious activity around the planes. During the days after the crash, several suggestions were made regarding the cause of Marvel Crosson’s crash. Crosson’s brother, who flew her plane out for the race, had experienced motor trouble all the way from Wichita to California. Therefore, the plane’s manufacturer, the Wright Company, had rebuilt the engine just before the competition began. Crosson herself had mentioned engine overheating and low oil pressure after the first sixty-five mile leg from Santa Monica. The evidence seemed to suggest that mechanical failure was the cause of Crosson’s crash. However, a few months
later, Dr. L. H. Bauer, the founder of American aviation medicine and editor of its
*Journal of Aviation Medicine*, advised aviation examiners to inform female pilots that
they should not fly during, immediately before or immediately after their menstrual
periods. He also wrote that this fact of biology was the cause of a number of recent
crashes. The interpretation by J.G. Noel, an inspector from the Bureau of Air Commerce,
satisfied the needs of both derby organizers and an aviation industry in the midst of
technological and commercial transformation. By deciding that Marvel Crosson had
crashed in the throes of menstrual distress, Noel eliminated any further need to investigate
mechanical failure. Accordingly Melody Andrews notes:

> Attention shifted from the airplane to the pilot and gender assumed more
> critical importance. The event that women flyers had hoped would prove
> their equality in the cockpit had instead disclosed a biological deficiency
> no healthy women could apparently avoid.

### The Derby’s Aftermath

The National Women’s Air Derby in 1929 attracted female pilots from all across
the United States and also from countries as far away as Australia and Germany. It was
the first time that many of these women were able to meet fellow female pilots and had
the opportunity to discuss their aviation experiences. The women agreed that they needed
to keep in touch, and several women pilots expressed the wish for a female pilot
organization through which they could share their experiences, encourage other women to
take up flying, and work towards women pilots’ acceptance as professionals. Shortly
thereafter, an organizational committee was established and every licensed female pilot in
the country was invited to a meeting in a hangar at Curtiss Field, Valley Stream, Long
Island during which the formation of an all-women’s aviation organization would be
discussed. Although only twenty-six of the one hundred and fourteen American women
pilots attended, the meeting was a success. The organization managed to attract an additional seventy-three women pilots for a total of ninety-nine charter members, which resulted in the “Ninety-Nines” (99s). 63 Initially, the 99s were mostly a formal group with a secretary and treasurer but no president until 1929, when the members elected Amelia Earhart to lead the organization. She was an obvious choice because of her celebrity status 64 as well as her dedication to the cause of women’s aviation. 65 The women of the 99s hoped that the organization would bring social interaction among women pilots, discussions about professional and sport piloting, and continuing education for women pilots. 66

**Women Pilots and World War II**

By the end of 1940, the 99s had become a strong network of four hundred upper middle-class white women. 67 The enormous increase in the 99s’ membership between 1938 and 1940 was due to the establishment of the Civilian Training Program (CTP) in 1938. The program was originally designed solely for male pilots, but a small number of women were also accepted. Moreover, in addition to the hundreds of CTP programs across the country, private schools also received federal funding to launch the program. Even though most flying schools limited the number of women who could participate in their program, they allowed many American women to earn their private licenses. 68

When the United States entered World War II, women were, to a limited extent, allowed to support the war effort as pilots. The first organized group of American women pilots to serve a supporting role in the air consisted of twenty-five who worked for the British Air Transport Auxiliary (ATA) in 1942. That same year, a similar women’s pilot program was activated in the United States when an experimental squadron of
experienced women pilots, headed by pilot Nancy Love, was formed to ferry airplanes. This organization was called the Women’s Auxiliary Ferrying Squadron (WAFS) and had twenty-three members. Simultaneously, pilot Jacqueline Cochran had been recruiting American women to fly with the ATA and she had examined this organization as a possible blueprint for what she hoped to organize in the United States. She stated that the current twenty-three WAFS members were not sufficient to bring American women pilots up to Army Air Force service standards. Cochran was permitted to form the Women’s Flying Training Detachment (WFTD).

Primarily for the sake of simplification of policy making, in early August 1943 the Army Air Force (AAF) consolidated the WAFS and the WFTD into the Women Airforce Service Pilots or WASP.

The WASP represented an enormous step for women’s aviation organizations because it was a highly publicized government-sanctioned organization and it was the first time that the Unites States government allowed women to fly military aircraft. WASP members were not allowed to take part in combat, so they served as ferry, test and administrative pilots and as flight instructors. Furthermore, the WASP members were expected to perform to the highest military standards. However, they were not given the same kind of support as male pilots because they were technically still civilian aviators. One such example of the impact of this status was that, when a woman lost her life in the line of duty, her family had to pay the expenses in order to return her body to her hometown.

According to Katherine S. Gray, the WASP, the second large-scale women’s aviation organization after the 99s, represented a shift from women’s roles as exhibition pilots to professionals. However, when Cochran proposed to either militarize or deactivate the WASP in 1944, never thinking that deactivating would ever happen while
the country was still at war, the government denied the request for militarization and the WASP disbanded in December 1944.74

Many WASP members wanted to continue their flying careers after the war, but the need for women pilots subsided just as quickly as it had emerged. Flight companies did not intend to hire any female pilots or co-pilots in the foreseeable future, but they did require stewardesses.75 Many WASP members took offence to the assumption that working as a stewardess was the same as flying airplanes, since they considered themselves to be professional pilots, not professional servers. While some WASP members accepted offers from the army to take on non-flight positions and others accepted positions as stewardesses or ground crew for major airlines, not one American woman remained on the flight line as a military or commercial pilot, regardless of her ability.76 Many ex-WASP members joined the 99s because it provided the financial and organizational support of a national organization along with the sisterhood and personal support of local groups.77

As Claudia Oakes notes, by the end of the 1930s women were finally being taken more seriously as professional pilots but at the same time, they had worked themselves out of the limelight and in many cases out of a job. Female pilots were no longer novelties and now that airplanes were deemed safe and reliable, the airlines did not need them any longer to promote their business. Aircraft manufacturers wrapped up in the war effort, and the market in which women had demonstrated and sold private aircraft consequently disappeared. In addition, the major air races, which were the usual showcases for female pilots, were suspended.78

As a conclusion it needs to be noted that after Helen Richey resigned from her job as airline pilot December 1934, approximately ten months after she was hired,79 women
were shut out of the cockpits of scheduled airlines for the next thirty years.\textsuperscript{80} Moreover, as Melody Andrews notes in 1994,

> The small number of women currently employed as commercial airline pilots in this country also suggest that the ladybird stereotype continues to cast a shadow over the aviation industry and female aspirations within. The skies may be “friendly,” as one airline company is fond of saying, but for many women the cockpit remains hostile territory.\textsuperscript{81}

### The Sociological Component: Feminist Standpoint Theory

It’s not a women’s world in the sense of excluding men. But it’s a women’s world in the sense that it is the relevances of the women’s place that govern.\textsuperscript{82}

Dorothy E. Smith, 2004

In 1992 Peter Burke noted that women had been virtually invisible to historians in the sense that the importance of their every day work and their political influence had been generally overlooked.\textsuperscript{83} However, the idea that femininity and masculinity are socially constructed has become more accepted due to feminist research, which has progressively developed over the past forty years.\textsuperscript{84} In this context Judith Lorber notes that the idea of gender as a social construction is a recent phenomenon.\textsuperscript{85} One of the most influential theoretical approaches that supports this idea and that has contributed to the understanding of women’s history and experiences, is feminist standpoint theory.\textsuperscript{86} Some of the principal authors whose works have substantially contributed to the articulation and development of the foundation of standpoint theory include Hillary Rose (1983), Dorothy E. Smith (1987), Patricia Hill Collins (1986, 1990), Nancy Hartsock (1987), Joyce McCarl Nielsen (1990), and Sandra Harding (1991).\textsuperscript{87} Rather than offering a detailed account of these authors’ individual contributions to the field of feminist research, the
purpose of this section is to provide a general understanding of feminist standpoint theory and its underlying assumptions.

According to Mary Swigonski a standpoint refers to a social position from which certain features of reality come into prominence and other aspects of reality are obscured.\textsuperscript{88} Standpoints involve a level of conscious awareness about (1) a person’s location in the social structure, and (2) this location’s relationship to the person’s lived experiences.\textsuperscript{89} Standpoint theory has been used to identify research problems within the daily reality of marginalised groups. The aim of standpoint theorizing is to bring groups whose life experiences have been consigned to the margins of scholarly research out of the margins and place their day-to-day reality at the centre of research.\textsuperscript{90} Feminist standpoint theory therefore focuses on women, assuming that they form a marginalised and thus oppressed group in society. Furthermore, standpoint theory builds on the presumption that the less powerful members of society experience a different reality as a consequence of their oppression.\textsuperscript{91} To survive, they must have knowledge and awareness of, and be sensitive to, both the dominant group’s interpretation of reality and their own interpretation. In this context Swigonski refers to the potential for “double vision.” The marginalised group sees both sides, that of the oppressed and that of the oppressor.\textsuperscript{92} Feminist bell hooks comments that it is crucial for oppressed people to be able to view their marginality as a position and place of resistance.\textsuperscript{93} The margins therefore become both sites of repression and sites of resistance.\textsuperscript{94} In the same context Alison M. Jaggar notes,

whereas the condition of the oppressed groups is visible only dimly to the ruling class, the oppressed are able to see more clearly the rules as well as the rulers and the relation between them. Thus, the standpoint of the oppressed includes and is able to explain the standpoint of the ruling class.\textsuperscript{95}
As previously indicated, the principal assumption of feminist theorizing is the acknowledgement that all knowledge is historically, culturally and politically constructed. Feminist standpoint theory therefore focuses on the social construction of women’s everyday experiences. The central premise of this approach is that reality is constructed and experienced through the lenses of male actors. As a consequence, the dominant understanding of women and experiences is also constructed through an androcentric lens. To counteract this premise, feminist standpoint theory seeks to destabilize androcentric, mainstream thinking through focussing on the construction of women’s everyday experiences from the unique perspective of the women themselves. Therefore, the researcher will place American women pilots at the center of this study by focussing on their personal written accounts.
Endnotes


12 Roger E. Bilstein, *The American Aerospace Industry. From Workshop to Global Enterprise* (London: Prentice Hall International, 1996), 26; Henri Ladd Smith, *Airways. The History of Commercial Aviation in the United States* (New York: Alfred A. Knopf, 1942): 92-93. As airmail began crossing the country successfully in the mid-1920s, railroad owners started complaining that this government-sponsored enterprise was cutting into their business. They found a friendly ear in Congressman Clyde Kelly of Pennsylvania, chairman of the House Post Office Committee, who largely represented railroad interests. On February 2, 1925, he sponsored H.R. 7064: the Contract Air Mail Bill, which, when enacted, became the Air Mail Act of 1925 or the Kelly Act. The act authorized the postmaster general to contract for domestic airmail service with commercial air carriers. It also set airmail rates and the level of cash subsidies to be paid to companies that carried the mail. As Kelly explained: The act “permits the expansion of the air mail service without burden upon the taxpayers…." By transferring airmail operations to private companies, the government effectively would help create the commercial aviation industry. For further reference, see “Airmail: The Air Mail Act of 1925 Through 1929” on the well documented U.S. Centennial of Flight Commission website: <www.centennialofflight.gov/index.cfm>.


14 Ibid., 21.

15 Ibid., 22-24.

16 Ibid., 49.

17 Ibid., 78.


Male pilots were often referred to as ‘intrepid birdmen,’ which corroborated the idea that flying was not an activity for ordinary mortals. See Corn, “Making Flying ‘Thinkable’,” 558-59.


Ibid., 560. The statement ‘If a woman can do it, it must be safe and easy’ is not a quotation but rather a view on which Corn’s reasoning is based.

Ibid., 560.

Ibid.

Ibid., 561.

Ibid., 562.

Ibid., 563.


Ware, *Still Missing*, 70-71.

Corn, “Making Flying ‘Thinkable’,” 563-64.

Ibid., 566.


Ruth Nichols (1901-1960) was an experienced professional pilot by the time of the race. She worked for Fairchild Airplane and Engine Company and was the first woman to fly over every state of the Union. She broke her back in a crash while piloting a transport plane in 1935, but went on in 1939 to establish the Relief Wings, a civilian air ambulance service which later was absorbed into the Civil Air Patrol during World War II. She continued to set new flight records and in 1958 set the women’s records for both speed and altitude. She died in 1960, possibly by suicide (Blair, *The Roaring Twenty*, 115).

Amelia Earhart (1897-1937), tirelessly promoted by publicist George Putnam, was already famous by the time of the 1929 race after being the first woman to cross the Atlantic by plane in 1928. Putnam’s wife
divorced him three months after the race. Amelia married him in 1931, after turning him down several times. In July 1937, she disappeared somewhere over the Pacific Ocean in her attempt to be the first woman to circle the world by plane. Expeditions still search for her missing plane (Blair, *The Roaring Twenty*, 113). For more extensive biographical information on Amelia Earhart, see Chapter Five: Discussion.

For further reference, see Amelia Earhart, *The Fun of It: Random Records of My Own Flying And of Women in Aviation* (Chicago: Academy Chicago Publishers, 1977), 152-169; Ruth Nichols, *Wings for Life* (Philadelphia: J.B. Lippincott Company, 1957), 43-62; Thaden, *High Wide and Frightened*, 77-92. Louise Thaden (1905-1979) dropped out of college and worked in sales for a coal company in Wichita, but grew more interested in the nearby Travel Air Company which was building airplanes. At one point in 1929, she simultaneously held the women’s records for speed, altitude and endurance. With Blanche Noyes as her navigator, she captured first place in the 1936 Bendix cross-country race. Louise’s son, daughter, and granddaughter all became pilots (Blair, *The Roaring Twenty*, 118).

For further reading, see Thomas G. Matowitz Jr., *Images of America: Cleveland’s National Air Races* (Chicago: Arcadia, 2005).


According to pilot and derby participant Ruth Nichols, the United States had only nine licensed female transport pilots, eleven women who held limited commercial licenses, ninety-two who were accredited as private pilots and a number of students at the time of the derby in 1929. These one hundred and twelve licensed pilots were scattered around the country, with usually not more than one to a city. For further reference, see Ruth Nichols, *Wings for Life*, 78.


In this context, landing time refers to the amount of time a plane is physically on the ground during stops. In other words, the winner of a cross-country race was the pilot who spent the least amount of time on the ground, as well as in the air.


Thea Rasche (1899-1971) was Germany’s first female stunt flyer and a well-known aerobatic flyer both in Europe and the United States. She continued to fly and write about flying back in Berlin. During WWII, her books were banned in Germany for being too pro-English/American. She then joined the Nazi Party.
After the war she was tried for Nazi activities in the United States, but was acquitted (Blair, *The Roaring Twenty*, 118).


54 Mary Von Mach (1896-1980) was one of the less experienced of the derby participants. She went on after the race to qualify to be a flight instructor after graduating as the first woman student from Parks Air College in St. Louis. During WWII, she was responsible for the final inspections of engines on B-24 bombers. In 1978, she received the Bronze Star Award from the OX-5 Pioneers for her work on the OX-5 engines and in 1987 she was inducted into the Michigan Hall of Fame (Blair, *The Roaring Twenty*, 119).

55 Thaden, *High Wide and Frightened*, 48. Keith Miller (1901-1972) was the only Australian in the race. She was famous as the first woman to reach Australia by airplane. She had started this long flight from England as a passenger, but by the time she had landed in Australia, she had become Bill Lancaster’s copilot. (Blair, *The Roaring Twenty*, 114).

56 Marvel Crosson (1900-1929) and her brother Joe built their own airplanes and they barnstormed together in California before moving on to the rugged mountains of Alaska where they ran a commercial air service. She was one of the most experienced pilots in the 1929 women’s race (Blair, *The Roaring Twenty*, 112).


58 Ibid.

59 Ibid., 282.

60 Ibid., 283.

61 Ibid.


64 Amelia Earhart was the first woman the fly across the Atlantic Ocean (Newfoundland - Ireland) in 1932. For further reading, see Oakes, *United States Women in Aviation 1930-1939*, 24. See also Chapter Five for a more detailed account of Earhart’s flying performances and celebrity status.


66 Ibid., 12.


70 Render, *No Place For a Lady*, 113.


Ibid., 26.

Ibid., 22.

The term "stewardess" was commonly used in the early years of aviation development to identify a female member of an aircrew employed by airlines to ensure the safety and comfort of the passengers aboard commercial flights. Although it is acknowledged that this term is not gender neutral, for the documents’ clarity and to ensure proper context for the period under investigation, the researcher has retained the historical term "stewardess" throughout the document.


Gray, “Flying in Formation,” 27.

Oakes, United States Women in Aviation 1930-1939, 55.


Ware, Still Missing, 78.


Peter Burke, History and Social Theory, 51.

Ibid., 50.


89 Ibid. For further reference, see Nancy C. M. Hartsock, “The Feminist Standpoint: Developing the Ground for Specifically Feminist Historical Materialism,” in Feminism and methodology, ed. Sandra Harding (Bloomington: Indiana University Press, 1987).


94 Ibid., 158.


96 Adams, “Communities on their own,” 7.

97 Ibid., 9.

98 Ibid.

Chapter Three

Methodology

Theoretical Foundation- Direction of the Study

Chapter two provided an overview of the existing literature on women pilots and the gender discrimination they encountered in United States aviation between 1920 and 1940. It also offered a brief overview of feminist standpoint theory and its underlying assumptions, which are used as a guiding framework for this study. Chapter Three provides a justification for this research project and comprehensively outlines the research method employed.

Historical research is conducted for one or more reasons: to uncover the unknown; to answer questions; to seek implications or relationships of events from the past and their connections with the present; to assess past activities and accomplishments of individuals, agencies, or institutions; and to aid generally in our understanding of our human culture.¹

As Bruce L. Berg in his statement implies, one of the main assumptions underlying historical research, which this study attempts to produce, is that one cannot understand the present without having an understanding of the past.² Likewise, noted historian Arthur Marwick states that “to understand contemporary problems, to take part in contemporary debate, we need history.”³

In this study the researcher places women, or more specifically women pilots, at the centre of attention. Drawing on a sociological framework provided by feminist standpoint theory, the researcher attempts to gain an understanding of the gender issues that American women pilots encountered in civilian and commercial aviation between 1920 and 1940. In the present investigation, gender, as suggested by sociologist Ann Hall, must be viewed as “a system of social relations between females and males,”⁴ rather than a dichotomous social category determined by biology. These social relations or
gender relations must be considered “power relations whereby men, as a social group, have more power over women than women have over men.”

Although there is an ongoing debate on the role of sociology within history and vice versa, according to Burke the two disciplines should be treated as complementary. Similarly Carr suggests that “the more sociological history becomes, and the more historical sociology becomes, the better for both.” The researcher therefore adopts an interdisciplinary approach, in which both historical and sociological concepts are integrated on a complementary basis.

With regard to the use of theory within historical research, Arthur L. Stinchombe states that “one does not apply theory to history, rather one uses history to develop theory.” Similarly Peter Burke suggests that the function of theory in historical research is simplification. He argues that theory can never be ‘applied’ to the past, but it can suggest new questions for historians, or new answers to familiar questions. The purpose of drawing on feminist standpoint theory is therefore not to designate the theory as the ultimate framework of the study. The researcher uses the theory as a means to advance the understanding of American women pilots’ experiences during the 1920s and ’30s. In addition, to counteract researcher’s bias, an inductive approach was adopted; the data were collected and analysed without a predetermined research hypothesis. Instead, the researcher formulated research questions that captured the focus of the study and that guided the research process.

A critical feminist discourse analysis approach is employed while drawing on four general premises, borrowed from feminist standpoint theory: (1) Reality is constructed through the lenses of male actors. Therefore, a full understanding of women’s perspectives on their reality can only be gained through studying the women’s
experiences from their own unique perspectives. (2) Women as a disadvantaged group experience a different reality as a consequence of their oppression; (3) Gender differences are cultural rather than natural; and (4) Relations of power are not fixed, but contested continually.

To properly identify the gender issues that American women pilots negotiated in civilian (sport) and commercial aviation between 1920 and 1940, three main levels of understanding are utilised for this investigation. The first level deals with the women pilots as a group and examines the group’s gender perceptions. The second level refers to the pilots’ gender perceptions as individuals. The third and final level deals with male perceptions of women’s involvement in aviation. To allow the researcher to integrate each level into a meaningful framework, subsequent research questions and research sub-questions are used to draw connections between the three levels. The primary research question is: How did American women pilots between 1920 and 1940 negotiate gender issues in civilian aviation in the first place and in commercial aviation in the second? To allow the researcher to answer this question, the following three sub questions are posed: (a) Who were the key individuals and how did they impact the way in which women pilots negotiated gender issues?; (b) How does the National Women’s Air Derby of 1929 provide insight into how women pilots navigated issues of gender?; and (c) How did men perceive the involvement of women in American civilian and commercial aviation between 1920 and 1940? While providing a critical feminist discourse analysis, the researcher adopts an historical narrative voice.

The concept of triangulation is used to “obtain a better, more substantive picture of reality, a richer, more complex array of symbols and theoretical concepts, and a means of verifying many of these elements.” Triangulation refers to the use of multiple lines of
sight or multiple methods of observation to explore a single phenomenon. The underlying assumption is that by using different kinds of data and by comparing them to one another, the threats posed by questions regarding validity will be counteracted. To gain an understanding of the way in which American women pilots between 1920 and 1940 negotiated issues of gender, primary sources, such as newspaper articles, personal correspondence, meeting reports, newsletters, and autobiographies, as well as secondary sources are critically compared and interpreted. Moreover, external as well as internal criticism are used to ensure the quality of the data and thus the depth of the analysis. As Bruce L. Berg states, “rigorous evaluations of the external and internal value of the data ascertain valid and reliable information and viable historical analysis.” With regard to external criticism, the main questions the researcher kept in mind are: (1) Who wrote the source?; (2) In what historical context was the source written?; and (3) What or who was the intended audience? With regard to internal criticism, the subsequent questions were asked: (1) What was the author’s motive for making the statement or creating the document?; (2) What inferences were offered in the statement by the author?; and (3) Was the sentiment of the author similar or contrary to that of the time period? Moreover, since the researcher was not born during the period under investigation, establishing an understanding of the context in which the events unfolded is considered imperative.

**Data Sources**

As noted, along with the use of secondary sources, such as books and journal articles, primary sources, such as personal correspondence, meeting reports, diaries, autobiographies, magazine and newspaper articles are examined. Due to the passage of
time, the researcher does not have access to the original actors under investigation and therefore focuses her attention on the women pilots’ own written accounts in the first place. In addition, to gain a more profound understanding of the gender dynamics in American aviation between 1920 and 1940, sources written by male actors are also analysed and included.

The archival sources that are used comprise, but are in no way limited to, the primary data in the National Air and Space archives of the Smithsonian Institution in Washington, D.C. The archives are located on the third floor of the National Air and Space Museum and in the Garber Facility depot. Both archives are easily accessible and close to one another. A search on location allowed the researcher to gather the documents necessary to conduct her study. Not only do the archives contain a substantial amount of primary data regarding the pilots under investigation, but a portion of these primary sources were written by the women pilots themselves.

Limitations

The most important limitation of this study is clearly reflected in the following statement by Edward Hallett Carr: “The facts of history never come to us ‘pure’ since they do not and cannot exist in a pure form: they are always refracted through the mind of the recorder.”\textsuperscript{21} The researcher conducts the study from a perspective that is rooted in her personal social and historical background.\textsuperscript{22} The female researcher in this study might for instance interpret data differently than a male researcher would. Although in this study the researcher and the subjects under investigation are the same gender, they come from a very different historical and social location.\textsuperscript{23} Therefore – and as previously stated – the researcher attempts to provide a solid context, as an understanding of the subjects’
historical and social location is vital. Furthermore, primary archival sources, such as newspaper articles, are examined with caution. Journalists tend to collect, select and colour the information they dispense to their readers. Therefore, while analysing the data, the researcher kept in mind that media sources often provide only partial glimpses into the past and that certain information might be either intentionally or unintentionally left out.

A second limitation refers to the accessibility of sources and the researcher’s time and financial constraints. As previously noted, the researcher does not have access to the original actors under investigation and therefore cannot conduct personal interviews. Secondly, the researcher has to recognize the impossibility of locating all documents available, and thus undertake a careful selection of the available sources.

**Delimitations**

The years 1920 to 1940 delimit this study. This twenty-year period is determined to be most relevant to investigate American female pilots. As noted, it was during this period that women pilots’ involvement in the United States aviation industry significantly increased and that flying women became highly visible in the media (e.g. newspapers, magazines and television). The twenty year period between 1920 and 1940 is also important since it includes the Transcontinental Women’s Air Derby, organized in 1929. This event has in several ways been crucial to the debate on women’s flying competency and women’s proper place in aviation as a whole.

The end date of the study – the year 1940 – is chosen since by 1940 female pilots seemed to have disappeared from the American aviation scenery. World War II caused the curtailing of civilian aviation and male pilots prepared for battle. Although many
women pilots expressed the wish to participate in combat flying, and despite the severe
shortage of pilots, the military did not accept women for pilot training. Following World
War II several women pilots attempted to continue or to take up their flying careers again,
but, as indicated earlier, the need for women pilots had subsided. Now that flight had
proven to be reliable and safe, flight companies were less inclined to hire female pilots or
coopilots, unless they were willing to accept a position as stewardess. 28

A second delimitation that needs to be acknowledged is reflected in the study’s
demographical focus. The female pilots studied include only American women pilots.
Although it would be interesting to expand the investigation by including Canadian
women pilots, the study would become too extensive for the purposes of a Master’s
thesis. The investigation of Canadian women pilots’ history could be an entirely new
project. Moreover, although the United States assigned the first pilot’s license to a woman
in 1911, Canada did not have a licensed woman pilot until 1928. 29 In addition, the
Transcontinental Women’s Air Derby, an event that is closely examined for this study,
did not have Canadian aviators amongst its participants.
Endnotes


2 Ibid., 267.


5 Ibid.


9 Burke, *History and Social Theory*, 164-65.


13 According to Patricia Elliot and Nancy Mandell feminist researchers do not view gender relations as either natural or immutable, but as historical and socio-cultural productions that are subject to reconstitution. See also Patricia Elliot and Nancy Mandell, “Feminist Theories,” in *Feminist Issues: Race, Class and Sexuality*, ed. Nancy Mandell (Toronto: Prentice Hall, 2001), 24. Similarly, Judith Lorber notes, “Everyone knows that women and men of the corporation are treated differently, but the implication is that this occurs because women and men are biologically different, not because the corporation is organized around the production and maintenance of gender differences in order to have a subordinate group of workers who can be paid less to do the dirty work. Women are seen as biological, not as social products.” For further reading see Judith Lorber, “Shifting Paradigms and Challenging Categories,” *Social Problems* 53 (4) (2006): 449.

14 Adams, “Communities on their own,” 9.


18 Ibid., 274.

19 Ibid.
20 Ibid., 273-274.

21 Carr, What is History?, 24.

22 Ibid., 43.


25 Ibid.

26 Ibid., 52.


Chapter Four

Findings

Chapter Two provided an overview of secondary sources regarding American women pilots between 1920 and 1940. In addition, the autobiographies – and thus primary accounts – of three female pilots, have also been touched upon briefly. In Chapter Four the researcher uses women pilots’ personal accounts, such as the above mentioned autobiographies, but also meeting minutes, personal correspondence, journal and magazine articles as primary sources. Since the purpose of this investigation is to examine gender issues from the women pilots’ viewpoints, the researcher frequently quotes the pilots’ spoken and/or written words. Although quotations are accompanied by the researcher’s own interpretations, their use is intended to enhance the reader’s contextual understanding of the period under investigation and at the same time, provide room for his or her personal analysis.¹

Chapter Four is divided into three sections. The first section addresses the decade between 1920 and 1930, during which aviation in the United States developed into a flourishing industry. After a short introduction regarding the prewar United States aviation industry, women’s place in aviation in the 1920s is discussed. The researcher addresses women pilots’ social status, their motives for their engagement in aviation and hindrances they encountered with regard to this involvement. Furthermore, in this section aviation is discussed from a sport perspective. Not only does the researcher touch upon women’s aviation records, but she also examines the pilots’ involvement in the first National Women’s Air Derby. At the end of section one, the motives and accomplishments of the women pilots’ organization, ‘The Ninety Nines,’ are discussed in more detail.
In the second section the researcher addresses women’s involvement in aviation sport further through an examination of women pilots’ participation in the National Air Races, which continued to be held annually between 1930 and 1940. Although women had become visible as promoters of the aviation industry during the 1920s, from 1930 on their involvement in aviation sport, and more specifically in cross-country and speed racing, steadily increased. Analogous to section one, the researcher discusses women’s place in the aviation industry in the 1930s. The number of licensed women pilots and the establishment of new women pilots’ organizations are also addressed. At the end of this section the researcher provides insight into the way women pilots negotiated their place in commercial as well as in military aviation. Finally, the researcher’s interpretation of this chapter’s main findings is presented in a concluding section.

**Women Pilots and the Development of the United States Aviation Industry in the 1920s**

By the end of World War I, only a handful of American women were qualified as pilots. Yet, the number of women pilots who barnstormed, raced, set records and demonstrated aircraft steadily augmented thereafter. During the early 1920s there was great competition for aviation-related jobs and the few positions available forced many pilots to build up their own businesses as barnstormers and stunt flying pilots. Ex-military pilots often started barnstorm teams and hired female as well as male pilots to work for them. Barnstorming was almost the only means of access to a career in aviation in those early years. Women generally began as wing walkers or parachutists. Phoebe Fairgrave, for instance, joined ex-military pilot Glenn Messer’s flying circus. She wing walked and performed parachute jumps to be able to pay for her flying lessons. When she had earned enough money, she opened the ‘Phoebe Fairgrave Flying Circus.’ She married pilot
Vernon Omlie in 1922 and together they stayed in the barnstorming business until they were able to establish their more lucrative Mid-South Airlines company in Memphis, Tennessee.  

After the Great War, the United States government began to realize that airplanes not only served military purposes, but they could be commercially exploited as well. As previously noted, the airmail service established in 1918 was a federal monopoly until 1925, when the air mail act transferred government air operations to commercial carriers, providing revenues that launched civil air transport companies all over the United States. In addition, Charles Lindbergh’s successful transatlantic flight from New York to Paris in 1927, stimulated widespread interest in aviation and triggered a flow of investments in aviation businesses.

At the same time as the United States government had become more ‘air-minded,’ aircraft manufacturers realized that in order to be successful, they needed to convince more people to travel by air. However, air travel in those early days was far from appealing; comfort and service were marginal and passengers generally had to sign a waiver allowing the carrier to leave them anywhere en route when a more lucrative load of airmail showed up.  In order for aircraft companies to flourish, the general public had to become air-minded, and this did not happen easily.

With the cessation of hostilities and the abrupt termination of Government contracts, the manufacturers found themselves in an almost hopeless position. The public had accepted aviation as a military tool, but it was far from ready to accept it as something that could be used to advantage commercially. Its acceptance in that could only be brought about slowly by education. 

There were multiple ways in which the government and the aircraft manufacturers attempted to stimulate the public’s interest in aviation. One way was the organization of
air races, a phenomenon initiated in 1920 when the Pulitzer Trophy\(^9\) was first introduced. This race would be one of the mainstays of future air races.\(^{10}\) However, the so-called ‘national races’ may be said actually to have originated in 1921. A number of aviation meets were conducted in various parts of the country that year, and some of the events held were later incorporated in the National Air Races, where they survived as national classics until the end of the 1930s.\(^{11}\) In this context James Wines noted:

> It was in the leanest of the lean years that the National Air Races – started to encourage competition in design among the manufacturers and to arouse the interest of the public in flying – had their beginning.\(^{12}\)

> These early air meets strongly relied on army and navy pilots as race participants. The only skilled pilots were those who had received pilot’s training during war. Furthermore, as the races featured speed contests, the military planes would easily outfly the lighter civilian planes, which were being built for the private market. Illustrative in this context was the postponement of the 1921 Detroit air meet until later in 1922, due to the inability to secure army and navy entries.\(^{13}\) In addition, it was during the races in Detroit that the National Aeronautical Association (NAA) was formed and that its contest committee awarded the next races for 1923 to Saint Louis.\(^{14}\) With regard to the 1925 National Races in New York, General Manager of the National Aeronautic Association, Frederick Neely, commented that “the commercial planes were more informative than interesting, because they proved to be the advance guard for a budding commercial industry.”\(^{15}\)

The 1929 National Air Races in Cleveland, Ohio, which are extensively discussed in this thesis, were different from the previous editions in two ways. First, for the first time in aviation history an all women’s event – a cross country race – was included in the
National Air Races’ program. Secondly, for the first time in the history of the National Air Races, “military planes were forced to yield the spotlight to the civilian pilot and commercial plane.” Civilian and military pilots were allowed to compete against each other, for the first time, and a civilian victory proved that civilian aircraft design and possibilities had progressed significantly between 1920 and 1929. According to an article in *Aviation*, published after the 1929 races had taken place,

the free-for-all at Cleveland was true to its name. The old rule against pitting military and civil pilots against each other, which has stood for five years or more, has been laid aside... Two years ago the industry had neither the resources nor the inclination to build for racing. A civilian victory at Cleveland furnished the best of evidence that the commercial builder can enter against unrestricted competition, and can sometimes win.

**Women Pilots’ Place**

The place of women in this early American aviation industry is an interesting one, given that few researchers have provided a thorough analysis. After World War I, women in general and women pilots in particular enhanced their involvement in the American aviation industry. In the early 1920s, when the aviation industry started to define its identity and, women pilots were mostly working in the barnstorming business as wing walkers and parachutists. Many of them hoped to earn enough money to start an aviation school or flying circus of their own.

While the commercial aviation industry made steady progress, many women pilots exchanged their daring jobs as stunt pilots for more secure jobs as airplane demonstrators, airplane salespersons, flight instructors or aerial photographers. Unlike the prewar female pilots, who were in most cases wealthy individuals, the women who earned their pilot’s licenses during the 1920s and 1930s came from various professional
In Women and Aviation a list of the different occupations held by the 130 licensed women pilots at the beginning of 1930 was provided and included artists, lawyers, telegraph operators, airplane saleswomen, students, secretaries, housewives, teachers, department store workers, accountants, librarians and waitresses. For example, with regard to the Curtiss Wright Flying Service School, one of the most renowned flying schools at the time, a woman pilot noted that

the list of recent women fledglings in Curtiss Wright Flying Services schools seems to show that the most consistent thing about the types of women who are learning to fly is their variety.

For the well-to-do woman pilot, aviation was most often a leisure activity that she added to her list of other hobbies, such as golfing, swimming and lawn tennis. The women who became pilots in the hope to find a job, and thus earn a living, in the aviation industry, were mostly white middle class individuals. This fact is remarkable in one way, but seems logical in another. To be able to earn a pilot’s license, one had to take flying lessons. Prior to 1920 these lessons were expensive. Twelve hours of flight instruction could easily cost one thousand dollars. Although prices for ten to twelve hours of flying lessons decreased from $500 in 1920 to approximately $300 in 1928, flying remained expensive. In addition, the purchase of an airplane – costing roughly between $2,000 and $3,500 – and the $25 to $50 a month for renting hangar-space, indicates a financial commitment that could not be easily managed by many middle class women. However, by the end of the 1920s more than 130 women from diverse professional backgrounds had earned their pilot’s licenses and were employed in the aviation industry.
Flying seemed to appeal to women and those who decided to take flying lessons chose to spend their spare time and the money they earned through hard work on aviation related activities. Although the reasons women became engaged in aviation obviously differed amongst individuals, the majority referred to ‘freedom,’ ‘independence,’ and ‘fun,’ when they were asked to explain their motives. In 1928 pilot Margery Brown, for example, found that flying was more symbolical to women than to men. Whereas flying to men would be merely mechanical, to women, she said, “it seems to signify rising above their environment in one way or another.” She added that to women, flying symbolized “freedom from the irking limitations that have hedged them about for so many centuries.” In addition, she used this symbolical meaning in her attempt to arouse women’s interest in aviation and to encourage them to take up flying:

Do you want to be free?
Fly!
Do you want to break away from all that has become monotonous and dull?
Then, fly!
Do you want to soar high above disappointments? To feel as if you have been born anew – transported into another world?
Do you long for an experience that will probably repay you more, in sheer, uplifting, lasting joy, than any human experience you have ever had – bar none?
Learn to fly!

To many women, flying seemed to be a synonym for ‘liberty’ and the ‘cure’ for the restrictions that had resulted from their subordinate social positions. Prior to the Great War women’s place generally was in the home. However, ever since women had assumed the jobs of men during their absence due to war, the Victorian woman had been removed from her pedestal and replaced – in theory at least – by a far more self-reliant woman. In this context Sara Jane Deutsch notes that during the 1920s, “there was a pervasive sense
of newness;” the world seemed new after the massive destruction of World War I and “women were made new too.” Of course, women’s suffrage in 1920 greatly contributed to this sense of newness and the ‘independent woman.’

Although the marketplace became more open to women in general during the 1920s, they often had to deal with several deterrents that hampered their employment. In the case of women pilots, Amelia Earhart noted that one of the greatest handicaps for women who aspired to become pilots stemmed from the differences in education between the sexes and – as a result – women’s general lack of mechanical knowledge. “It has always seemed to me that boys and girls are educated very differently,” Earhart wrote in her autobiography. She continued that “education goes on dividing people according to their sex and putting them in little feminine and masculine pigeonholes.” She suggested that different methods of instruction should be used for boys and girls. Mechanical courses, for example, had to be explained differently for girls, “not because girls are inherently not mechanical, but because normally they have learned little about such things in the course of their education. In the same way,” she continued, “feminine students in flying schools might gain more if courses were modified and adjusted to their educational needs.” Furthermore, both Amelia Earhart and Louise Thaden stated that women pilots had been limited in their access to flight training. Earhart wrote:

Since the early days of flying not many women have received as adequate training as men. The best schools in many ways at least, are the Army and Navy, and they, of course, are closed to women. Commercial institutions until recently apparently did not particularly welcome feminine students and had little conscience about their adequate instruction.

Along the same lines, Louise Thaden noted in her autobiography High, Wide and Frightened that “the woman pilot’s greatest handicap has been her inability to secure
flight training comparable with that available to men, that and the scant opportunities of securing flying jobs to gain experience.”37

Another deterrent for women who sought to become involved in the aviation industry as pilots, as identified by Earhart – and as previously indicated – was financial. Male pilots were often able to work as mechanics at airports to pay off their flying lessons. But in the case of women, Earhart noted that “no one wants a feminine grease monkey around the hangar to do the odd jobs which may partly pay for a young man’s aviation training.” 38 Another way for men to learn to fly was through enlisting in either the army or the navy, where they received free instruction and salary. This option was not a possibility for women. 39 In addition, after they had earned their licenses, women had fewer outlets to earn money in the aviation industry and therefore “they must hesitate longer about deciding on an aviation career.” 40 In the same contexts Earhart wrote:

While it may be difficult enough to learn to fly if one does not have an airminded Santa Claus in the family, often the hardest part is keeping on flying after the instruction period is over. Renting equipment is expensive and many a long day goes by before an employer can be persuaded to risk his airplane on a novice pilot’s skill – much less pay him to fly. 41

As for the way in which airplanes were constructed, Earhart identified minor hindrances for women. Brakes and starters were most often designed according to men’s hand and feet sizes, which made it difficult for small women to operate planes. Some women stuffed pillows around them to make the cockpit fit. 42 The most profound deterrent for women’s entry into aviation, Earhart said, is tradition; 43 girls are often shielded and sometimes helped so much that they start to believe that “girls don’t” and “girls can’t.” 44 According to Earhart, this belief kept many women “away from trying
new things and from putting their whole effort once they do venture forth.” She added that it “makes men unwilling to recognize women’s abilities.”

Not only tradition, but the resulting stereotypes about women’s abilities, their emotions and biology were often used by those – mostly men – who would rather not see women enter aviation professionally. In her article, “What Men Flyers Think of Women Pilots” (1929), aviator Margery Brown asked several male pilots for their opinions. According to one of them, women made poor pilots because: (1) they are too emotional; (2) they blow up in a crisis; (3) airplanes are merely playthings to them; (4) their flying is not constructive since they cannot use it as a business; and (5) they usually enter aviation for publicity purposes only. Another pilot told her that “ten percent of the women have enough intelligence to learn to fly, and the other ninety percent haven’t.” A third pilot she interviewed stated that “due to temperamental tendencies, women make poor automobile drivers, and they will make equally poor pilots for exactly the same reasons.” Unlike the reaction to these rather insulting statements one would expect from a twenty-first century white-middle class woman, in 1929 Margery Brown replied:

These arguments are sound. Men flyers aren’t nursing a grievance without reason. But it so happens that I am a member of the sex that is under criticism, and have derived incalculable benefit from flying, I am compelled to defend a woman’s right to fly. Yet I see the man’s viewpoint, and I agree with him. On the whole, I think he is right. Women are not well fitted for flying under present conditions.

Brown did not try to counteract the male pilots’ statements and although she tried to defend women pilots, she actually reinforced the idea that women were the lesser of men by concluding that “the barrier to women becoming good pilots is not the fact of sex at all; it is their apparent lack of the essential mental qualities.” “The main reason most women are emotional,” she said, “is because they have nothing better to do. Let them get
interested in aviation, and they will quickly become less emotional – or else be forced to
give up flying.”\textsuperscript{50} The fact that she did not think highly of her own sex became already
apparent in an article she wrote in 1928, in which she attempted to promote aviation to a
female audience;

\begin{quote}
Flying will help you to get your mind off yourself; it will enable you to
fasten your attention on the wider types of interests which men have
always had, and which are largely responsible for the fact that men, as a
sex, are less restless and far more satisfied with life than women are. Men
have always had more fun than women, because they are less dependent
on the personal element for happiness. Flying will help you to eliminate
that personal element.\textsuperscript{51}
\end{quote}

Flying, according to Brown, seemed to be the ultimate solution to many of women’s
alleged problems.

As Joseph Corn mentions in his book \textit{The Winged Gospel} (1983),\textsuperscript{52} flying during
the 1920s and ’30s had the allure of a new religion. ‘Airmindedness’\textsuperscript{53} was something
that had to be incorporated in one’s lifestyle. It was something that had to be preached to
the public and included in the curriculum of educational institutions. Women were found
to be particularly suited to making the general public and future generations ‘airminded.’
\textsuperscript{54} Aviation had to become a household term and thus support the development of ‘aerial
domesticity,’ as Joseph Corn labels it.\textsuperscript{55} Indicative in this context is the statement that
“there is a distinct place in American aviation for the ‘family ship,’ the personal plane,
piloted by the owner, or his son or his daughter, as the family car is operated today.”\textsuperscript{56}
Likewise, Earhart noted that the “family car of today will be the family plane of
tomorrow.”\textsuperscript{57} In addition, the parents’ task and the mothers’ in particular was to pass this
new ‘aerial religion’ on to their children. Amelia Earhart wrote: “It seems to me it is the
responsibility of parents (mothers in particular) to oversee their children’s welfare by
acquiring first hand flying experience.” However, in order for women to educate their children on the topic of aviation, they had to become airminded themselves, a task which became the responsibility of already airminded women – the pilots.

Although aviation was appealing to many, flying in the 1920s still seemed particularly daring to both men and women. However, several men, such as aircraft manufacturers and traffic managers, seemed to suggest that women were more afraid to fly than men and therefore slowed down the industry’s development. In her article, “Why are Women Afraid to Fly” (1929), Amelia Earhart wrote that several aviation traffic managers reported “that women are the cause of much sales resistance.” In addition, manufacturers believed that women had a great share in purchasing power. Thus, in order to establish a flourishing industry, women’s interest in aviation was deemed imperative. Earhart agreed, and stated that women’s influence had been primarily responsible for the rapid development of the American automobile in beauty and comfort and she was convinced that “a similar influence is inevitable in aviation as more women share the interest of men in this modern mode of transportation.”

Furthermore, Earhart did not deny the idea that it was harder to persuade women to believe that flight was easy and reliable, but she provided a plausible explanation; “aviation is being sold to boys much more effectively than it is to girls.” Again she referred to the differences in learning opportunities and experiences between genders and asked: “How can the industry expect cooperation from individuals who don’t have the opportunity of learning about it?” She illustrated her point with an example:

In one of the large eastern cities an airplane model contest was staged for children in connection with an aviation show. It was open to members of manual training and shop classes of public schools only. Automatically, many girls were barred.
Women should become more airminded in order to allow their husbands to fly and to raise an aviation conscious family. However, when they became too enthusiastic, they ran into several barriers of prejudice. Contradictorily, women in the 1920s were accused of not taking part in the emerging aviation enthusiasm, but at the same time, several factors, such as education, restricted their participation. Similarly, women pilots were allowed to sell and demonstrate planes, but when they wanted to fly professionally – as military or passenger transport pilots – they were excluded.

Women Pilots’ Race

Prior to 1929, the year in which women pilots were, for the first time, allowed to take part in the National Air Races in Cleveland, Ohio, they had been competing against each other, mainly through establishing and challenging records. Since women pilots began their record setting attempts after their male counterparts, they did not manage to equal or exceed the men’s records right away. In addition, before the end of June 1929, their attempts were not recognized since neither the FAI nor the NAA had established separate categories for women. In this context Amelia Earhart commented:

Inasmuch as women haven’t travelled so far as men aeronautically, I felt a much keener interest would result if they could be properly credited with what efforts they can make at present time. There are separate tennis, high-jumping, running, swimming and golf records. The young woman who stays aloft for twenty hours should be given official recognition, for her feat is a criterion of women’s ability.

She added that “such regulation does not mean that when a woman is capable she cannot compete with men on equal terms,” and expressed the wish that she would 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.”
On 20 December 1928, for example, Viola Gentry set an endurance record when she stayed aloft for eight hours, six minutes and 37 seconds. Her flight did not exceed the most recent men’s endurance record and was thus not recognized as an official record flight. The same was true for several other women’s endurance, altitude and speed record setting attempts in 1928 and 1929. Although women’s records – especially the endurance records – were set and broken at a fast pace, the pilots had a long way to go before they could exceed the men’s records. The men’s endurance record at the time, for example, was approximately 60 hours. However, a change occurred in the summer of 1929. While women’s records had been previously classified under Miscellaneous Air Performances, the FAI conference in Copenhagen on 19-22 June acknowledged the need for separate women’s record categories. From then on women’s records were officially recognised and recorded. In an article in the San Bernardino Daily on 21 August 1929, the secretary of the NAA, Luke Christopher, commented on the Copenhagen conference:

It was decided to create a separate category for women’s records national and international. The decision will take effect immediately. In the future, all the records established by women, through competition conducted in accordance with FAI rules and regulations, will be officially observed. The date concerning same will be compiled as our other world records, and sent to the secretary of FAI in Paris, France for promulgation.

With regard to the women’s records that had been listed as ‘miscellaneous,’ he added: “These records have appeared merely because the men of the NAA were chivalrous enough to set them down. The woman aviator had no official status.”

In June 1929 Amelia Earhart expressed her hope that “at the next National Air Races to be held in Cleveland in September there is to be at least one event for women exclusively.” Her wish was granted, since in 1929 for the first time, women pilots were allowed to participate in the National Air Races, which had been held annually since
Women had not been allowed in the earlier national races. It has been suggested that the main reason for the absence of women in those early years was the races’ predominant military character. While women were not allowed in the military and therefore did not possess the skills or planes required to participate in air races, the race competitions in the 1920s constituted a way for male ex-military pilots to keep up their flying and to earn money. In addition, their military planes were technologically far more advanced than the early lighter civilian airplanes – used by most women pilots – which could not attain the same speed as the military planes. However, by the end of the 1920s, civilian aircraft manufacturing had increased along with the public’s interest in aviation. In this regard Joseph Edgerton noted: “The increasing predominance of the commercial airplane stands out as one of the surprising features on the 1929 National Air Races held at Cleveland.”

The air races served multiple purposes, but as previously indicated, they were mainly organized to promote the aviation industry and to arouse the public’s interest in aviation. Clarence Young summarized this aspect of the races:

These events have been one of the contributing factors in bringing about the existing situation. Each year they have called upon the manufacturer to exert himself in designing for greater safety, speed and efficiency, in order that he may meet the requirements of the contest rules and enter suitably qualified aircraft; each year the rules have been revised to coincide with the changing conditions; and each year the thousands of spectators have become more and more critical.

Similarly, E.M. Laird stressed the air races’ importance for the aviation industry:

Airplane races are an important factor in accomplishing the first step of the industry’s sales program. Airplane races are the circus parade of the airplane industry... More ink and conversation are expended on a new coast-to-coast record flight than on all the millions of miles flown through fog, storm and cold by scheduled airmail, express and passenger lines.
The organization of a women’s race seemed to fit within the promotional aims of the aviation business. An article in *Aero Digest* in September 1929 on the women’s derby, reported that “The Santa Monica Exchange Club, which sponsored the race and donated $4,000 toward the prize, is lending its services solely through a desire to aid the progress of aviation.” Another article reported that the co-sponsoring Exchange Clubs of the United States “sponsored this epochal aviation classic to aid in the promotion of air mindedness and the development of long distance flying.” Frank T. Copeland, the managing director of the 1929 women’s derby, was more explicit when he explained why the women’s derby was organized:

If the feminine is considered the weaker sex and this weaker sex accomplishes the art of flying, it is positive proof of the simplicity and universal practicality of individual flying. It is the greatest sales’ argument that can be presented to that public upon which this industry or any other industry depends for its existence... This was the fundamental basis for the 1929 National Women’s Air Derby.

Although Copeland concluded his article denying that the National Women’s Air Derby was a publicity project, the race’s organizers and sponsoring exchange clubs seemingly aimed to benefit the aircraft manufacturers more than the actual derby’s participants. It was not the first time, nor would it be the last that the argument of ‘the weaker sex’ would be used in favour of the commercial aviation industry.

As indicated in Chapter Two of this thesis, the organizing committee announced that the women’s derby should not be an actual transcontinental race, but a shorter leap between Omaha, Nebraska and Cleveland, Ohio. The general idea that it was too dangerous for women to fly over mountains and deserts in combination with the relative newness of transcontinental racing made many people believe that women should not
cross-country race. Moreover, if the organizing committee wanted to convince the public that flight was safe and easy, airplane crashes had to be avoided at all costs. The committee, however, had underestimated the enthusiasm and determination of the participants; the women pilots wanted a cross-country race similar to the men’s competition. Amelia Earhart managed to convince the committee to extend the route and it was decided that the race would start in Santa Monica, California and conclude, as originally suggested, in Cleveland, Ohio. Then the committee suggested that if the pilots wanted to cross-country fly, they might consider taking along a male mechanic. The women pilots’ reaction, again, was one of protest, mainly because they wanted to avoid being accused of not having flown the race themselves. Amelia Earhart noted:

> It always happened that if a man is along, whether or not he has ever been off the ground before and though he may sleep in the cockpit all the time, he is invariably termed as ‘co-pilot,’ and this [the derby] was a strictly feminine affair.  

The women’s derby participants received what they had asked for when the committee decided that mechanics, if needed, had to follow in separate planes or by car, and that they were only allowed to service the planes at scheduled stops. Moreover, the race committee added a rule which stated that the pilots were allowed to carry a passenger, but it had to be a woman who had no flight experience whatsoever. The pilots were divided into two separate divisions depending on engine displacement. There was a CW class for lighter planes with engines from 257 to 510 cubic inch displacement and the heavier DW class was for engines over 510 to 800 cubic inch displacement. The Santa Monica Exchange Club, which promoted the race, had raised $4,000 by selling automobile stickers admitting the holder to the start of the derby. The Cleveland air meet committee donated $4,000 and several lap prizes were given by
fifteen of the eighteen control cities – mostly by local exchange clubs – adding up to approximately $10,000.\(^88\) Although this amount of prize money seemed rather large in comparison to the prize money offered to male pilots competing in similar cross-country races, only one such race was organized for women, while there were seven for men. The men’s derby prizes ranged between $1,875 and $7,500 and totalled $31,875. In addition, there were thirty closed course events for men, and only five for women. The men’s events – with prize money ranging between $100 and $5,000 – added up to more than $37,600, while the five women’s closed course events’ prize money ranged between $175 and $1,250 for a total of $4,925. When comparing similar events individually, the prize money did not significantly differ between genders. The prize money offered to the winner of the women’s dead stick landing contest, for example, was $175. The winner of the men’s dead stick landing contest was offered $100. The Australian pursuit races for women – there were two of this kind – offered the winners each $1,250 while the winner of the Australian pursuit race for men – one of its kind – gained $1,500.\(^89\) Given the newness of women in the air racing circuit combined with their small number, it seems reasonable that only six events for women were organized, in comparison to the 38 for men.\(^90\) However, the restricting factor for women was that they were not allowed to sign up for the same races as the ones in which men competed. The rules stipulated that “Men and women pilots are not allowed to compete in the same events. Unless otherwise specifically stated under events, only male pilots will be allowed to compete.”\(^91\)

Twenty women pilots started the women’s derby on 18 August 1929. Unlike the exchange clubs, which organized the race for promotional purposes, the women pilots hoped that their participation would counteract the prejudices held against women in the cockpit and that they would be able to prove that they were capable of competing on
equal terms with their male colleagues. However, the committee’s motives for the race were not easily matched with the women pilot’s hopes and intentions. If no accidents or crashes occurred, the safety and reliability of flight and the aircraft itself would be proven; ‘if the weak sex can do it, everybody can.’ Conversely, if accidents or crashes were to occur, the general belief that women should not attempt long distance flying would be strengthened. In other words, although a woman pilot could win a derby, she would never win the same respect that was accredited to male pilots who won in similar races. Illustrative in this context are the many nicknames that were given to the women’s derby, belying the women pilot’s serious commitment to the race; “‘Lipstick derby,’” “powder puff derby,” “petticoat derby,” and the like had to be swallowed smilingly.”

In addition, throughout the race the pilots had to dress up every night for the banquets organized by the different exchange clubs. The women pilots had to live up to their reputation as ‘sweethearts of the air’ and therefore they stayed up late every night to entertain the invitees and please the event sponsors. In the October 1929 issue of *The Women’s Journal*, Frances Drewry McMullen noted:

> Everywhere at the banquets, they had to be “sweethearts of the air,” “flying flappers,” “angels,” “sunburned derbies” and what not, when what they really wished and felt entitled to be considered was simply “flyers” – “women fliers,” if you must.93

As the pilots had to get up early to prepare their planes for the day’s flight, they usually did not sleep for more than three hours per night.94 Louise Thaden wrote:

> We did object to being made exhibits and more or less circus attractions. We did complain at being kept up all hours of the night. And we didn’t like to stop so often – but then, who wouldn’t.”95
Similarly, Amelia Earhart noted that “it was not the racing time itself but the in-between times that proved the ordeal.”\textsuperscript{96} In other words, the women pilots were willing to sacrifice their sleep and thus their safety during the race in order to maintain a good relationship with their sponsors. They knew that this was the only way in which they could further their involvement in air racing in particular and in the aviation industry in general.

The race itself did not evolve smoothly. Before takeoff, German pilot Thea Rasche received a telegram warning her of sabotage.\textsuperscript{97} During the races, several women had serious troubles with their planes. Ruth Elder for example, discovered gasoline in her oil tanks and Claire Fahy stated that two brace wires on her plane had snapped while she was circling the Calexico port. “I am convinced that the wires have been tampered with. They were snapped as squarely as if they had been cut by pliers,” she said.\textsuperscript{98} Her husband Herbert Fahy also declared that “the wires show evidence of being burned with acid.” I am convinced,” he continued, “that there is something rotten in this race,” so “I’ll do everything in my power to call the race off.”\textsuperscript{99} When experienced pilot Marvel Crosson died in a plane crash on the second day of the race, more speculation regarding possible sabotage occurred. According to Leon Day there was certainly sabotage; “Sand doesn’t jump into gas tanks by itself, and magneto points aren’t filed without malice.” “But,” she continued, “not all Derby mishaps are sabotage, and perhaps not Marvel Crosson’s fatal crash.”\textsuperscript{100}

Despite Crosson’s death and several nonfatal accidents, the race was not stopped. The organizing committee decided to continue the derby because “the reports of tampering with the race airplanes were not substantiated.”\textsuperscript{101} In addition, the women pilots did not want to give up their race either. They suggested that a more significant and meaningful tribute to Crosson, and thus the cause of women pilots, would result from
continuing the race, rather than by withdrawing from it. Crosson’s good friend and winner of the derby’s heavy plane class, Louise Thaden, commented:

Wherever she is now, we know that she knows the things we would like to say and can find no words to express. Pioneers can only look forward, never back – so each of us carried on and flew perhaps a little better race than we had thought possible.\textsuperscript{102}

The actual cause of Crosson’s crash has never been discovered and no clear evidence could be found to either support or refute the speculation regarding sabotage. However, in 1930 Dr. L. H. Bauer, founder of American aviation medicine, stated that Crosson crashed because she was flying during her menstrual period.\textsuperscript{103}

Unquestionably, it [a women’s menstrual period] is the cause of a certain numbers of crashes. We found after the air races a year ago that in connection with one of the women who was killed it happened during her menstrual cycle.\textsuperscript{104}

It was not the first time, and it would not be the last, that assumptions about women’s biology restricted women’s involvement in civilian and professional aviation, and this was also the case for other sports and industries at the time.\textsuperscript{105} Women could not win as long as the menstrual argument stood firm; the more they flew, the more they proved that they should not.\textsuperscript{106} In 1939 in his book Soaring Wings, Amelia Earhart’s husband George Palmer Putnam agreed and stated:

Probably the biggest single stumble block to women winning work as transport pilots existed in the traditional theory that woman from time immemorial has had one period every month when her nerves and her reactions are thrown out of balance by a simple phenomenon of nature.\textsuperscript{107}

According to researcher Melodie Andrews, the argument that women should not fly some days before, during and after their menstrual periods, was for the first time officially countered by Nels O. Monserud in 1945 in a report in the Air Surgeon’s Bulletin.\textsuperscript{108}
Although Monserud states in his article that “most women “sit as high” – because many women needed extra cushions to reach the rudder pedals – but may not “stand as high” as men”\textsuperscript{109} he wrote:

No correlation was found between menses and elimination from training. There were no demonstrable menstrual factors involved in 11 fatal and 112 major, nonfatal accidents...In properly selected women, menstruation is not a handicap to flying, is unaffected by flying and does not hinder dependable performance of duty.\textsuperscript{110}

**Women Pilots Organize**

The derby was “a most interesting and valuable experience,” and “added considerably to our flying knowledge and at the same time served to increase public interest and confidence in women in aviation,” said Amelia Earhart during an interview in October 1929.\textsuperscript{111} Minimizing the technical problems which had occurred during the race, she added:

It was a brand-new undertaking for all concerned, flyers, judges and committees and those in charge at every control point...Naturally it could not go off with perfect smoothness. Nevertheless, who were in it found it altogether worth while.\textsuperscript{112}

Regardless of the mishaps and Marvel Crosson’s fatal accident, the derby participants seemed to agree that the race – in their eyes at least – had been a great success. Louise Thaden optimistically stated: “I think we have proved that we can fly as long, as hard, as consistently, and as well as the men.”\textsuperscript{113} According to Amelia Earhart, the derby had not only shown that “women can be expert aviators, but also that they can be first-class sports.”\textsuperscript{114} “Everyone seemed anxious that all should have an equal show,” she said, and explained, “If any girl was familiar with the country over which the route lay or knew any
shortcuts, she invariably shared her information with the rest.” Likewise, Louise Thaden noted:

This year’s derby had brought us all together for the first time since women have started winning their wings. We each had found a staunch friend in the other, and, for so large a group of women, that in itself is unusual. We had found that the rest of us were good fellows, and further, good sports.¹¹⁶

Not only the women’s comments were positive. Managing Director Frank Copeland also stated:

These women are the best bunch of sports, from every viewpoint, with whom I have ever come in contact, men or women…I’m frank to admit that not many men could have gotten out of some of the mechanical and navigation difficulties we have encountered.¹¹⁷

Shortly after the 1929 derby, a first issue of Women and Aviation – the very first American women’s aviation magazine – was published on 16 September 1929. The magazine, usually not longer than three or four pages, was distributed weekly and contained news about the American women pilots’ aviation feats, such as races and records, as well as information on women pilots’ backgrounds and the diverse occupations they held either within or outside of the aviation industry.

The derby participants’ progress on their plans to establish an organization “to promote women pilots among themselves, and to encourage other women to fly, as well as to break down general opposition to aviation,”¹¹⁸ was closely followed in this magazine. Pilots Neva Paris and Amelia Earhart had sent out a call for an organization meeting for licensed women pilots to be held in a hangar at Curtiss Field, Valley Stream, Long Island on 2 November 1929.¹¹⁹ Twenty-six women pilots attended this first meeting during which it was decided:
to make the organisation as informal as possible, with a committee composed of pilots from different sections of the country to do the governing, instead of having a long list of officers. Representation on the committee is to be pro-rated according to the number of licensed women pilots in each section. Membership in the organisation is to be limited to licensed women fliers, and the purpose of the organization is to be social as well as professional, from the standpoint of encouraging other women to take up flying both for business and for pleasure and of assisting each other in securing positions as pilots.\textsuperscript{120}

One of the chief subjects of debate during the meeting consisted of finding an appropriate name for the club. According to pilot Ruth Nichols, some of the names that were suggested, included Lady Birds, Angel’s Club, Gadflies, Homing Pigeons, Lady Buzzards, Sky Scrapers, Cloud Chasers, Moon Claves, Spinners, Bird Women, Licensed Women Flyers, Air Dames, Queens High, Breezy Birds and Climbing Vines. However, Amelia Earhart suggested that it might be a good idea to just choose a number, rather than a name – the number of charter members.\textsuperscript{121} This choice would also better reflect the women’s serious commitment to their organization as not all reactions were as positive as those of the women pilots themselves.\textsuperscript{122} “The women are going to organize. We don’t know what for,” stated one newspaper, adding that “women can’t get along with women.”\textsuperscript{123}

Thirty-one pilots were unable to attend the meeting in person but, since they all supported the initiative, it was decided that they should also be eligible for charter membership. In addition, not all women pilots’ addresses were available at the time and a committee of two, consisting of Amelia Earhart and Neva Paris, was appointed to send a new letter to all licensed women pilots in the United States to ask them whether they wanted to become a charter member.\textsuperscript{124} The organization managed to attract an additional forty-two women pilots for a total of ninety-nine charter members, which resulted in the
‘Ninety-Nines’ (99s). The organization’s membership would steadily increase and by the end of the 1930s, the 99s would have more than four hundred members.

Other organizations, with a similar mandate to the 99s, were founded in the 1930s in different parts of the country. In December 1929, for example, the Women’s Flying Club of Houston, Texas was established. Whoever wanted to join the group had to learn to fly within three months of joining the club or else the club would have the pilot’s name “ruthlessly lopped of the membership list.” Another example was the establishment of three women pilots’ clubs – New England, New York and Maryland – in January 1930. The New England club welcomed all female pilots and hoped to create more interest in aviation among women. The members would give talks on flying at schools and colleges, as well as at women’s clubs. Likewise, the New York club planned to hold lecture meetings and to visit air meets and air shows. The Maryland club’s main purpose was to purchase planes for its students and to promote interest in aviation among women. Not only the Maryland club, but several other clubs, including the 99s, purchased one or more airplanes to be used by members who could not afford to buy a plane of their own.

**Women Pilots and the United States Aviation Industry in the 1930s**

The 1920s had brought many opportunities for women who wanted to be involved in the aviation industry. Some of them stayed grounded and sewed the fabric of parachutes, managed airport traffic or worked as airport secretaries, others chose to take to the air as pilots. They raced, set records and demonstrated planes for “the fun of it,” but primarily, they promoted the United States aviation industry. The 1929 Women’s Air Derby had in many ways challenged the ongoing debate on female pilots’ place within American aviation. The derby’s committee had organized the race primarily for the
aviation industry’s sake, while the sponsoring exchange clubs seemed to consider the derby a promotional stunt, rather than an opportunity for women to showcase their flying abilities. However, after this first derby was held, it became an annual event.

**And the Races Go On...**

“Our hats off to these women. The air, evidently, like the land and sea, is to be theirs,” said the Cleveland City Manager R. Hopkins shortly after the 1929 derby. Despite Major John D. Marshall’s prediction that Cleveland would host the air races again in 1930, that year’s races took place in Chicago from 23 August to 1 September. This time, however, two women’s derbies were on the program, the Women’s Pacific Class “A” derby (2245 miles) and the Women’s Class B Dixie Derby (1575 miles). The first race, or the ‘Western Derby,’ as it became known, started at the Municipal Airport of Long Beach, California and ended at the Curtiss-Wright Reynolds Airport, Chicago. The entries were limited to planes of 800 cubic inch engine displacement. The second one, the ‘Eastern Derby,’ started in Washington and would also end at the same airport in Chicago. This derby was limited to planes of 500 cubic inch displacement. Unlike the 1929 women’s derby, this year’s derby did not attract the hoped-for numbers of participants. Prior to the 1930 national air races, a newspaper wrote:

Irked by West Coast “ballyhoo” methods, which have unauthorizedly linked their names with this year’s Women’s Air Derby from California to the national air races in Chicago Aug. 23 to Sept.1, five of America’s best known airwomen yesterday issued a joint statement denying they would compete either in this event or a similar women’s air derby from the East Coast to the scene of the races.
The statement was signed by pilots Louise Thaden (winner of the 1929 derby in the high powered plane division), Blanche Noyes, Amelia Earhart, Ruth Nichols and Elinor Smith. All five now possessed heavy ships with large horsepower motors and were dissatisfied when the air race committee limited the woman’s derbies to planes of low horse-power and speed. Amelia Earhart explained that women had outgrown the small craft used in last year’s race and took greater pride in their ability to perform to higher standards of piloting ability. In Earhart’s case, for example, she owned a Lockheed-Vega monoplane with a 425 horsepower Wasp engine, and the 800 cubic inch displacement restriction automatically ruled her plane out. Furthermore, she did not have the means to purchase another aircraft. Blanche Noyes flew a big Wasp-motored Stinson monoplane and did not have another airplane available. The same was true for Elinor Smith and Ruth Nichols; their ships were too powerful. It was said that Louise Thaden could not compete because she had to take care of her week-old baby.136

The women also objected to the race committee’s decision to send along two army planes and a flight surgeon.137 The women pointed out that the addition was admirable from a safety standpoint, “but is not welcome among women competitors unless similar precautions are taken with the men’s races.”138 Also, shortly after the 1929 women’s derby, Louise Thaden had suggested that next year “there be a woman pilot on the race committee.”139 Likewise, Neva Paris wrote in her letter to Amelia Earhart in January 1930, “One of the important items of business at the last meeting was the necessity of obtaining the appointment of one of our four members on the Race committee for 1930.”140 Although uncertain, it seems that the women’s suggestion was not taken into account when the 1930 races came along. Illustrative in this context is that during the first 99s meeting after the Chicago races, the necessity of having a woman pilot on the race
committee was reiterated for the following year. “A resolution was passed by the meeting to the effect that the club is heartily in favor of a woman member on the 1931 National Air Race Committee.” During the 1930 races it was also decided that the National Air Races “will be the annual time and place of the National Meeting of the 99s. The fiscal year will end and the new year begin with the national meeting.”

During the 1930 Chicago races only six women pilots participated in the Pacific Derby and five in the Eastern Derby. The latter was won by Phoebe Omlie, while Gladys O’Donnell won the Western Derby. Although only eleven women pilots competed in the cross-country races, the women established a remarkable feat, as the magazine Women and Aviation noted in September 1930.

The winners of both derbies for women maintained a higher average speed than did men contestants in derbies of the lighter or the heavier plane classification... And unquestionably they should tend to make doubting Thomases on the subject of piloting abilities of women sit back and take considerable notice.

In addition, for the first time during the national air races, a ‘mixed derby,’ in which men and women competed together as a team, was included in the program. One member of the team remained in Cleveland while the other one stayed in Chicago. One flew the ship to Cleveland and the other brought it back to Chicago. Despite the progress being made, it would not be until the 1932 National Air Races that women were allowed to compete against men. Women placed in the top five in six of the nineteen mixed races that year. The 1933 National Air Races had only two events in which women could participate and one of those, the Women’s Shell Speed Dash, was not flown because of a lack of participants. Instead, the $1,425 in prize money was awarded based on the results of the Aerial Trophy Race – the only women’s race held during that year’s national races – in which four women pilots participated.
Based upon the argument that “it was necessary to wheedle and beg for entries in order to hold the Aerol Trophy at Los Angeles last year,” race manager Cliff Henderson decided that no events for women should be organized during the Cleveland 1934 national races. Moreover, he stated that “there is no more place for women pilots in fast, closed-course racing events than there is on the Indianapolis Speedway.” He added that all mature women pilots in the United States with whom he had discussed the subject, “emphatically conceded this to be right.” This second argument was based primarily on Florence Klingensmith’s fatal accident during the 1933 Frank Philips Trophy race in Chicago. During the race, Klingensmith kept up well with her male competitors, averaging over 200 miles per hour for 75 of the course’s 100 miles, until the fabric of her Bee Gee Y.’s right wing tore loose. She left the course’s pattern to avoid a collision with the other racers, but failed in her attempt to land safely. In reply to Cliff Henderson’s reasoning, The 99er – the 99s organization’s magazine, which at that time represented 369 women pilots – reported in August 1934:

The race officials have chosen to ignore the fact that women at various points throughout the country – more so this year than during any previous year – have consistently proven their ability in closed course racing. Those in charge of the competition chose not only to wash out all “co-ed Competition” at the 1934 National Air Races, but to schedule no woman’s event, not even the Aerol Trophy which has been the most important annual woman’s race and the only such event in which it was possible for contestants to make an important cash win.

Furthermore, the reason for the few women participants in the 1933 Los Angeles National Air Races was, according to the magazine, due to a rule established by the race committee. Some twenty women pilots had spent many words and much time urging Cliff Henderson “to lower the qualifying speed as to enable to secure ships with which to enter long before he made that last-minute gesture.” The race committee members had
only taken the women pilots’ suggestion into consideration at the very last moment prior to the event, when they lowered the qualifying speed from 175 mph to 150 mph.\footnote{157} As a result, even if the initial twenty pilots had possessed a suitable airplane, the rule change was communicated too late and the pilots were not ready to participate. In addition, as no other events for women were organized, the pilots wondered:

Even if there were no place for women pilots in high-speed free-for-all races, would that mean that there was no place for them in slower races? We note several events in this year’s \textit{men pilots only} program for planes with 125 mph qualifying speed.\footnote{158}

The women also expressed their grievances since many of them used the money earned through air racing to keep up their expensive hobby – flying. In addition, for many pilots air racing constituted a means through which manufacturers could be convinced to sponsor their flying activities. One of their statements in reply to Cliff Henderson read:

It probably has also slipped his mind that we have been having a depression in this country. And it no doubt never has occurred to him that the only way women or men in the past have been able to get the sort of jobs which pay enough money to enable them to own high speed jobs of their own or to convince backers of manufacturers to provide them with ships was by means of the distinction they were able to earn in competitive flying.\footnote{159}

With regard to Florence Klingensmith’s death, \textit{The 99er} noted that “when Art Page crashed in Chicago in 1930 it never occurred to anyone to suppose there would never be another Thompson Trophy Race.”\footnote{160} A newspaper noted that “the death of Dough Davies had deprived Mr. Henderson of one of his star examples of why women should not be allowed to participate in the races.”\footnote{161} Dough Davies had died in the 1934 Thompson Race during the Cleveland National Air races. According to the same newspaper, Davis’s crash was fairly similar to Florence’s;

As a matter of fact, it [Florence’s crash] closely paralleled the crash of Davis’s racing monoplane, which also suffered a structural failure during
flight, and the veteran racing airman’s failure to get out of the ship, in an emergency similar to that which faced Miss Klingensmith, rather effectively disposes of the implication that she lost her life merely because she was a woman intruding in a field where she did not belong.\textsuperscript{162}

Unlike Henderson’s reaction, Frank Phillips – sponsor of the 1933 race in which Florence had died – was more supportive of women in aviation sport and said:

This young woman paid with her life for the privilege of pioneering for progress. Flying is not conceivably the kind of sport in which first-rate ability and courage on the part of one woman buys disqualification and defeat for all the rest.\textsuperscript{163}

In other words, not everyone, and not every man in particular, disregarded women’s involvement in what was mainly considered a male domain – air racing. Illustrative in this context is also reflected in the following statement by C. B. Allen referring to the 1934 races;

More and more veteran patrons of the National Air races are swinging to the belief that if a little of the energy expended on elimination of women were devoted to tightening up restrictions on the airworthiness of participating planes, American air meets would be attended by fewer fatalities.\textsuperscript{164}

Although women pilots did not participate in the 1934 Cleveland National Air races because of a “masculine-generated move to exclude women from air racing,”\textsuperscript{165} the 99s and the Women’s National Aeronautical Association – an organization whose members were mostly non-fliers, but who were actively interested in promoting all phases of aviation – organized their own ‘first Women’s National Air Races’ from 4 to 5 August 1934 in Dayton, Ohio.\textsuperscript{166} Twenty women entered and participated in events, such as twenty- and fifty-mile free-for-all races, precision landing contests and bomb dropping. The biggest event was the fifty-mile free-for-all, for which a $1000 first prize had been offered. It was a closed course race that required frequent high speed turns around pylons. It was during this race that aviator Frances Marsalis died. A wing of her
Waco biplane hit the ground when she did not manage to level out her plane after a turn. The fifty-mile race was continued, but remaining events – an aerobatic and a barrier landing contest – were cancelled after Frances’ death. \(^{167}\)

The controversy regarding the participation of women in the 1934 National Air Races might have contributed positively to female involvement in the 1935 year’s Bendix Trophy race. Industrialist Vincent Bendix sponsored this transcontinental air race, which became part of the annual National Air Races in 1931. It was not until 1935 that women were allowed to enter the prestigious Bendix Race. Amelia Earhart and Jacqueline Cochran were the only women who signed up in 1935. Cochran had to give up due to an overheated engine, but Earhart finished fifth. \(^{168}\) During the next edition of the race in 1936, women pilots took three of the top five places. Louise Thaden and co-pilot Blanche Noyes finished first. Laura Ingalls crossed the finish line 45 minutes later and won second place. Amelia Earhart and Helen Richey finished fifth. \(^{169}\) Jacqueline Cochran repeated a first-place finish for women in the 1938 Bendix Race. \(^{170}\)

**Women Pilots’ Place**

The number of licensed women pilots rapidly increased in the early 1930s. There were approximately 127 in January 1930 \(^{171}\), but by the end of 1933 at least 608 women had become licensed pilots. \(^{172}\) Nevertheless, by June 1934 the total number of women pilots had fallen back to 358. *The 99er* reported:

> there are 242 less women licensed to fly than there were a year ago when the total on the Department’s [Department of Commerce] list, checked with current information, came to 600. Thus a figure which has been mounted rapidly and steadily since January 1929, when the total stood at 34, has slid away back. \(^{173}\)
Although the reason for this rapid increase and equally quick decrease is not entirely clear, a factor that might have played a role here was the Great Depression. There were three main licenses one could obtain, a private license, a limited commercial license and a transport license. The transport license was the most difficult to obtain as it required 200 hours flying time. The limited commercial license required fifty hours flying time and the private license only 10. In order for pilots to keep their licenses, they had to fly a certain number of hours every year. However, flying was expensive and the Great Depression seemed to cut back the less affluent women pilots’ flying activities in the 1930s. In this context Texan pilot Adele O. Wright commented:

I had exalted hopes when I learned to fly, but the depression came along and put a crimp in that. Now, the best I can do is try to do enough flying to keep my license alive.175

Another woman pilot from Beaumont, Texas said: “This town used to be full of girl flyers, but nearly all of them have stopped flying temporarily, of course.”176 The number of licensed women pilots steadily increased again after 1934 and by the end of the 1930s, more than six hundred women possessed a pilot’s license.177

Although the Great Depression did affect many women’s flying activities, several of them continued to frequent air meets and to set records. In addition, several new women pilots’ organizations were established. One of them was the Betsy Ross Corps,178 founded by aviator Opal Kunz on 9 May 1931. The army and navy officials and other organs of National Defence had been warmly receptive of the idea and lent aid in the preparation of the Corps’ program. The organization’s statement of purpose read:

It is intended that the Corps shall function as an auxiliary Air Corps... We do not expect to train women for combat. We wish to bind together women flyers who have common interest in aviation and in National Defence; to offer them encouragement and incentive to perfect their flying
skill to a point where, should the occasion arise, they can relieve male pilots for combat and military flying.\textsuperscript{179}

To be a member of the Corps, one had to be a certified American citizen, hold a U.S. Department of Commerce pilot’s license, and take an oath. The membership included women pilots in all parts of the United States. Opal Kunz became national commander and for each corps area a local officer was appointed. The uniform included a belted military tan coat and beret. In addition, the Betsy Ross Corps was welcomed into the American Coalition of Patriotic Societies,\textsuperscript{180} and already had more than one hundred members in 1932.\textsuperscript{181}

Another group of women pilots formed the Women’s Air Reserve on 1 October 1931 in California. The organization’s object was to train and educate its members so that their services would be available in case of national emergency.

It was felt that, should any emergency arise, there would be many tasks which could be performed by women flyers, thereby releasing men pilots who might be needed elsewhere.\textsuperscript{182}

Furthermore, the organization was not “a club in any sense of the word.”\textsuperscript{183} There were no provisions in the regulations of social activities and there were no dues or assessments. Sixty days after a pilot’s name was proposed, the enlistment board notified her as to whether she had been accepted or rejected. The women had to express their serious commitment to the organization. Indicative is the following message regarding membership eligibility:

A rejection does not necessarily reflect unfavorably upon a candidate. It may merely mean that it has been found she would not be able to give the time to the work that is required. Then, again, it may mean that she is a publicity-seeker hoping to use the prestige of the more serious minded members for her own personal gain.\textsuperscript{184}
The headquarters of the club were located in the Reserve Officers’ clubhouse at the Army Reserve Air Base in Long Beach, California, and in 1932 the club had renowned pilots, Louise Thaden, Blanche Noyes and Jean LaRene amongst its members.¹⁸⁵

It was indicated for both the Betsy Ross Corps and the Women’s Air Reserve that these organizations did not intend to train women for combat flying. Instead, it was suggested that their members could take over male pilot’s jobs when these men were needed elsewhere during war. Unlike prewar pilots, such as Katherine Stinson and Ruth Bancroft Law, who explicitly stated they wanted to fly combat during war, the 1930 women pilots seemed more ‘pacifistic’ in their approach, or maybe they simply did not believe that the opportunity to fly combat would ever arise for them. Illustrative is Opal Kunz’s statement that during war “women could carry supplies to devastated areas, they could act as dispatch fliers and be very useful. They could release men for work requiring greater skill then they themselves possess.”¹⁸⁶ Along similar lines, many women pilots in the early 1930s seemed to think that they would never be able to enter the aviation industry as airline pilots. In this context Amelia Earhart noted;

we do not see women driving auto busses, or locomotives, or being captains of steamships... It may follow that women will never be pilots of passenger or mail planes on regular runs. However, they have opened so many doors marked “Impossible” that I don’t know where they’ll stop.¹⁸⁷

In an issue of *Southern Aviation* in 1932, Louise Thaden shared the opinion that “women can never hope to compete with men in the actual flying of airplanes. “Not,” she said, “that women can’t handle a plane as well as men. They can – a number of them can do the job a whale of a lot better – but,” she continued, “the public simply does not have confidence in women fliers. That is, not enough to ride with them to any great extent.” She
added that this general attitude “means that women are forever barred from careers as transport pilots on regular passenger lines.”  

Clarla Studer stated more optimistically:

There are at least 30 women in this country who could handle the job of co-pilot and an air liner without fuss or feathers. They are already competing with men on an equal basis in every other phase of flying except as airline pilots, and I haven’t the slightest doubt that women will be flying transport some day.

As some female aviators simply did not believe that women would ever share the cockpit with men as transport pilots, other women pilots were opposed to the idea of female professional pilots. Aviator Mary C. Alexander, for example, writes she cannot make herself believe that any woman can take a heavy, fast ship, loaded with five or six hundred gallons of gas, off the field and fly across the Atlantic by herself. She may have the scientific mind, knowledge of celestial navigation, and be able to fly blind, but she will not have the physical endurance to combat the long hours, some of which will be blind flying, and meeting the weather conditions. At the present time women can do more for aviation and for themselves by sticking to equipment suitable for their strength and ability; flying cross country commercially or for pleasure whenever possible, and landing at airports looking fresh and clean.

She concluded that this way, spectators will think that “there is nothing to it, I’ll learn to fly” or, “If she can fly alone, I should take a chance in flying over air transport lines.”

Similarly, in 1935, pilot Elisabeth Jane Burns noted that “the presence of women will do more to convince the ease and safety of flight than any of the remarkable records which men may hang up.”

As noted previously, the argument that female pilots were better suited than men to promote the safety and reliability of airplanes was explicitly pronounced by the National Air Race Committee in 1929. Thereafter, women pilots seemed to incorporate this idea consistently into their flying motives. Although they mostly wished to be taken seriously as professional pilots, many of them – consciously or not – accepted the idea that they
“have a future in aviation only so long as we prove to be of value,” which indirectly implied that they were the lesser of their male pilot colleagues. In the same context Opal Kunz, on behalf of the 99s, wrote; “we believe that our girls can and will learn to fly as well as the average men, better than many, but,” she continued, “it does not seem likely that we will ever equal the remarkable skill of countless men fliers both in our own country and abroad.” Of course, statements, such as “no government in its sane senses is ever likely to allow women to act as regular air-line or charter pilots,” did not enhance the women’s cause or confidence.

When Central Airlines hired Helen Richey on 31 December 1934 as co-pilot in the regular Washington-Detroit mail and passenger service, a statement in Airwoman read, “I don’t know how she managed to do it but anyhow give three cheers for Central Air Lines and for Helen. I’ll wager no ship was ever as hard to land as that job.” According to Glenn Kerfoot, Helen Richey was upset when her friend Frances Marsalis died during the first Women’s National Air Meet in 1934 and therefore, in search for a more stable career, she applied for a job with Central Airlines. However, when it appeared that the Pilot’s Union would not admit Richey to their membership and when – in addition – the Department of Commerce refused to let her fly in bad weather, Richey resigned from her job less than ten months after she was hired. Amelia Earhart, in support of women flying professionally, argued that Richey’s departure from her job was because she was a woman. Experienced pilot Miss Ruth Haviland stated on the contrary that: “In private or race flying, women need to give the ground to men” because she found that flying big transport planes was physically too difficult for women. In the same context it needs to be noted that the tests that had to be taken to obtain a transport license, which, in theory, allowed the pilot to transport passengers, were the same for women and
men. Yet, the fact that there were no women transport pilots clearly reflects the resistance against women in the cockpits of transport planes at the time. In this context *The New York Times* pointed out:

> Latest Department of Commerce records, as of Oct.1 [1935], showed that seventy-two women hold transport licenses, having taken the same test as men. These are the highest licenses issued, requiring 1000 hours of solo flying. Of these seventy-two women none now have jobs on any of the big transport lines carrying the mail.\(^{201}\)

Prior to World War II, Helen Richey was the only woman who managed to become involved as an airline pilot in the American commercial aviation industry. In addition, by the end of the 1930s, women pilots became less visible as the country prepared for war and air meets were suspended. Of the 18,500 American pilots in December 1939, only six hundred were women.\(^{202}\) “It is improbable that any woman pilot will have part in actual fighting either in the air or on the ground,” wrote Louise Thaden in 1939. Indeed, women pilots were not allowed in combat, but many of them would support the war effort as ferry, test and administrative pilots and as flight instructors.\(^{203}\)

**Conclusion**

Women pilots played a humble but major role in the United States aviation industry between 1920 and 1940. To gain a place in the male arena of air racing and commercial aviation activities, women had to walk a fine line between pushing gender boundaries and conforming to societal expectations of femininity. As women were associated with a nurturing and educational function, they were found more suited than men to make the general public airminded, as well as to create an aviation conscious generation.\(^{204}\) The majority of women pilots managed to use these kinds of stereotypes to their advantage.\(^{205}\) By conforming to societal ideas about feminine roles, aviation became
a means through which women could fulfill personal goals, such as making a living or becoming a role model for younger women. In addition, many women pilots conformed to gender roles because they enjoyed participating in aerial events, embraced adventure and felt that flying women symbolized freedom and independence.

Women pilots’ increased visibility during the 1920s and ’30s was possible because these women managed to find a balance between existing stereotypes about their flying abilities and opportunities offered by the aviation industry. Illustrative in this context is that very soon after the first men’s races were held in 1920, women were allowed to compete against men in the same races and events. This quick progress on women’s behalf could be attributed to several factors. In the 1920s and ’30s aviation in general and air racing in particular were still very new phenomena. In addition, the aviation industry developed at a fast pace and during the early 1920s, confusion seemed to exist about women’s proper place within this industry. Both aviation and women’s increased involvement in the workforce were relatively ‘new.’ As a result, due to a lack of definition, gender roles within aviation remained blurred, and the significant increase in women pilots’ involvement in the 1920s might have stemmed from this confusion.206

In the 1930s, however, women began to excel in air racing and even defeated their male counterparts on several occasions. For example, women outflew their male opponents during the prestigious Bendix Air Trophy Race in 1936 and 1938. As a result, women pilots became perceived as a threat to the male aviation institution and women’s place was redefined; they did not make good airline pilots, but they did make good stewardesses.

When women started to prove that they were the male pilots’ equals in terms of flying abilities, they seemed to have gone one step too far. Although the process to obtain
a transport license was the same for both sexes and although several women possessed this license, the more subtle gender discrimination in the late 1930s obstructed the women’s path toward the next logical stage – that of professional and/or military aviation. Women pilots had fulfilled their assigned roles as aviation’s missionaries and now that – on the eve of World War II – flight was proven to be reliable, many women pilots’ once hopeful journeys ended in disillusionment.
Endnotes

1 According to Jerry R. Thomas, Jack K. Nelson and Stephen J. Silverman, direct quotations enrich the analysis and furnish documentation for the researcher’s point of view. They add that “Direct quotations from different individuals can demonstrate agreement (or disagreement) about some phenomenon. Direct quotations from the same people on different occasions can provide evidence that certain events are typical or can demonstrate a pattern or trend in perceptions over time.” For further reading, see Jerry R. Thomas, Jack K. Nelson, and Stephen J. Silverman (eds), Research Methods in Physical Activity (fifth edition). Champaign: Human Kinetics, 2005), 355.


3 For example, in 1921 Lillian Boyer signed a contract with former World War I pilot, Lt. Billy Brock. Boyer performed in 352 shows in 41 states and Canada. She made 143 auto-to-plane changes, 37 parachute jumps, and also wingwalked. Brooks-Pazmany, United States Women in Aviation 1919-1929, 5-6.

4 Brooks-Pazmany, United States Women in Aviation 1919-1929, 5-7.


6 Ibid., 21.

7 Ibid., 26.


9 The Trophy was named after its donators Ralph, Herbert and Joseph Pulitzer Jr. (Wines, “Nine Years of National Air Racing,” 404.) The Trophy was a 132 mile speed race over a 33 mile circuit and was first competed for at Michel Field, Long Island (New York) in 1920. The race was so successful that it was organized again on 3 November 1921 at Omaha, Nebraska. The Pulitzer Trophy was held annually and was last competed for in 1926. For further reading, see Joe Christy, Racing Planes and Pilots, Aircraft Competition, Past and Present! (Blue Ridge Summit, Pennsylvania: Tab Books Inc., 1982), 11-12; Frederick R. Neely, “History of the National Air Races. 1929 National Air Races” (1929): 34-37. (Retrieved from J1-1929-155-01 1929 Cleveland, National Air Races & Aeronautical Exposition Documents, National Air and Space Museum Archives, Washington, D.C).

10 Christy, Racing Planes and Pilots, 11.


12 Ibid.

13 Ibid., 405.

14 Neely, “History of the National Air Races,” 34. The National Air Races took place consecutively in Detroit (1922), Saint Louis, Missouri (1923), Dayton, Ohio (1924), Long Island, New York (1925), Philadelphia, Pennsylvania (1926), Spokane, Washington (1927), Los Angeles, California (1928) and in Cleveland (Ohio) (1929). For further reading see Wines, “Nine Years of National Air Racing.”

15 Neely, “History of the National Air Races,” 35.

16 Aero Digest, “The National Air Races and Aeronautical Exposition. Cleveland, Ohio, August 24th to September 2nd, 1929” (September 1929): 56.
The aircraft divisions of rubber, petroleum and instrument companies, for example, used women in various capacities. Women were also involved in parachute manufacturing; they would almost exclusively cut and sew the fabric while men packed the finished products into cover. Where this particular division of labour stemmed from is not clear from Earhart’s biography. It is possible that the finished parachutes were assumed to be too heavy for women to carry or maybe men were believed to be better suited to fold the parachutes in the right manner. Amelia Earhart, *The Fun of It: Random Records of my Flying And Women in Aviation* (Chicago: Academy Chicago publishers, 1977), 141.

As previously indicated, aerial performer Phoebe Fairgrave, for example, started in the barnstorming business in to hope of earning a pilot’s license and to make a living out of aviation-based activities. She succeeded and established her own ‘Phoebe Fairgrave Flying Circus. Brooks-Pazmany, *United States Women in Aviation 1919-1929*, 6-7.


Woman’s Department. “Who are the Fledglings?,” *Women and Aviation* 37 (1 June 1930): 2-3.


While it was rather difficult for white women to break into aviation in those early years, it was almost impossible for black women. Bessie Coleman, however, seemed to be an exception. When this Afro-American woman wanted to take flying lessons in the United States, all schools which she tried to get into turned her down. She then went to France in 1921, where she earned her pilot’s license. She had always hoped to be able to open a flying school, so that other African-Americans would be able to take up flying. However, realizing that she first needed money to be able to open a school, she started barnstorming. In this context Kathleen Brooks Pazmany (1983) notes: “The color of her skin, which had hindered her in her quest for flying lessons, now became her drawing card.” However, before she was able to open her school, she died in 1926 in a plane crash. For further reading, see Kathleen Brooks-Pazmany, *United States Women in Aviation 1919-1929* (Washington: Smithsonian Institution Press, 1983), 9.


The size of the ship would determine the costs for hangar-space rental. For further reading, see Earhart, “Try Flying Yourself,” 158.

Trenckmann, “Pilots’ License Notes,” 3.


Ibid., 88.


Earhart, *The Fun of It, 143-144.*
33 Italics are original. Earhart, *The Fun of It*, 144.

34 Earhart, *The Fun of It*, 144.

35 Ibid., 145.

36 Ibid., 143.


38 Earhart, *The Fun of It*, 145. An exception, however, was Florence Klingensmith. She attended electrical ground school as the only girl among four hundred boys. She worked as a mechanic apprentice and “through dirt and grease” she worked her way to one solo flight out of every six hours of instruction. Clara Studer (ed), “Women Can Fly Too,” *The Ninety-Niner* 12 (15 September 1933): 1-2.

39 Earhart, “Try Flying Yourself,” 158.

40 Earhart, *The Fun of It*, 145.

41 Ibid., 149.

42 Ibid., 145.

43 Ibid., 145.

44 Ibid., 144.


47 Ibid., 62.

48 Ibid.

49 Ibid., 62, 64.

50 Ibid., 64.


53 According to Susan Ware, “Being “air-minded” entailed “having enthusiasm for airplanes, believing in their potential to better human life, and supporting aviation development.” Ware, *Still Missing*, 62.

54 Illustrative is the following statement by Barbara Southgate in 1934: “If she can do it, then flying cannot be dangerous as it has a reputation for being. *If she can do it, then it must be safe for my son and daughter to learn to fly.* Thus good work can be done for the future of aviation through educational efforts. Who can better perform this task than our girl pilots? Who can better reach the mothers, the women’s colleges, the women’s clubs, and the high schools to aid the world in developing this comparatively new industry?…Our high schools have gone air-minded. Many of them have formed aero-clubs that are actively interested in aeronautics. Some high schools even have girls’ flying clubs. Colleges have their clubs. The day is not far
distant when the schools will offer courses in aviation and aeronautical engineering even as the universities are doing.” Barbara Southgate, “Not in Competition with Men,” *Airwoman* II (1) (December 1934): 4.


56 Chamberlin. “Shall We All Fly Soon?,” 410. At the time, airplanes were often referred to as ‘airships’ or just ‘ships.’ The term is therefore frequently used throughout this thesis.

57 Earhart, “Try Flying Yourself,” 35.


60 Earhart, “Try Flying Yourself,” 35

61 Earhart, “Why are Women Afraid to Fly?,” 71.

62 Indeed, in the 1920s few schools would accept girls in their manual training and shop classes. Earhart, “Why are Women Afraid to Fly?,” 70.

63 “My Wife won’t let me fly” was an often heard statement in the 1920s. For further reading, see Earhart, “Why are Women Afraid to Fly?,” 70; Florence Yoder Wilson, “What Women Can Do for Aviation,” *Needlecraft-The Magazine of Home Arts* (May 1930):16.

64 Earhart, “Why are Women Afraid to Fly?,” 138.

65 Ibid.


67 Two weeks later on 2 January 1929, Evelyn Trout broke Viola’s record with an endurance flight of twelve hours and eleven minutes. Her flight also turned out to be the longest night-flight by a woman to that date. On 31 January 1929 Elinor Smith broke the record and stayed up in the air for thirteen hours and sixteen minutes. On 10-11 February Evelyn Trout recaptured the record with seventeen hours and five minutes, a record that was again broken by Louise Thaden on 16-17 March with a flight of 22 hours and three minutes. However, on 23-24 April Elinor Smith reclaimed the record and stayed aloft for 26 hours and 21 minutes For further reading, see Kathleen Brooks-Pazmany, *United States Women in Aviation 1919-1929* (Washington: Smithsonian Institution Press, 1983), 29-30.


69 Ibid., 34.


71 Ibid.


77 *Aero Digest*, “The National Air Races and Aeronautical Exposition. Cleveland, Ohio, August 24th to September 2nd, 1929,” 56.


80 Ibid.


82 According to Frederick Neely, it was during the National Races in 1927 in Spokane, Washington that the transcontinental and sectional derbies were inaugurated. “These proved immensely popular, and since that time they have been repeated at each annual event.” Neely, “History of the National Air Races.”


87 Buffington, “The First Women’s Air Derby,” 222; “Tentative Schedule of Prizes and Events. 1929 National Air Races.” (1929): 5 (Retrieved from J1-1929-155-011929 Cleveland, National Air Races & Aeronautical Exposition Documents, National Air and Space Museum Archives, Washington, D.C). Engine displacement refers to the volume swept by all pistons of an engine in a single movement. It can be specified in cubic centimetres, liters or cubic inches. Power output of a combustion engine is directly proportional to the engine displacement. In other words, the higher the cubic inch displacement, the more powerful and, in most cases, the faster the airplane.


89 “Tentative Schedule of Prizes and Events,” 2. Based upon the fact that enormous amounts of money were offered to the winners of the larger air races, such as the various derbies, the difference in prize money
between the women’s and men’s smaller competitions, such as the dead stick landing races and Australian pursuit races, should be considered negligible. However, further research is required to explain the differential in prize money awarded to women and men. The higher prize money offered to women in the smaller competitions might have been a result of the emphasis that was laid on the spectacular. The public enjoyed seeing men participating in dangerous stunts and competitions, but when women performed the same stunts, the spectacle level drastically increased. Thus, it might be that, to encourage women to participate in these smaller events, they were offered higher prizes.

The six events for women pilots included the Women’s Air Derby and five closed course events; there was a 10 lap and a 12 lap course (5 miles to a lap), a dead stick landing contest and two Australian pursuit races. The men’s races included: the Class “A” Plane-All Ohio Derby Race; the Miami-Miami Beach to Cleveland Air Derby; the Philadelphia to Cleveland Air Derby; the Portland, Oregon, to Cleveland Air Derby; the Oakland, California to Cleveland Derby; the Canadian Derby (open to Canadian pilots only); the Non-stop Air Derby from Some Pacific Coast City to Cleveland, the Rim of Ohio Air Derby; and 30 closed course races, such as a 20 lap course (5 miles to a lap), a contest for breaking the world solo endurance record, a relay race, an Australian pursuit race, etc. See “Tentative Schedule of Prizes and Events,” 1-11.

90 The six events for women pilots included the Women’s Air Derby and five closed course events; there was a 10 lap and a 12 lap course (5 miles to a lap), a dead stick landing contest and two Australian pursuit races. The men’s races included: the Class “A” Plane-All Ohio Derby Race; the Miami-Miami Beach to Cleveland Air Derby; the Philadelphia to Cleveland Air Derby; the Portland, Oregon, to Cleveland Air Derby; the Oakland, California to Cleveland Derby; the Canadian Derby (open to Canadian pilots only); the Non-stop Air Derby from Some Pacific Coast City to Cleveland, the Rim of Ohio Air Derby; and 30 closed course races, such as a 20 lap course (5 miles to a lap), a contest for breaking the world solo endurance record, a relay race, an Australian pursuit race, etc. See “Tentative Schedule of Prizes and Events,” 1-11.

91 Ibid.


93 McMullen, “The First Women’s Air Derby,” 38.


95 Ibid., 62.

96 McMullen, “The First Women’s Air Derby,” 38.


99 The Yuma Morning Sun, “Search Desert Near Wellton for Crosson Ship.”


For example, women’s struggle for equal involvement in the Modern Olympic Games from their origins in 1896 until the 1980s, was mainly due to restrictive beliefs about women’s inferior biology. Long distance running and sprinting, for example, were considered too strenuous for women and a threat to their reproductive functions. Indicative in this context was the removal of the majority of women’s athletic events after the 1928 Amsterdam Olympic Games had taken place. The women’s 400 meters was reintroduced in 1964, the 2500 meters in 1972, and the 3000 meters and marathon were introduced as late as 1984. Jennifer Hargreaves, Sporting Females: Critical Issues in the history of women’s sports (London: Routledge, 1994), 217, 131.


Ibid., 215.


Ibid.

Thaden, “The Women’s Air Derby,” 299.

McMullen, “The First Women’s Air Derby,” 11.

Ibid., 39.


Illustrative in this context is following statement: “After “Ladybirds” and “Angels’ Club” were turned down as too frivolous and apt to make the men laugh at them, and “Association of Licensed Women Pilots” voted against as being too formal…” Maxine Davis, “Women Fliers Band Together, Scorning of Name ‘Ladybirds’,” The New York Telegraph (1929): 10.


129 “Women With Wings. No harebrained stunter, the Ninety Niner are businesslike airwomen, ready to take over men pilot’s duties if we go to war,” Source and date unknown: 17. (Retrieved from DN-480000-03 Ninety Nines (USA) Documents, National Air and Space Museum Archives, Washington, D.C).

130 See Amelia Earhart, The Fun of It.


135 “5 Women Flyers out of Air Derby.”

136 Ibid.


138 “5 Women Refuse to Fly in Air Derby.”

139 Thaden, “The Women’s Air Derby,” 299.


Participants in the 1930 Women’s Dixie Derby from Washington, D.C. to Chicago: Phoebe Omlie, Marty Brown, Laura Ingalls, Nancy Hopkins, Charity Langdon. For further reading, see Oakes, *Unites States Women in Aviation 1930-1939*, 56.


The races in which women and men participated together were: the Cord Cup Race, a transcontinental derby; the William B. Leeds Trophy Race; the 510-Cubic-Inch Handicap Race; the 125 Miles Per Hours Basis; the Sohio Mystery Derby; and a Precision Landing Contest. In addition, May Haizlip set a new world speed record for women. During the Shell Petroleum Corp. Speed Dashes race for women only, she reached a speed of 255.51 mph. Oakes, *Unites States Women in Aviation 1930-1939*, 42, 59-61.


Klingensmith’s airplane was a Gee Bee Y. These racer planes, built by the Granville Brothers of Springfield, Massachusetts, were the quintessential racing aircraft of the 1930s. Their sometimes deadly speed was due to their short, bulky fuselages, clipped wings, and high horsepower engines. The prestigious Thompson Race had been won by Gee Bee racers in 1931 (Lowell Bayles) and 1932 (Jimmy Doolittle). Oakes, *United States Women in Aviation 1930-1939*, 31. For further reading, see Charles G. Mandrake, *The Gee Bee Story* (Wichita: R.R. Longo Co., 1957).

*The 99er*, “To Date on Women Pilots,” 1 (10) (August 1934): 11.

In addition, the Cleveland Pneumatic Tool Company, which formerly contributed the Aerol Trophy and the $3000.00 purse which went with it, now sponsored three of the men’s races with a total purse of $5000.00. For further reading, see *The 99er*, “Races-Records. Cliff Henderson Turns Back the Clock,” 8.


Allen, “Women Flyers Organisation 99 Club Will Hold Own Event As Result of Feud Developed By Elimination at Cleveland.”


Allen, “Women Flyers Organisation 99 Club Will Hold Own Event As Result of Feud Developed By Elimination at Cleveland.” It is not clear who C. B. Allen was. In an issue of Flight (April 1954, p. 503) a short biography is provided of a British military pilot, named A.V-M. C.E. H. Allen, C. B., who joined the Royal Flying Corps in 1917 and continued his military career thereafter. However, it is uncertain whether both sources refer to the same person.


Oakes, Unites States Women in Aviation 1930-1939, 31-32. Given the limited analysis to date, it would be interesting to further examine this first 1934 Women’s National Air Meet.

Ibid., 32-35.

Christy, Racing Planes and Pilots, 123; Oakes, United States Women in Aviation 1930-1939, 1, 29-30. Louise Thaden devoted an entire chapter to her 1936 Bendix Race victory in her autobiography High, Wide and Frightened, 109-122.

Oakes, United States Women in Aviation 1930-1939, 37.


The 99er, “To Date Data on Women Pilots” (2 December 1933): 5.


Earhart, The Fun of It, 30; Woman’s Department, “270 Women Pilots,” Women and Aviation 43 (27 July 1930): 1-2. In addition, the cost of obtaining a license varied from $300 for a private to $4,000 for a transport license. Earhart, The Fun of It, 30.

Newsletter, “Ninety-Nine Club South Central Section” (15 March 1932): 5.

Ibid.


Betsy Ross (1752-1836) has been credited with the creation of the American flag. For further reading, see for example, Jane Duden, Betsy Ross (Mankato, Minnesota: Bridgestone Books, 2002.

The American Coalition of Patriotic Societies included, for example, the Reserve Officer’s Association; Sons of the American Revolution; Daughters of 1812; Military Order of the World War; American Legion; etc. For further reading, see Bowen, “We Girls Must Stick Together,” 28-29.


Ibid.

Ibid.

Ibid.


Ibid.


Kunz, “My dear Mrs. Kenny.”

Ibid.

Clara Trenckmann (ed), “So Very English,” Women and Aviation 32 (20 April 1930): 1-2. This statement was made by C.G. Grey, who Trenckmann identified as an “English writer on aviation.”


Christian Science Monitor, “Miss Richey Explains quitting Pilot’s Job” (7 November 1935); Putnam, Soaring Wings, 159-160.

Christian Science Monitor, “Miss Richey Explains quitting Pilot’s Job.”

It needs to be noted that in the 1920s, the majority of women who learned to fly were school teachers. This phenomenon was most likely the consequence of the emphasis that was laid on the educational function of women in the aviation industry. See for example, Clara Trenckmann (ed), “Some Schoolmams who Have Sprouted Wings,” *Women and Aviation* 23 (16 February 1930): 1-2.

In the same context Corn noted that “women pilots conformed, sometimes against their wishes, to feminine stereotypes because they felt it would help the cause of aviation.” Corn, *The Winged Gospel*, 83.

As Susan Ware notes, “Aviation was a new profession, seemingly free from the gender expectations and sex typing that limited women elsewhere. Women were getting in near the beginning, yet the deck was stacked against them. From hindsight, it is clear that the industry developed along sex-segregated lines that marginalized women.” Ware, *Still Missing*, 61.
Chapter Five

Discussion

The main purpose of this investigation is to focus attention on the American women who were pilots during the interwar years (1920-1940). As few researchers have provided an in depth analysis of women’s place in the United States aviation industry during this twenty year period, this investigation aims to make an insightful contribution to existing knowledge on women pilots’ history in general and the gender issues they encountered in particular. The researcher emphasizes women’s involvement in aviation sport in the first place, and discusses their role in commercial aviation in the second. Furthermore, guided by feminist standpoint theory, the researcher focuses her attention primarily on the women pilots’ personal written and/or spoken accounts. As a result, the researcher presents an historical narrative of the period and pilots under investigation, while adopting a critical feminist tone.

Chapter Five provides answers to the research questions asked and addresses women’s involvement in the United States aviation industry. The researcher encapsulates the main findings from Chapter Four and attempts to put them into a broader historical context. Moreover, further analysis and interpretation of these findings are provided and conclusions suggested. As the discussion presented in this chapter can be considered a foundation for further comparable studies, recommendations for future research are presented at the end of the chapter.

Amelia Earhart: Advocate of Women’s Involvement in Aviation

The first of the three research sub-questions sought to investigate who – in the context of American women pilots during the 1920s and ’30s – could be considered a key
person and how this person possibly affected the way in which women pilots negotiated
gender issues. As the frequent quotes in Chapter Four indicate, Amelia Earhart (1897-
1937) was by far the most outspoken and influential female pilot between 1920 and 1940.

Amelia Earhart was born on 24 July, 1897 in Atchison, Kansas. According to
Susan Ware,¹ her early years were shaped by her parents, Edwin and Amy Otis Earhart,
her younger sister Muriel, and her mother’s parents, who were members of the influential
Otis family in Atchison.² Earhart’s father worked as a railroad claims agent, but due to
his alcohol problems he could not keep a steady job. Therefore, the family moved
frequently and the two sisters, while growing up, often stayed with their grandparents in
Atchison. While not in Atchison, they lived with their parents in Kansas City, Des
Moines, St. Paul, and Chicago. Earhart attended six high schools before she gathered
enough credits to finish the required four-year course. As a child, she was not only an
eager learner, but also carried a love for all kinds of strenuous games and exercise, such
as basketball, bicycling, and tennis.³ Ware notes that “Amelia’s childhood embraced a
sense of experimentation and physical freedom,” which expressed itself in her later
aviation career.⁴

Earhart graduated from Hide Park High School in Chicago, Illinois in 1916.
Although Earhart’s parents were often strapped for money, the family gathered the
resources necessary to send Earhart to the college preparatory Ogontz School in Rydal,
Pennsylvania. However, she never finished the program.⁵ In 1917, during World War I,
Earhart worked as a nurse’s aide in the Spadina Military Convalescent Hospital in
Toronto. According to Ware, it was then that Earhart developed a love of flying by
listening to the military pilots’ stories.⁶
After the war, financially supported by her parents, Earhart was able to take flying lessons. Anita Snook, a pioneer female aviator who taught lessons at Kinner Field near Long Beach, California, became Earhart’s instructor. According to Ware, Earhart “felt she would be less self-conscious taking lessons from a woman.” Earhart made her first solo flight in 1921 and gained her pilot’s licence shortly thereafter, in 1923.

In 1928, already a noted aviator, Earhart received extensive media attention when she became the first woman to cross the Atlantic as a passenger – flying from Trepassey, Newfoundland to Burry Port, Wales – aboard the ‘Friendship.’ The airplane carried three people; pilot Wilmer Stultz, mechanic Slim Gordon and log taker, Amelia Earhart. Earhart received the nickname “Lady Lindy,” as she was said to resemble Charles Lindbergh who successfully crossed the Atlantic in 1927. Shortly thereafter, in November 1928, Earhart was able to take advantage of the publicity she had earned through her transatlantic flight when the editor of *Cosmopolitan Magazine* asked her to start writing columns on her flying experiences. Through the magazine Earhart was able to promote aviation to the general public, especially among women, which she now considered one of her responsibilities. In her first article in *Cosmopolitan Magazine* she wrote:

> The Friendship flight unexpectedly uprooted me from social work and forced aviation more prominently into my life. Since 1920 I have been fairly close to flying, having piloted my own planes for sport and flown several hundred “solo” hours in the air. But now my vacation is over and from its adventure has come the chance to gratify some long-standing ambitions in connection with the development of American aviation. My immediate opportunity is to meet the readers of *Cosmopolitan Magazine*. Its editor, wisely looking to tomorrow, realizes what a great part aviation will play for men and women in many phases of American life.

Earhart not only promoted aviation in *Cosmopolitan Magazine*, but also in various other periodicals, such as *Sportsman Pilot, Aero News and Mechanics, The American*
Magazine, and Needlecraft-The Magazine of Home Arts. In her articles Earhart liked to emphasize the ease and safety of flight. She received many letters from women all over the country who wanted to become involved in aviation. She became a heroine and a symbol of emancipation for many American women. However, it should be noted that it was almost exclusively upper and middle-class women, who were able to gather enough resources to support their expensive flying activities. Lower socioeconomic-class and African-American individuals had neither the time nor the means to fly.

When Earhart successfully flew the Atlantic by herself in 1932, she became even more of an example for many women, especially those who wanted to become pilots. Finally, in 1937, she became a legend when she disappeared during her attempt to fly around the world. Through her writings and speeches, in which she stressed that women were perfectly capable of flying, and through her remarkable aviation feats, Earhart offered women courage and ‘permission’ to follow in her footsteps. Earhart’s devotion to aviation, her strong desire to encourage women to take up flying, and her role model status contributed to the increase in the number of licensed women pilots in the 1920s.

As Susan Ware notes in 1993, Amelia Earhart was “technically a child of the Victorian nineteenth century but spiritually a modern woman of the twentieth.” Earhart was indeed an intelligent person and progressive thinker. Illustrative is her view regarding the division of labour between sexes;

... it does seem to me that if a woman can earn more at some job than she can by working at home, she should not be hampered in taking the job. If her husband didn’t happen to have more lucrative work at hand, why shouldn’t he take over the home job, and with no sense of hurt pride? I realize, of course, that the whole concept will encounter storms of good horselaughs – but even that doesn’t seem to me to invalidate it as a working idea.
To Earhart, her ideas were not “mere modern thinking’ or ‘feminism’ or anything of that kind, but just common sense.” Earhart did not consider herself a feminist, but admitted that she would “rather enjoy seeing women tackling all kinds of new problems – new for them, that is.” Similarly her husband noted that “her absorbing interest and concern, without being offensively feministic, was the place of women,” the place of women in aviation in particular.

According to Susan Ware, every era put forward and recognized talented women who shaped American history, “but individual advancement was especially important to the history of women between the suffrage victory in 1920 and the revitalization of feminism in the 1960s and ’70s.” The accomplishments of popular heroines, outstanding professionals, Hollywood stars, politicians and sports figures were widely reported, and kept alive a sense of progress for women as a group in a period when mass feminist movements were less likely to emerge. Ware adds that “celebration of individual achievement cut two ways.” Women’s success stories were uplifting, but they did little to inspire women collectively to mobilize for change. Ware considers Amelia Earhart a perfect embodiment of this individualistic era. Earhart identified her individual accomplishments as victories for women – especially white, middle-class women – as a whole. Not surprisingly, Earhart never explicitly referred to race as a barrier to women’s integration into the American aviation industry.

Earhart’s philosophy, according to Ware, represented the essence of liberal feminism. Ware defines liberal feminism as a form of ‘mainstream feminism,’ “both in the sense of historically being the most common form of feminism and for its goal of integrating women into the mainstream of the dominant culture.” Jennifer Hargreaves
notes that liberal feminism “embraces the notion that throughout the history of industrial society women have been approaching near to equality with men in all aspects of life and culture.” She suggests that this progressive process, which started during the late nineteenth and early twentieth centuries, continued during the inter-war and post-war periods and has accelerated in recent years.

Susan Ware adds that, in the United States at least, liberal feminism may have been more the norm than the mass movements of the suffrage era or the 1970s. Indeed, even during the pre-war suffrage era and the second wave of feminism in the 1960s and ’70s, very few American women, unlike their British sisters, adopted an aggressive militant approach in an attempt to break gender boundaries. The liberal ideology was perhaps a reaction against the more militant pre-war feminist movements. However, these liberal ideas did not change the way in which the concepts of aviation sport or commercial aviation were socially constructed.

Liberal feminism – as described by SusanWare – seemed particularly apparent when looking at the way in which women were encouraged to become interested in aviation. Women pilots did not try to change the existing social structure or more specifically, male hegemony, but used the existing stereotypes to their advantage. For example, Amelia Earhart, Margery Brown, Louise Thaden, Clara Studer and Mary C. Alexander tended to promote flying as a ‘household’ term and something that should be incorporated in one’s lifestyle. As unrealistic as it may sound, during the early 1920s the airplane was expected to replace the family car and thus become a vital part of every person’s daily life. Women pilots in this regard, promoted ‘aerial domesticity,’ while stressing the ease and safety of flight. In addition, women pilots seemingly did not want to be associated with notions of feminism. In this context, Nancy Cott notes that “professional women on the whole seemed to assume that any connection with feminism
would prove detrimental to their professional progress.”\textsuperscript{33} She adds that “female aspirants to male-controlled professional areas around the turn of the century sought to legitimize their pursuits by emphasizing their identification as rational and neutral professionals.”\textsuperscript{34}

Illustrative in this context is the following statement about the 99s;

Far from the bra burning liberationists of a later day and the placard waving suffragettes of an earlier one, these women weren’t really planning on “making waves.” Rather, in a businesslike fashion, they established their objective of coordinating interests and efforts of women in the aviation field.\textsuperscript{35}

Along the same lines, aviator Taylor Swanee ironically stated in her weekly column, “Just Among us Girls” in the magazine \textit{Airwoman}: “Do try, though, not to appear on the flying scene as Bertha Burstbuttinsky, of the Cheechache Burlesque troupe. Nor, pray, act like a militant feminist. The boys won’t like it if you do.”\textsuperscript{36} Significant in the same context is the following statement by historian Joseph Corn:

Few American women then called themselves feminists, thinking like Amelia Earhart that the word connoted an undesirable mannishness and pushiness. Yet Earhart and her sister fliers, by combining flying and adventure with marriage and nurture, personified the ideal of so many women of the era, the liberated yet feminine woman.\textsuperscript{37}

In other words, women pilots sought to be taken seriously in the male dominated aviation arena by downplaying their possible feminist objectives. What Bernard Rieger suggests, when analysing the lives of German aviator Elly Beinhorn and British pilot Amy Johnson (1930s), can also be said for American women pilots at the time. He argues that because female pilots derived their status from achievements in the predominantly male world of aviation, they could only be successful if they managed to harmonize the masculine character of being a pilot with their feminine sides.\textsuperscript{38} For example, Rieger notes that Amy Johnson’s
ability to move both in the male world of the workshop replete with grime, horseplay and rough language, and in environments in which she conformed to roles more readily associated with conventional femininity helped Johnson to gain public acceptance.39

Likewise, in his article about representations of women’s sport in cinema newsreels during the interwar period, Mike Huggings notes that “women often had to balance their prowess with femininity to be accepted.”40

A paradox can be observed in the way in which women during the 1920s and ’30s viewed their ‘roles’ and thus negotiated gender issues. As Jill Conway noted in 1971, ... there is no escaping the fact that in the very decade of the twenties when the franchise was secured and when a liberal view of marriage ties had finally gained public acceptance that the vast majority of American women began to find social activism unattractive and to return to the ethic of domesticity as romantic and suffocating as any code of the High Victorian era.41

This statement seemed true for women pilots. On the one hand they promoted aviation as something that would free women from the restricting ‘Victorian’ limitations, but at the same time attention was focused on aviation as a domestic item. Although in theory – and as previously suggested – women in the 1920s had become more independent, after they were granted the vote they seemed to return to an acceptance of the existing power structure. In addition, more often than not women pilots married male pilots.42 Flying couples not only personified existing social norms about heterosexuality, but also strengthened the idea of flying as a family aspect, as a symbol of domesticity. In addition, marriage to a male pilot facilitated women pilots’ entry, involvement and acceptance in the ‘fraternity of flight.’43 However, in this context an anonymous woman pilot in 1934 wondered:

Why don’t girl fliers work together? There seems no plausible reason except perhaps, even in this day and age, we have no confidence in the ability of our own sex! ... it has become evident that our aviatrices, apt and
competent as they are, cannot get away from the “comforting and protective” influence of a gentleman co-pilot. Would it not add to the credit of the girl fliers and at the same time help develop a feeling of confidence among the general public if those girls who have studied and have been trained in the art of aviation would exercise their capabilities without the aid of the opposite sex?"44

As Susan Ware notes, during the 1920s and ’30s “individualism as a basis for feminism failed to offer any challenge to the prevailing gender system.”45 Women pilots during the 1920s and ’30s, whose ideas and perspectives were most often pronounced by Amelia Earhart, were indeed excluded from the professional aviation realm, mainly because of their gender. After World War I, the small number of women pilots was spread all over the country, which made unionization almost impossible. In addition, many women shared socially constructed ideas that women were unsuited to fly, which hindered the creation of a critical mass of women pilots. However, immediately after women pilots met each other during the 1929 National Air Derby, the creation of the 99s allowed them to establish the collective network required to further women’s involvement in aviation.

The 99s started small, but had more than four hundred members by the eve of World War II. However, despite becoming organized and, as a group, more powerful than the individual woman pilot of the early 1920s, prior to the war the group did not succeed in breaking down many gender boundaries. The fact that they did not manage to become airline pilots, and thus professionals, was due, in part, to their sex. Nancy Cott also notes that the limited professional involvement of women during the 1920s and ’30s in general, could be attributed to the economic situation at the time. She writes that the Great Depression “pushed women down in the labor force, not out of it. While the proportion of
women at work increased, the proportion of professional pursuits declined." She adds that:

patterns of rise and fall in women’s share of professional work relative to men’s in the first half of the twentieth century can more reasonably be attributed to large-scale economic and labor market conditions and to factors within each profession...than to the state of organized feminism.

The National Women’s Air Derby: A Milestone

The second research sub-question posed at the beginning of this thesis was how the 1929 Women’s Air Derby could possibly have affected the way in which female pilots negotiated gender issues. The derby, unquestionably, was for many reasons a milestone in American aviation history. Although the organizing committee as well as the general public were reluctant to see women fly cross-country, the event resulted in the establishment of several women pilots’ organizations, as well as the permanent involvement of women in air racing from then on.

The 1929 women’s derby organizing committee, and race manager Cliff Henderson in particular, did not anticipate the participants’ seriousness about flying. As noted, the committee considered the race mainly a promotional stunt, rather than as a way to support women pilots’ involvement in the aviation industry. Nevertheless, given the women’s tremendous enthusiasm and hopes for future editions of the race, the event became – except for 1934 – an annual affair. It should be noted, however, that from the moment managing director Frank T. Copeland publicly stated that the 1929 women’s race would be held primarily to convince the public of the ease and safety of flight, more women pilots seemed willing to adopt the idea that ‘if the weaker sex can fly, it must be safe and easy.’ While some women pilots actually believed that women were inferior to men, others used the idea as a strategy to their advantage because they did not want to
lose their jobs. In other words, while, prior to the 1929 derby, women pilots had promoted aviation mainly as a lifestyle, as something that should be included in every school’s curriculum, after the derby, attention seemed to shift to promoting the ease and reliability of flight to the general public.

As indicated in Chapter Four, the women pilots who participated considered the 1929 race a great success. It not only reaffirmed but boosted their confidence in their flying abilities. Probably most important for the future of women pilots was the establishment of the 99s organization shortly afterward. The organization provided a solid base of support for many women pilots, and it still provides the same support today.48

The derby had also sparked more hopes for the involvement of women as professional airline and military pilots. However, several pilots, such as Louise Thaden still did not believe that women would ever become transport pilots or military pilots. Other aviators, such as Mary C. Alexander and Ruth Havillard, were opposed to the idea of female transport pilots. They both believed that women were physically unsuited to perform the job. Along the same lines, in 1929 Helen K. Schunck, who called herself a feminist, stated:

There is no reason why a woman cannot be an excellent pilot, any more than there is no reason why she cannot drive a car. ...As a sport, she will love it as much as her brother. But as a business? That is an entirely different proposition...What do you think would happen if they installed women pilots?...It seems to me that we are not fitted to talk intelligently in terms of “horsepower,” and “revolutions per minute,” “center of gravity,” and “propeller pitch.”49

Although Schunck seemed convinced that women would not make good airline pilots, from her statement it is clear that the main reason for this belief stemmed from the different educational opportunities provided for men and women.
The 1929 women’s derby and the establishment of the 99s should be considered crucial events for the advancement of women in aviation at the time. Although Amelia Earhart’s transatlantic crossing in 1928 spurred many women to take up flying, the establishment of the 99s saw the creation of a collective identity. Women pilots were now able to share ideas and experiences more easily. In addition, women pilots as a group gained more confidence in their abilities, and shortly afterward they defeated their male counterparts in various races, such as the Bendix Race in 1936. Moreover, it needs to be noted that beside the fact that women pilots were collaborative, they were also very competitive; they consistently attempted to break each others’ records.

**Men’s Perceptions**

A third research sub-question was how men perceived the involvement of women in aviation. As Chapter Four indicates, most men seemed to be reluctant to accept the idea of women’s involvement in aviation in general. However, there were several men who commented positively on the women pilots’ performances. In 1930 G. K. Spencer, for example, acknowledged that there has not been a single step in aviation’s development in which women did not play an important role. He pointed out that the tremendous courage, “which led those earlier women to step from their accustomed niches in the scheme of things and dare to fly the flimsy crates that fascinated them, is still to be honoured.” He added that: “We of their generation can hardly estimate the high place which history will some day accord to them.” Such a statement being made at the time emphasizes the researcher’s contentions that these women excelled within a socially restrictive environment. Along the same lines, in 1934 George W. Orr, president of Roosevelt Field in New York, commented:
Women have adapted themselves to every type of flying, from the long gruelling days of endurance tests, the constant vigilance of trans-oceanic solo flight, the exacting demands of transcontinental derbies, to the precision and cool mastery required by racing ships. The woman flier has run the gamut of aerial experience and has proven her entirely competent; richly deserving the acclaim and confidence of all who fly.51

The husbands of Amelia Earhart,52 Frances Marsalis and Louise Thaden also supported their wives’ flying activities. In his article “The Forgotten Husband,” George Palmer Putnam jokingly wrote:

A while ago some of the husbands of members of this Ninety-Nine Club got together to see what could be done about it. Our intention was not so much to combat activities as to establish a machinery for masculine self-protection. Out of that meeting emerged the Forty-Nine Point Five Club (49.5) – reckoned arithmetically as fifty per cent of our better halves. The prime movers were Herb Thaden, Bill Marsalis and myself.53

Male perceptions of women’s involvement in aviation were varied and included both very supportive as well as disapproving perspectives. Evidence suggests that after the 1929 women’s derby had taken place, men who disapproved of women’s involvement in aviation did not express their ideas as openly as they did in the early 1920s. On the other side, however, the very positive comments meant to honour women pilots’ accomplishments often failed to support women’s permanent involvement in aviation. Unintended or not, many positive comments contained the idea that the few women who performed remarkable feats were anomalies and that they had unique abilities which could not be generalized to the rest of the female population.

From a Feminist Standpoint Perspective

As indicated in Chapter Three, the purpose of this study is to answer the research questions while keeping general premises of feminist standpoint theory in mind: (1) Reality is constructed through the lenses of male actors. Therefore, a full understanding
of women’s perspectives on their reality can only be gained through studying these
women’s experiences from their own unique perspectives; (2) Women as a disadvantaged
group experience a different reality as a consequence of their oppression; (3) Gender
differences are cultural rather than natural; and (4) Relations of power are not fixed, but
contested continually. That being said, it needs to be reiterated that the researcher’s
intention was not to use feminist standpoint theory as a dominant framework, but rather
as a foundation for this study, and future research. As (sport) sociologist Jennifer
Hargreaves points out, “Theoretical absolutism is not possible: theories are interpretations
and they change as do the circumstances being analysed.”

The researcher agrees and believes that every historical event is unique and should be studied without a presupposed
type. However, the researcher in this study chose to adopt a theory that would allow her
to ask questions that would generate valuable answers.

As this thesis suggests, the United States aviation industry during the 1920s and
’30s was a male bastion in which women struggled to become involved. Male hegemony
essentially defined the way in which women became involved in aviation, which
positions they occupied and how they were generally perceived. Women pilots, seen
through a masculine lens, were generally considered weaker, less intelligent and more
emotional than men. In addition, female biology was perceived as restricting and
unsuitable to the profession of airline pilot. It was commonly believed that the woman
pilot should serve the American aviation industry in a ‘nurturing,’ and thus subordinate
position.

Women pilots as a minority group experienced a different reality from male
pilots. As men had the power of definition, women could either become involved in
aviation and conform – or at least pretend to conform – to these definitions, or not
become involved at all. As Amelia Earhart pointed out, there were several barriers women pilots had to overcome before and during their involvement in aviation. Women had fewer resources than men; they often lacked the necessary education; they could not defray the cost of flying lessons by working as mechanics at airfields; and planes were constructed according to men’s body’s measurements. In addition, many flying schools were reluctant to take on female students. As Louise Thaden noted in 1931, “instructors start in with a prejudice, and the woman student labours under a decided handicap.”

Although airplanes were mechanical, flying required courage, steady nerves, the ability to orient oneself without any navigational tools, and in some cases, physical strength. Illustrative in this context were the difficulties Ruth Nichols encountered while flying toward Cleveland where she would participate in the 1929 women’s derby. Nichols wrote:

I stopped to refuel and reconnoiter at Pecos, the jumping-off place for the mountains. There were three possible courses; I could follow the canyon railroad, I could fly above an oil pipe line which had been laid across the mountains, or take a straight compass heading for El Paso. I decided on the railroad, as the longest way round but the safest way there, since it also offered a few possible spots for forced landings. Heading for the mountains, I kept the railroad as a guideline below, and just as I reached the first high range there loomed ahead one of the blackest thunderstorms I’d ever seen... I lost the railroad completely and found myself in the middle of the mountains, with no landmarks and no possible landing spot ... Then another mysterious hazard developed. The plane became more and more tail-heavy. I couldn’t understand it since the stabilizer was all the way forward. Finally I was forced to fly with the stick pushed almost against the instrument panel, to keep the plane flying level. Just as my arm muscles were ready to quit, I sighted the little town of Juarez, Mexico, right across the border from El Paso.

Since flying required concentration and physical abilities, women were often said to be incapable of handling a plane. Many men and women perceived women as physically unsuited to cross-country fly and/or to become airline pilots. The argument, most
commonly used to keep women pilots grounded or to explain airplane crashes was that they flew during their menstrual periods. In a similar context, Helen Lenskyj notes:

The dominant group – white upper-class males – achieves consensus on the cultural and ideological dimensions of female sexuality through the ideas of male “experts” in medicine, science and religion.\footnote{57}

This ‘medicalisation’ of the female body,\footnote{58} without any scientific proof, legitimized the male authority’s refusal to have women in professional and military aviation. In this context Putnam wrote:

The medical officers held to the conviction that this [that women had a time every month when their nerves and reactions were thrown out of balance] was bound to be true, and nothing could be done about it. Individual medical history made no difference. Clinical tests made no difference. It was just a fact, and how could full transport dependability be expected in the face of it?\footnote{59}

He added that Amelia Earhart took the view that menstruation did not necessarily affect women’s flying abilities, but that she realized that “she was up against not mere physiology but prejudice, sometimes much harder to deal with than the whole of biology together.”\footnote{60} Earhart collected her own evidence to disprove the belief that women should not execute any kind of flying during their menstrual periods. Unfortunately, before she arrived at a point where she could go before boards of medical officers and show them “why the tradition and prejudice in making this point an inviolable liability against women transport pilots, were obsolete,”\footnote{61} she disappeared.

All three forms of aviation discussed in this thesis – aviation sport, military aviation and commercial aviation – could be considered means through which men expressed their assumed superior status. Analogous to Lenskyj’s statement that “sport had the potential to equalize relations between the sexes,”\footnote{62} which posed a threat to male hegemony, women’s involvement in aviation seemed something that needed to be
avoided or at least kept under control. Of course, after women had taken over men’s jobs during World War I, the increase of women in the labour force was inevitable. However, male authority, and in this case the aviation industry, afraid that women’s involvement would change general beliefs about masculinity, tried to keep women away from professional and military positions. If men had allowed women to become successful airline or combat pilots, these positions would lose their value in the eyes of many men and women. Illustrative in this context is Putnam’s statement:

She [Amelia Earhart] saw in war a refuge from home obligations to which a man could escape from woman’s tyranny – a sort of vacation in which he could do as he pleased and show what a stout fella he was; and that if women were to insist on mixing in war, they could help to bring an end to wars because men, viewing this invasion of their private realm with dismay, would give it up rather than share it with petticoats... The trenches, combat service in the air, transport jobs in advanced positions, and even the other, less brilliant arenas of activity in the theatre of war, are the last remaining strongholds of men. I suspect that men might rather vacate the arena altogether than share it with women.63

Although women pilots between 1920 and 1940 were excluded from the professional realm, in some respects they did manage to challenge men’s dominant power. An excellent example is the 1929 National Women’s Air Derby. The women pilots managed to make it an annual event, and when the race committee decided to exclude women from all events during the 1934 derby, the women pilots made a strong statement by organizing their own national women’s races. Although little is known about these women’s races, they may have played a role in women’s attempt to compete with men on equal terms. To regain control over women’s flying activities and to protect air racing from further ‘feminization,’ women were allowed to participate in the prestigious Bendix Race, beginning in 1935.
Women pilots in the 1920s and ’30s were not unique in their struggle to enter a male profession or for that matter any male arena. The same debate about women’s ‘proper place,’ which was prevalent in aviation, could also be observed in such fields as medicine, law, education, in different industries, such as the telegraph industry, as well as in sport.

Since the end of the nineteenth century, when modern sports, such as basketball, baseball, tennis, golf, croquet, track athletics and field hockey, had been exported from Great Britain to the United States, sport had been a “natural’ province of males” and “contributed substantially to establishing and maintaining ideologies about the proper sphere of women.” When women during the 1920s and ’30s gained more access to sporting competitions, and when the nineteenth-century idea that the female anatomy and physiology were only suited to the most gentle of physical activities was challenged, women’s proper place in all levels of sport competitions “became the target of heated debate in medical and physical education circles.” Although the debate pertained to various sports, such as rowing, golf, swimming, and athletics, the argument of biology was particularly prevalent with regard to this last category. In this context Jennifer Hargreaves notes that the “intrinsically vigorous nature of running, jumping and throwing,” made women particularly vulnerable to reactionary medical arguments. Although stereotypes restricted women’s involvement in various areas, they could also be used to their advantage. For example, maternal feminists in the United States and Canada argued that women’s unique nurturing function qualified them for social reform work directed at working class and immigrant families. They stated that they needed the necessary political power to carry out the work, such as voting privileges and eligibility for public office. Similarly, women pilots stressed that they were needed in the industry
to raise an airminded nation. However, for women pilots the use of stereotypes was only beneficial as long as these women were perceived to be of value to the aviation industry. Women did gain access to the aviation industry, but when the public no longer needed to be educated on the ease and safety of flight, they were forced to take a step back instead of forward. In the same context Huggins notes that

“‘the new feminism’ of the interwar period largely called not so much for women to be given greater access to male-dominated social spheres but for more recognition of areas of female expertise such as mothering, caring and nursing.”

As illustrated throughout this document, the primary sources of discrimination American women pilots in the 1920s and ’30s encountered were their restricted accessibility to the necessary education and financial resources, as well as medical beliefs about women’s inferior biology. On an educational level, women were most often not welcomed in classes or schools for mechanics. This fact also restricted women financially because they were not able to pay for their flying lessons or their plane by working as mechanics at airfields, similar to their male counterparts. Additionally, because the military was opposed to the acceptance of women pilots, women could not gain flying experience at a subsidized cost like male military pilots. Biologically, women were considered incapable of flying during their menstrual periods. This argument was often used to explain airplane crashes, as well as to keep women away from jobs as airline pilots. In addition, many women pilots felt that they had to conform to general beliefs about beauty and femininity and expressed this through their clothing by dressing fashionably for every flight occasion. This focus on the ‘feminine’ became also apparent in the language that was used around them. Women pilots were often referred to as ‘flying flappers,’ ‘petticoats,’ or ‘sweethearts of the air.’ On a practical level, women
pilots encountered difficulties because planes were designed according to men’s body measurements and small women often had to stuff pillows around them to make the cockpit fit.

The history of American women pilots between 1920 and 1940 is a history of opportunities and disillusionments. The pre-war era had brought more freedom for women and many women entered the labour force. This increase in female workers was inevitable after all the hard work they had proven themselves capable of during World War I, but masculine institutions, such as the aviation industry, now saw their authority threatened by the ‘fragile’ sex. In addition, the Great Depression made the market even more competitive and many men tried to keep women away from ‘serious work,’ including professional and military aviation. Even today, although women pilots are allowed to become airline and/or combat pilots, they are still significantly outnumbered by their male counterparts.

**Recommendations for Future Research**

The researcher hopes that this study will be regarded as a foundation upon which further research in similar directions can be based. The researcher’s main goal is to provide an historical narrative of women’s place in the United States aviation industry between 1920 and 1940, while introducing feminist standpoint theory to her investigation. Further research could provide a more in-depth understanding of women in the United States aviation industry from a feminist perspective. One could take a more biographical approach and examine these women pilots’ backgrounds. Although a considerable number of publications have been produced about the life of Amelia Earhart, few of the other notable pilots of the period, such as Louise Thaden, Marvel
Crosson, Phoebe Omlie and Opal Kunz, have received significant attention in the literature. Future researchers could aim to broaden this investigation by giving it an international focus. For example, a comparison of women’s role in the North American versus European aviation industry could be interesting. One could also expand this study by examining women in the aviation industry from past to present. This option would allow the researcher to better study women’s viewpoints since interviews could be conducted. Still another alternative would be to examine the relationship between the development of the automobile and aviation industry and women’s place within them, as it seems that women were also main promoters of automobiles at the time. In addition, it would be interesting to examine women’s place in automobile and motorcycle racing history, while a different option would be to take a closer look at the way in which the Great Depression affected women’s involvement in the aviation industry.

This study has only scratched the surface of the rich field of women’s aviation history. As the suggestions for future research indicate, the researcher paved the way for a potentially more robust examination of gender issues in the aviation context. In addition, this study reconfirms patterns, observed by many sociologists and historians, regarding women’s struggles to access activities and professions with an assumed male character and thus male structure. As a result, this investigation adds to existing literature and knowledge on women’s history and illustrates that the study’s overall conclusions are also transferrable to women’s roles – and thus to the ways in which they negotiated gender issues – in other domains during the 1920s and ’30s.
Endnotes

1 Susan Ware is a feminist historical researcher and has published several works about women in America during the 1920s and 30s. Her book *Still Missing. Amelia Earhart and the Search for Modern Feminism* not only addresses Earhart’s life from a biographical angle, but also provides a critical analysis regarding women’s involvement in aviation at the time. Other books she wrote include but are not limited to *Beyond Suffrage, Women in the New Deal* (Cambridge, Mass.: Harvard University Press, 1981); *Holding Their Own. American Women in the 1930s* (Boston: Twayne Publishers, 1982); *Partner and I: Molly Dewson, Feminism, and New Deal Politics* (New Haven : Yale University Press, 1989); and *Title IX: a Brief History With Documents* (Boston: Bedford/St. Martins, 2007).

2 Earhart’s grandfather Alfred Gideon Otis (1827 – 1912) was a former federal judge, president of the Atchison Savings Bank and a leading citizen in Atchison, Kansas. For further reference, see Donald M. Goldstein and Katherine V. Dillon, *Amelia: The Centennial Biography of an Aviation Pioneer* (Washington, DC: Brussey's, 1997).


4 Ibid., 31.


6 Ibid., 34-35.

7 Ibid., 36.

8 Ibid.


14 See also, Gray, “Flying in Formation,” 2.

15 Earhart, “Flying the Atlantic – and selling sausages have a lot of things in common,” 15-17, 72.
Aviator Fred Noonan was Earhart’s only crew member. They departed from Miami on June 1 and after numerous stops in South America, Africa, the Indian subcontinent and Southeast Asia, they arrived at Lae, New Guinea on June 29, 1937. On July 2, 1937, Earhart and Noonan took off from Lae in the heavily loaded Electra. Their intended destination was Howland Island, a flat sliver of land 6,500 ft (2,000 m) long and 1,600 ft (500 m) wide, 10 feet (3 m) high and 2,556 miles (4,113 km) away. Their last known position report was near the Nukumanu Islands, about 800 miles (1,300 km) into the flight. The United States Coast Guard cutter Itasca was on station at Howland, assigned to communicate with Earhart’s Lockheed Electra and guide the crew to the island once they arrived in the vicinity. However, when they had almost reached Howland, something went wrong and the last message to be clearly heard sounded anxious and uncertain: “We are on the line 157 337, We will repeat this message. We will repeat this on 6210 kilocycles. Wait.” Earhart’s aircraft was never found and the cause of the crash has never been fully understood. Earhart was declared deceased on January 5, 1939.


16 Ware, *Still Missing*, 59.
17 Ibid., 29.
19 Ibid., 146.
22 Ware, *Still Missing*, 118.
23 When sport historians and/or sociologists refer to Amelia Earhart’s remarkable accomplishments, they often draw parallels with other outstanding female athletes at the time, such as all-round athlete Mildred (Babe) Didrikson, Channel swimmer Gertrude Ederle, tennis player Helen Wills and figure skater Sonja Henie. For further reading see, Allen Guttmann, *Women’s Sports: A History* (New York: Columbia University Press, 1991), 146-149; Jennifer Hargreaves, *Sporting Females. Critical issues in the history, and sociology of women’s sports* (London: Routledge, 1994), 115.
24 Ware, *Still Missing*, 118. Indeed, it seemed that after the pre-war militant suffragettes and the devastating impact of the Great War, women were more likely to deal with gender issues in a peaceful and conforming manner, rather than by rebelliously smashing gender boundaries.
25 Ware, *Still Missing*, 118.
26 Ibid. Mainstream feminism in this sentence refers to any form of feminism which can be considered dominant at a certain point in history. In the 1920s and ’30s women’s liberal ideas, often referred to as ‘liberal feminism,’ were more prevalent than radical feminist ideas, for example.
28 Ibid.
29 Ware, *Still Missing*, 119.

31 As explained in Chapter Four, women pilots promoted flying to other women by stressing the fact that it was safe and easy, and by stating that flying was something that would benefit future generations. Women pilots presented flying as an extension of women’s alleged nurturing function, as something that would facilitate family life, something that could be used on a daily basis, just like other household items.


33 Cott, *The Grounding of Modern Feminism*, 231.

34 Ibid., 233.


39 Ibid., 384-385.


42 Examples of flying couples in 1930: Anne and Charles Lindbergh, Louise and Herbert Thaden, Frances and Bill Marsalis, May and Jim Haizlip, Blanche and Dewey Noyes, Claire and Herbert Fahy, Esther and Earl Vance, etc. (For further reading see: Clara Trenckmann, “Yours for Dual Control,” *Women and Aviation* 21 (2 February 1930): 1; *The Literary Digest*, “Motoring and Aviation. Husband-and-Wife Teams in the Flying Game” (12 April 1930): 39-40, 42.

43 The term ‘fraternity of flight’ is commonly used in works that address women in aviation. It refers to aviation as a masculine institution. See for example, Gray, “Flying in Formation,” 43.

44 Note the use of the term “girl fliers,” in this quote. By using this term, the female author, consciously or not, stresses women pilots’ assumed inferior status. The term “boy fliers” was never used. Ann Onymuss, “Air-Onically Speaking,” *The 99er* (April 1934): 4.

45 Ware, *Still Missing*, 118.

46 Cott, *The Grounding of Modern Feminism*, 224.

47 Ibid., 225.
The Ninety-Nines organization still exists. It is an international organization of licensed women pilots from 35 countries. The organization is a non-profit, charitable membership corporation and currently has more than 5,000 members. The international headquarters are located in Oklahoma City, Oklahoma. Although there are various female pilots’ organizations in various states and nations, virtually all women of achievement have been or are members of the Ninety-Nines. For further information, see the organization’s website: www.ninety-nines.org/99s.html.


Women’s Department, “A Man’s Point of View on the Lady Pioneers,” *Women and Aviation* 38 (15 June 1930): 3. It is not clear who G.K. Spencer was. The *Women and Aviation* magazine quotes his words and informs the reader that these words can found in an article Spencer wrote in the May 1930 issue of *Sportsman Pilot*, entitled “Pioneer Women of Aviation.”


It needs to be noted that Amelia Earhart was probably the only married pilot who kept her maiden name. As her husband notes: “My wife likes best to be called ‘Miss Earhart,’ especially when her name is used in connection with flying and professional matters.” For further reading, see George Palmer Putnam, “The Forgotten Husband,” *Pictorial Review* (December 1932): 12.


Nichols, *Wings For Life*, 81-82.


Putnam, *Soaring Wings*, 162.

Ibid.

Ibid., 163.


Ibid., 59.

68 Ibid., 30.

69 Hargreaves, *Sporting Females*, 125-127. It needs to be noted that Hargreaves’s examples are situated in a British context. However women’s struggle to gain acceptance in sport can be considered universal. With regard to rowing, Hargreaves explains that biological arguments were often used to oppose women’s participation. Female rowers were often harassed because the sport was associated with musculature and was labelled unladylike. Golf was (and in some cases still is) a male bastion in which women were not welcomed. If they were allowed membership in clubs, they had much less playing time than men and they were usually barred from weekend play and local tournaments. With regard to swimming, in the early 1920s women’s swimming clubs usually trained during the limited times when the pools were available for women only. Hargreaves, *Sporting Females*, 125-26.

70 Ibid., 131.


APPENDIX I

AVIATION MILESTONES AND FEMALE FIRSTS IN AMERICAN HISTORY

1903-1940

1903  Wilbur and Orville Wright

- These American brothers realized the first official powered flight, Kitty Hawk, North Carolina
- The field at Kitty Hawk had a hangar and workshop, and is therefore often considered the first airport in the United States

1910  Bessica Medlar Raiche or Blanche Stuart Scott

- It is up for debate which of these American women was the first to make an accredited solo flight

Glenn Curtis, Wilbur and Orville Wright

- First Americans to obtain a Fédération Aéronautique Internationale (FAI) pilot’s license

First air meet

- Inspired by one of the first big air meets held in 1909 in Reims (France), the first air meet in the United States was organized from 10 to 20 January 1910 in Los Angeles

1911  Harriet Quimby

- First American woman to receive a FAI pilot’s license
1912  Harriet Quimby
- First woman to fly solo across the English Channel

1913  Ruth Bancroft Law
- First woman to fly at night

1915  Katherine Stinson
- First woman to fly a loop and to skywrite

1921  Bessie Coleman
- First African-American female aviator to qualify for a FAI pilot’s license

1927  Charles Lindbergh
- First pilot to make a solo non-stop flight across the Atlantic Ocean

1929  Woman’s Air Derby
- The first transcontinental Women’s Air Derby. The participating women pilots flew from Santa Monica, California to Cleveland, Ohio in eight days

1929  Ninety-Nines
- Organization in the United States established by women aviators with Amelia Earhart as its first president. Out of the 126 American licensed women pilots in 1929, an initial 99 joined the organization, resulting in the ‘99s’

1929  Bobbi Trout
- First woman to fly all night
1930  Helen Richey
- First woman to earn a commercial license, granted by the United States Department of Commerce

1932  Amelia Earhart
- First woman to make a non-stop solo flight across the Atlantic Ocean

1935  Amelia Earhart
- First woman to participate in the prestigious Bendix Transcontinental Air Race, which was held since 1931. In 1935 female competitors were for the first time allowed to participate in this race

1936  Louise Thaden and co-pilot Blance Noyes
- First women to win the Bendix Transcontinental Air Race

1937  Willa Brown
- First African-American woman to earn a commercial pilot’s license
APPENDIX II

ILLUSTRATIONS

Illustration I  Anita Snook (left) and Amelia Earhart (right) next to Earhart’s first plane, a Kinner Canary

Illustration II  Cover of the 1929 National Air Races Official Program
(National Air and Space Archives, Washington, D. C.)

Illustration III  Marvel Crosson died in a plane crash during the 1929 Women’s Derby (Cleveland, Ohio)

Illustration IV  1929 Women’s Derby winner Louise Thaden
(Retrieved from <www.dmairfield.com/Collections/Klein%20Collection/People/index.html> on 27 April, 2009)
Illustration I: Anita Snook (left) and Amelia Earhart (right) next to Earhart’s first plane, a Kinner Canary
Illustration II: Cover of the 1929 National Air Races Official Program
Illustration III: Marvel Crosson died in a plane crash during the 1929 Women’s Derby (Cleveland, Ohio)
Illustration IV: 1929 Women’s Derby winner Louise Thaden
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